RESOLUTION NO. 33576-06

CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE WATER TREATMENT AND TRANSMISSION IMPROVEMENTS PROGRAM, MAKING FINDINGS, APPROVING THE MITIGATION MONITORING AND REPORTING PROGRAM, AND SELECTING ALTERNATIVE 1 AND APPROVING AND AUTHORIZING THE PROJECT-LEVEL ELEMENTS OF ALTERNATIVE 1 OF THE WATER TREATMENT AND TRANSMISSION IMPROVEMENTS PROGRAM

Introduced by Director Richardson ; Seconded by Director Foulkes

WHEREAS, on August 31, 2005, a Notice of Preparation of an Environmental Impact Report (EIR) for the Water Treatment and Transmission Improvements Program (WTTIP) was prepared and circulated by the East Bay Municipal Utility District (EBMUD or District) as lead agency in accordance with the California Environmental Quality Act (CEQA) and applicable laws and regulations; and

WHEREAS, in response to comments received on the August 31, 2005 Notice of Preparation, the District clarified certain aspects of the project description and issued a Revised Notice of Preparation on December 15, 2005; and

WHEREAS, the District held two public and two agency scoping meetings in late 2005 and early 2006 to explain the WTTIP and to solicit input on the scope and content of the EIR; and

WHEREAS, the District mailed approximately 5,000 public notices announcing public meetings regarding the WTTIP to residents of Moraga, Lafayette, Orinda, Walnut Creek, Unincorporated Contra Costa County, as well as regional and local agencies, and others who had previously expressed interest in the WTTIP; and

WHEREAS, the Draft EIR on the WTTIP was completed by the District and circulated for review and comment on June 23, 2006, for a sixty-day comment period, in accordance with CEQA regulations; and

WHEREAS, the comment period was subsequently extended for an additional twenty-four days until September 18, 2006; and

WHEREAS, as part of the District's public information efforts on the WTTIP and Draft EIR, the District held seven public and five neighborhood meetings during the comment period to receive verbal and written comments from interested parties upon the WTTIP and Draft EIR; and

WHEREAS, District staff met with City of Orinda staff to provide information and answer questions on the WTTIP and Draft EIR on three separate occasions; and

WHEREAS, District staff met with City of Lafayette staff to provide information and answer questions on the WTTIP and Draft EIR on four separate occasions; and

WHEREAS, District staff met with City of Walnut Creek staff to provide information and answer questions on the WTTIP and Draft EIR on four separate occasions; and

WHEREAS, District staff met with Town of Moraga staff to provide information and answer questions on the WTTIP and Draft EIR on three separate occasions; and

WHEREAS, the District considered and responded to over 900 public comments on the 2006 Draft EIR and WTTIP, and subsequently modified portions of the DEIR and WTTIP to provide further clarity regarding WTTIP elements and to address public concerns; and

WHEREAS, a Final EIR was prepared by the District, which includes responses to all comments on the Draft EIR received by the District during the public comment period and includes clarifications in response to public concerns; and

WHEREAS, the Final EIR was sent to public agencies on December 1, 2006; and

WHEREAS, the District staff has prepared a detailed Mitigation Monitoring and Reporting Program (MMRP), attached hereto as Exhibit B and incorporated by this reference into the resolution; and

WHEREAS, the Board received public comments regarding the WTTIP at the meeting on December 12, 2006; and

WHEREAS, the Board subsequently scheduled a special board meeting on December 19, 2006, to consider certification of the Final EIR and approval of the project.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors of the East Bay Municipal Utility District does hereby find, determine and certify that:

1. The Final EIR has been presented to the Board of Directors, the Board has reviewed and considered the information contained therein prior to selecting Alternative 1 and approving the project-level elements of Alternative 1, and the Final EIR reflects the Board's judgment and analysis.

2. All proceedings of the environmental review process, including the Draft and Final EIR and all required notices, have been conducted and completed in accordance with CEQA, the CEQA guidelines, and all other applicable laws, regulations, and procedures.

3. The environmental impacts of the WTTIP are fully disclosed in the Draft EIR and Final EIR, and the Draft EIR and Final EIR are adequate for use by the District for approval, design and construction of the project-level elements of Alternative 1.

4. The documents and material constituting the record of the proceeding are located at the District's administrative offices, 375-11th Street, Oakland, CA 94607. The custodian of said records is the District Secretary.

5. No substantial change in circumstances has occurred since preparation of the Draft EIR and Final EIR which would require revisions to the Draft EIR and Final EIR due

to the discovery or disclosure of new, significant impacts not covered in the Draft EIR and Final EIR, and there is no requirement to recirculate the Draft and Final EIRs.

6. Public consultation conducted prior to completing the Draft EIR has been a valuable component of the planning process. Efforts to encourage early public participation in the process included extensive community outreach and informational speaker presentations. These efforts, which are described in detail in the EIR, allowed for early and continued public input throughout the planning process.

7. The Board of Directors makes the findings and determinations regarding WTTIP set forth in the Findings, attached hereto as Exhibit A, and incorporated into this resolution by this reference.

8. The Board of Directors hereby approves, adopts, and imposes the MMRP, attached hereto as Exhibit B and incorporated herein by this reference. The mitigation measures adopted by the Board of Directors are hereby imposed as conditions of Project approval.

BE IT FURTHER RESOLVED that the Final EIR is hereby certified as having been completed in compliance with CEQA.

BE IT FURTHER RESOLVED that Alternative 1 and in particular the project-level elements for Alternative 1 of the WTTIP as described in the Draft and Final EIR, are hereby approved; specifically the following improvements at the water treatment plants:

- Lafayette Water Treatment Plant Improvements (filters; clearwells; Leland and Bryant Pumping Plant and Pipelines; backwash water recycle system; raw water bypass pipe, chlorine contact basin; blower building; electrical substation; emergency generator; sodium hypochlorite system and reclaimed water pipeline)

- Orinda Water Treatment Plant Improvements (backwash water recycle system and emergency generator)

- Walnut Creek Water Treatment Plant Improvements (Leland No. 2 Pumping Plant and filters)

- Sobrante Water Treatment Plant Improvements (ozone upgrades; backwash water system improvements; high rate sedimentation units and chlorine contact basin)

- Upper San Leandro Water Treatment Plant Improvements (ozone upgrades and filter-to-waste equalization basin)

As well as the following distribution system improvements:

- Happy Valley Pumping Plant at the Alternative Site (located on Miner Road near Camino Sobrante in Orinda)
- Happy Valley Inlet/Outlet Pipeline
- Ardith Reservoir

- Donald Pumping Plant
- Sunnyside Pumping Plant
- Glen Pipeline and Glen Reservoir Decommissioning
- Highland Reservoir as revised (located 120 feet north and 20 feet west of the DEIR Proposed Highland Reservoir Site in Lafayette)
- Highland Inlet/Outlet Pipeline
- Moraga Road Pipeline
- Moraga Reservoir
- Fay Hill Reservoir
- Fay Hill Pumping Plant
- Fay Hill Pipeline
- Tice Pumping Plant
- Tice Inlet/Outlet Pipeline
- Withers Pumping Plant
- Leland Isolation Pipeline and Bypass Valves

BE IT FURTHER RESOLVED that the General Manager is hereby directed to take such actions as shall be necessary to implement this determination to move forward with Alternative 1 and carry out the project-level elements Alternative 1 of the WTTIP, subject to compliance with all mitigation measures in the MMRP.

BE IT FURTHER RESOLVED that the Secretary of the District is hereby directed to file a Notice of Determination, in accordance with the law, with the County Clerks of Alameda and Contra Costa Counties and with the State Clearinghouse.

ADOPTED this 19th day of December, 2006 by the following vote:

AYES: Directors Coleman, Foulkes, Linney, McIntosh, Mellon, Richardson, and President Patterson.

NOES: None.

ABSENT: None.

ABSTAIN: None.

William B. Patterson
President

ATTEST:

Lynelle M. Lewis
Secretary

APPROVED AS TO FORM AND PROCEDURE:

Gloria Colleen
General Counsel

EXHIBIT A

EBMUD Board of Directors Findings Regarding Water Treatment and Transmission Improvements Program

1.0 Introduction

This is the findings document adopted by the East Bay Municipal Utility District ("EBMUD" or "District") Board of Directors for the following project-level elements of the Water Treatment and Transmission Improvements Program (WTTIP) [1]:

- Retaining and upgrading the Lafayette WTP as described under Alternative 1 in the *Water Treatment and Transmission Improvements Program Environmental Impact Report* (WTTIP EIR)
- Upgrading the Orinda, Sobrante, Walnut Creek, and Upper San Leandro WTPs as described under Alternative 1 in the WTTIP EIR
- Constructing the following project-level elements described in the WTTIP EIR:
  - Ardith Reservoir and Donald Pumping Plant
  - Fay Hill Pumping Plant and Pipeline Improvements
  - Fay Hill Reservoir
  - Glen Pipeline Improvements
  - Glen Reservoir Decommission
  - Happy Valley Pumping Plant and Pipeline
  - Highland Reservoir and Pipelines
  - Lafayette Reclaimed Water Pipeline
  - Leland Pressure Zone Isolation Bypass Valves
  - Leland Isolation Pipeline
  - Moraga Reservoir
  - Moraga Road Pipeline
  - Sunnyside Pumping Plant and Pipeline
  - Tice Pumping Plant and Pipeline
  - Withers Pumping Plant

Section 1.1, "The Project," describes the WTTIP and places it in the context of the planning efforts of EBMUD.

Section 2, "CEQA Requirements Regarding Project Impacts," describes the requirements under the California Environmental Quality Act ("CEQA") regarding Project impacts.

Section 3, "Findings Regarding Independent Review and Judgment," contains the findings regarding the independent review and judgment of the Board of Directors.

[1] Improvements characterized in the WTTIP EIR as program level, including additional treatment processes at the WTPs, require additional environmental review pursuant to the California Environmental Quality Act (CEQA) prior to approval. Consequently, this document contains no findings regarding program-level WTTIP elements.

Section 4, "Findings Regarding the Project," contains the findings regarding potential Project impacts. This section is divided into three parts. Section 4.1 contains findings regarding the eight potential unavoidable significant environmental impacts. The Board of Directors finds that the considerations of Project benefits, engineering necessity, and cost, outweigh or override the potential for these impacts. Section 4.2 contains the findings regarding significant or potentially significant Project impacts that are mitigated to a less-than-significant level. Section 4.3 contains the findings regarding Project impacts that are less than significant or where there is no impact.

Section 5, "Statement of Overriding Considerations," sets forth the statement of overriding considerations for the 8 identified significant and unavoidable impacts.

Section 6, "Findings Related to Potential Growth Inducing Impacts," contains the findings concerning the potential growth inducing impact of the Project. The Board of Directors finds that implementation of identified mitigation measures will reduce the secondary impacts of growth, but will not lessen it to a less-than-significant level. The impact is therefore included as item 8 of the above-referenced potentially unavoidable significant environmental impacts of the Project.

Section 7, "Findings Regarding Alternatives and Selecting the Project," contains the findings concerning the alternative Project configurations considered in the Draft EIR. The Board of Directors finds that the selected alternative is feasible, and that the other alternatives are either infeasible or do not provide any clear environmental, or other benefit beyond those of the proposed Project.

The findings presented here also summarize the mitigation measures set forth in the Draft EIR and agreed to by the District or incorporated into the Project. The mitigation measures are summarized below for convenience, but the summary is not intended to change any aspects of the complete text of the mitigation measures described in the Final EIR (FEIR) and adopted by the District.

1.1 The Project

A. Project Need and Objectives

EBMUD provides water service to 20 incorporated cities and 15 unincorporated areas in Alameda and Contra Costa Counties. EBMUD's water system serves approximately 1.3 million people in a 325-square-mile area. EBMUD's service area is generally divided by the Oakland-Berkley Hills into the West of Hills and East of Hills service areas. EBMUD operates six water treatment plants: Walnut Creek, Lafayette, Orinda, Sobrante, Upper San Leandro, and San Pablo. Together the WTPs treat a current average-annual demand of 222 million gallons per day (mgd).[2] Throughout the water system, there are over 4,000 miles of potable (treated) water distribution pipelines, over a dozen tunnels, 175 potable water reservoirs, approximately 150 pumping plants, and numerous other facilities that together provide water to EBMUD customers.

[2] 2006 projected average-annual demand.

In 2003, EBMUD completed a Water Treatment and Transmission Master Plan which reviewed the configuration of EBMUD's water treatment and transmission system for a 30 to 50-year horizon. A key recommendation of the Master Plan was to address the capacity and regulatory issues associated with the water treatment and distribution facilities serving the Lamorinda area. Staff subsequently developed the Lamorinda Water System Improvements Program (LWSIP) Facilities Plan further defined options to address the Lamorinda area issues and identified two primary alternatives for further CEQA evaluation. The environmental impacts of the two alternatives were evaluated the WTTIP Draft EIR.

WTTIP improvements are driven by a variety of overlapping needs, including meeting existing and future water demands, meeting future regulatory standards related to water quality, complying with environmental permit conditions, and replacing and upgrading aging infrastructure.

Water Demands

Customer need for water varies substantially on a seasonal and daily basis, and water facility sizing must account for actual water delivery requirements, including the peak hours of maximum-day demands as well as unaccounted-for water (e.g., leakage and firefighting), variations in pumping demand conditions, and system outages for planned and unplanned emergencies.

The capacity of some facilities serving the Lamorinda/Walnut Creek area is already insufficient to reliably meet summer demands. The WTTIP therefore, includes projects to address existing capacity deficiencies in the Lamorinda/Walnut Creek treatment and distribution system as well as anticipated future (to 2030) capacity needs. The Lafayette WTP is the most critical capacity-deficient facility serving the area. Several areas of the existing distribution system also have inadequate pumping or pipeline capacity to deliver water to customers and maintain customer pressure or fire flow. These issues have developed over the last 30 to 50 years as the region has grown, and options for correcting distribution system issues are limited by operational and hydraulic issues.

Water Quality Regulations

Many WTTIP projects, particularly improvements at the WTPs, are driven by new and emerging water quality issues. EBMUD is subject to numerous federal and state regulations pertaining to domestic water supplies, many of which stem from the Safe Drinking Water Act. In California, the federal government has delegated responsibility for the administration and enforcement of certain federal requirements to the state. Federal and state regulations impose treatment technology standards, monitoring standards, and other requirements.[3]

Current major regulatory initiatives that affect the treatment of drinking water include initiatives to reduce microbial pathogens—in particular, *cryptosporidium*—and disinfection byproducts.

[3] Title 22, Division 4, Chapter 15 of the California Code of Regulations (entitled "Domestic Water Quality and Monitoring") contains key regulations for drinking water.

Amendments (in 1996) to the Surface Water Treatment Rule required the U.S. Environmental Protection Agency (U.S. EPA) to promulgate rules to balance the risks associated with waterborne pathogens like *cryptosporidium* against the potential health risks associated with disinfection byproducts. The Stage 1 Disinfectants/Disinfection Byproducts Rule and Interim Enhanced Surface Water Treatment Rule were the first phase of rule-making required by Congress as part of the 1996 amendments. The second phase of rule-making, signed into law in December 2005, includes the Stage 2 Disinfectants/Disinfection Byproducts Rule (Stage 2 D/DBP Rule) and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule).

The Stage 2 D/DBP Rule and LT2 Rule create the need for many of the proposed improvements at the WTPs.

In addition, EBMUD also established internal water quality goals that meet or exceed state or federal requirements. EBMUD sets these independent goals to ensure it can meet regulations with a margin of safety, plan for future more stringent regulatory standards, and provide reliable, high quality service.

NPDES Permit Requirements

EBMUD discharges to area streams and reservoirs from two sources: 1) the Lafayette Aqueducts (containing raw water originating from the Mokelumne watershed) in order to fill local storage reservoirs; and 2) from the Orinda WTP filter backwash treatment system for disposal. Backwash water discharges present a potential for compliance issues. While raw water discharges generally have not been a compliance issue, the backwash water discharges present a potential for compliance issues.

At the Orinda WTP, filter backwash water is dechlorinated and discharged to San Pablo Creek, which in turn discharges into San Pablo Reservoir. The discharge from the backwash water settling ponds to San Pablo Creek is covered by the Regionwide NPDES Permit for Discharge from Surface Water Treatment Facilities for Potable Supply. Violations of this permit have occurred, primarily due to bioassay failures (indicating acute aquatic toxicity) of this discharge. Providing backwash water treatment at the Orinda WTP, as proposed under the WTTIP, would allow treated backwash water to be returned to the head of the WTP and would eliminate this discharge to San Pablo Creek.

Infrastructure Replacement and Technology Upgrades

Infrastructure, both at the WTPs and in the transmission and distribution systems, must be periodically replaced and upgraded due to aged condition or to meet current safety, regulatory, and technology standards. The Lafayette WTP has numerous operating problems, due in part to aging infrastructure. Some systems at the plant have not been upgraded for 45 years. Examples of existing problems at the Lafayette WTP include the poor condition of the filters, which constrains plant operations when the turbidity of source water is higher than normal; numerous problems with backwash water handling facilities; recurring electrical brownouts; and problems with treated water storage facilities (clearwell and weir) that can adversely affect water quality. The

WTTIP proposes upgrades to address this including a raw water bypass pipeline, a new backwash water recycle system, replacement of the chemical storage, two new clearwells, and the replacement of the pumping plants at the plant.

WTTIP projects that address aging transmission and distribution systems infrastructure include replacement of the Fay Hill, Moraga, and Leland open-cut reservoirs with tank-style reservoirs.

Project Objectives

The objectives for the WTTIP are identified in Table A-1.

TABLE A-1
PROJECT OBJECTIVES

Category	Project Objectives
Reliability	▪ Provide reliable water treatment, transmission, and distribution infrastructure that meets long-term operational needs under average and maximum-day demand conditions ▪ Meet EBMUD standards for planned, unplanned, and emergency outages ▪ Meet security initiatives
Regulatory & Water Quality	▪ Continue to meet drinking water and environmental regulations with a margin of safety and achieve EBMUD internal long-term water quality goals
Operations	▪ Ensure project will meet short-term peak demand periods in excess of projected demands ▪ Minimize the risk of service disruption and meet demands during construction
Implementation	▪ Minimize implementation issues by considering the complexity of public and local agency issues
Environmental	▪ Minimize environmental impacts during construction ▪ Minimize environmental impacts after construction and during operations
Economics	▪ Minimize life-cycle costs (capital, operating, and maintenance) to EBMUD customers

B. Project Location and Description

Table A-2 identifies the project components, and location of each component. Alternative 1 of the WTTIP was developed to meet the project objectives set forth above and includes retaining and upgrading the Lafayette WTP, as well as upgrading the Orinda, Sobrante, Walnut Creek, and Upper San Leandro WTPs. The proposed changes at these WTPs generally involve improvements to the raw water treatment processes, the backwash water treatment processes, treated water storage, and/or transmission. In addition, the Alternative 1 of the WTTIP also includes the following project-level elements:

- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements and Glen Reservoir Decommission
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Pressure Zone Isolation Bypass Valves
- Leland Isolation Pipeline
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant and Pipeline
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Lafayette Water Treatment Plant

The Lafayette WTP is in the City of Lafayette between Mt. Diablo Boulevard to the south and the right-of-way of Highway 24 to the north. Lafayette Creek and the Walter Costa Trail traverse the WTP property. The Lafayette Aqueducts pass through the WTP site from east to west.

Water demand in the areas served by the Lafayette WTP currently exceeds the plant's capacity, which is limited due to poor filter media conditions, limiting hydraulic influence on the filters from the clear well, limited filter backwash handling capability, and recurring electrical brownouts. The plant is also in need of extensive upgrades to meet anticipated regulations and maintain performance.

Numerous improvements are planned to increase the WTP capacity and reliability including: construction of a raw water bypass; improvements to the WTP filters and treated filter backwash system; replacement of the chemical feed system; construction of a chlorine contact basin; replacement of the treated water clearwell; the replacement of pumping plants and associated pipelines; and electrical modifications (including the construction of a new electrical substation).

Raw Water Bypass

A new 24-inch-diameter raw water bypass pipeline is planned so that chlorinated raw water could be pumped directly into the Leland and Bryant Pressure Zones for use by EBMUD customers during disruption of treated water service caused by a catastrophic event.

TABLE A-2
WTTIP PROJECT-LEVEL PROPOSED FACILITY LOCATIONS

Facility	Project Location	Address or Nearest Intersection
Lafayette Water Treatment Plant (WTP)[a]	Lafayette	3848 Mt. Diablo Boulevard
Orinda WTP[a]	Orinda	190 Camino Pablo
Walnut Creek WTP[a]	Walnut Creek	2201 Larkey Lane
Sobrante WTP[a]	Contra Costa County	5500 Amend Road
Upper San Leandro WTP[a]	Oakland	7700 Greenly Drive
Project-Level Transmission and Distribution System Improvements		
Ardith Reservoir/Donald Pumping Plant[a]	Orinda	At existing Donald Pumping Plant near Ardith Drive and Westover Court
Fay Hill Pumping Plant and Pipeline Improvements[a]	Moraga	Pumping Plant: southwest corner of intersection of Rheem Boulevard and Moraga Road; Pipeline: Rheem Boulevard west of Chalda Way
Fay Hill Reservoir[a]	Moraga	At existing Fay Hill Reservoir site off of Fay Hill Road near Rheem Boulevard
Glen Pipeline Improvements and Glen Reservoir Decommission[a]	Lafayette	Nordstrom Lane from Hilltop Drive to Glen Road, Glen Road from Nordstrom Lane to just west of Monticello Road; Monticello Road north of Presher Way
Happy Valley Pumping Plant and Pipeline	Orinda	Pumping Plant: on Miner Road near Camino Sobrante; Pipeline: from pumping plant southwest on Miner Road, then southwest on Miner Road to Oak Arbor Road
Highland Reservoir and Pipelines	Lafayette	Lafayette Reservoir Recreation Area; Pipeline: from reservoir to Mt. Diablo Boulevard
Lafayette Reclaimed Water Pipeline	Lafayette	Lafayette WTP; Pipeline: from Lafayette WTP to Highland Reservoir overflow/drain pipeline
Leland Pressure Zone Isolation Bypass Valves[a]	Walnut Creek	Danville Boulevard near Rudgear Road
Leland Isolation Pipeline	Walnut Creek	Lacassie Drive from North California Street to North Main Street
Moraga Reservoir[a]	Moraga	At existing Moraga Reservoir near Draeger Drive and Claudia Court
Moraga Road Pipeline	Lafayette/Moraga	Northern edge of Lafayette Reservoir Recreation Area, Moraga Road from Nemea Court/Madrone Drive to Draeger Drive
Sunnyside Pumping Plant and Pipeline	Orinda/Lafayette	Pumping Plant: Happy Valley Road near Sundown Terrace; Pipeline: pumping plant to Happy Valley Road
Tice Pumping Plant and Pipeline	Contra Costa County	Pumping Plant: near Tice Valley Boulevard and Olympic Boulevard; Pipeline: from pumping plant across Olympic Boulevard, north on Boulevard Way to Warren Road
Withers Pumping Plant	Contra Costa County	At Grayson Reservoir near Reliez Valley Road and Silver Hill Way

[a] Existing EBMUD facility.

Filters and Backwash Water Recycle System

The filters at the Lafayette WTP would be rebuilt and a new blower building would be added to allow for more efficient combined air and water filter backwash.

The District's Water Supply Permit from the state Department of Health Services requires the District to implement actions to meet the *California Cryptosporidium Action Plan*. The *California Cryptosporidium Action Plan* focus is to optimize water treatment practices in order to maximize *cryptosporidium* removal. The Lafayette WTP treated filter backwash water is currently discharged into the Lafayette Aqueducts, which are the raw water supply for the Orinda WTP. The filter backwash may contain higher concentrations of pathogens that were removed by the filters. Because of issues associated with pathogen levels, EBMUD has agreed to discontinue that practice by 2008.

The WTTIP includes an interim and a long-term solution to meet the *California Cryptosporidium Action Plan*.

As an interim solution, the Lafayette Reclaimed Water Pipeline project would deliver reclaimed water from the Lafayette WTP filter backwash treatment system to the Lafayette Reservoir. The pipeline would be installed primarily on EBMUD property in the City of Lafayette (the Lafayette WTP property and the Lafayette Reservoir Recreation Area). The northern terminus of the Lafayette Reclaimed Water Pipeline is at the Lafayette WTP, and the southern terminus is in the Lafayette Reservoir, where the pipeline would discharge water reclaimed at the WTP into the reservoir. For purposes of description, there are essentially three distinct segments to the proposed alignment:

- *Segment 1*. From the existing backwash water facilities at the Lafayette WTP, the proposed alignment travels south across the creek. The pipe would span Lafayette Creek; there would be concrete abutments on either side of the creek supporting the pipe. South of the creek, the pipe would be constructed in a trench adjacent to the Bryant and Leland Pipelines.

- *Segment 2*. The Lafayette Reclaimed Water Pipeline would be co-located in the same trench (and constructed at same time) as the overlapping alignment segment of the Highland Inlet/Outlet pipeline.

- *Segment 3*. The Lafayette Reclaimed Water Pipeline and Highland Reservoir overflow pipeline are the same. The pipeline would extend into the reservoir, terminating at a diffuser. For construction of the pipe within the reservoir, the pipe would likely be floated on top of the water, then sunk into place and anchored to the bottom.

The proposed long-term solution is the construction of a backwash water recycle system, which would provide additional treatment and then recycle the backwash water to the head of the plant, thus reducing the potential for reintroduction of pathogens into a drinking water supply. This would comply with the *California Cryptosporidium Action Plan*. The new backwash water recycle system would also reduce the amount of chlorination required at Orinda WTP, thereby reducing disinfection byproduct formation in the Orinda WTP water supply.

The new backwash water recycle system would include a filter-to-waste equalization basin; backwash water equalization basins; flocculation and sedimentation basins; ultraviolet-light (UV) disinfection reactor; chemical room, electrical room, solids holding tank, and solids pumping plant. A filter backwash blower building would also be constructed to enable backwashing with air and water. The basins would be buried concrete structures approximately 25 feet deep. The UV disinfection building would house the UV disinfection system, which would disinfect the backwash water before the decant[4] pumps send it to the head of the plant. The chemical room would house chemical feed pumps and would be used to store coagulants and/or nonionic polymers (in totes or small tanks) needed for coagulation and flocculation of the backwash water. The electrical room would house the electrical panels and control systems for various pumps and motors for the backwash water recycle system.

Chemical Feed Systems

In order to provide disinfection in the Lafayette aqueducts rather than in the Mokelumne Aqueducts, thereby reducing chlorine contact time and the potential for formation of disinfection byproducts at the Orinda WTP, the existing sodium hypochlorite storage and feed systems housed in the chemical building at the Lafayette WTP would be replaced. A new 2,500-square-foot building would be constructed to store and pump (Feed) sodium hypochlorite. Sodium hypochlorite would be fed to the chlorine contact basin and to the Lafayette Aqueducts to meet disinfection requirements in the Lafayette Aqueducts for the Orinda WTP.

Chlorine Contact Basin

EBMUD proposes to construct a chorine contact basin to follow filtration to improve disinfection efficiency and thus reduce the formation of disinfection byproducts at the Lafayette WTP. A new 1.1-million-gallon (mg) chlorine contact basin and associated weir structure and feed system would be constructed to meet disinfection requirements for the Lafayette WTP. The chlorine contact basin would be a buried concrete tank with a diameter and depth of approximately 70 feet and 40 feet, respectively.

Treated Water Storage (Clearwell)

The existing 0.3-mg clearwell at the Lafayette WTP is substantially undersized, is too high in elevation, and experiences maintenance problems. EBMUD plans to replace the clearwell with two new clearwells with a total active storage of 6 mg (Clearwell No. 1 would have 4 mg and Clearwell No. 2 would have 2 mg of storage). The clearwells would be buried, covered, concrete tanks approximately 50 feet deep. A new overflow discharge pipe between the clearwells and Lafayette Creek would be constructed for emergency use only.

Pumping Plants and Pipelines

EBMUD is planning to decommission the Bryant and Leland Pumping Plants currently operating at the Lafayette WTP and replace these with new plants at the west end of the WTP near the new clearwells. The filter backwash water pumps would also be located within the Bryant and Leland

[4] Decant means to draw off the upper layer of liquid after the heaviest material (a solid or another liquid) has settled.

Pumping Plants. The pumping plants would draw water from the clearwells and pump it into the Bryant and Leland Pipelines or back to the filters. The alignments of these pipelines would be partially within the Lafayette WTP property and partially within Mt. Diablo Boulevard.

- *Bryant Pipeline*. The proposed alignment for the 36-inch-diameter Bryant Pipeline begins at the proposed Bryant Pumping Plant and extends south across Lafayette Creek to Mt. Diablo Boulevard. At Mt. Diablo Boulevard the alignment extends eastward in the westbound travel lanes of Mt. Diablo Boulevard, shifts north and continues east in EBMUD property, then shifts south back into the westbound lanes of Mt. Diablo Boulevard and continues east to the box culvert over Lafayette Creek east of the entrance to the WTP. The pipeline would pass over the concrete box culvert and transition to become the proposed Moraga Road Pipeline.

- *Leland Pipeline*. The proposed alignment for the 30-inch-diameter Leland Pipeline parallels the Bryant Pipeline alignment until reaching the concrete box culvert. There, the Leland Pipeline would bifurcate into two 20-inch-diameter pipelines to fit in the space between the box culvert and the roadway. After exiting east of the box structure, the two pipelines would merge into one 30-inch-diameter pipeline, which would tie into an existing pipeline serving the Leland Pressure Zone.

Orinda Water Treatment Plant

The Orinda WTP is located north of Highway 24 and east of Camino Pablo in Orinda. The WTP site is bisected by Manzanita Drive, a public street. EBMUD's property extends north of its plant facilities and includes an undeveloped area north of the existing washwater settling basins and the Orinda Sports Field (ballfields south of Wagner Ranch Elementary School). San Pablo Creek traverses the Orinda WTP site along the eastern property boundary.

At the Orinda WTP, filter backwash water is dechlorinated and discharged to San Pablo Creek, which in turn discharges into San Pablo Reservoir. Providing backwash water treatment at the Orinda WTP would allow treated backwash water to be returned to the head of the WTP and would eliminate this discharge to San Pablo Creek. This would prevent the potential for discharges that are not in compliance with the NPDES permit that currently governs these discharges.

The new system would include basins constructed below grade as well as above-ground buildings and a tank, all of which would be located in an area adjacent to the existing chemical building and west of the main entrance to the plant.

- *Basins*. The basins would include a filter-to-waste equalization basin, two backwash water equalization basins, and two flocculation and two sedimentation basins.

- *Above-Grade Structures*. The UV disinfection building would contain the backwash water return pumps, UV disinfection systems, and a chemical/electrical room that would house coagulants and/or nonionic polymers, the chemical feed pumps, and electrical panels and control systems. This building would be adjacent to and west of the basins. To operate the backwash water recycle system during a power outage, one 200-kilowatt emergency diesel generator would be stored onsite in a concrete building. An above-ground solids storage tank and solids pumping plant would also be constructed adjacent to the other components. Solids collected in the tank would be pumped into trucks and hauled to EBMUD's wastewater treatment plant for further treatment. A new gate would be constructed at the Manzanita

Drive entrance to the existing fence, on the pond side. The new gate would be designed to be more aesthetically pleasing.

Walnut Creek Water Treatment Plant

The Walnut Creek WTP is located in northwest Walnut Creek, north of Larkey Lane. The Acalanes Ridge Open Space surrounds the plant to the north, south, and west. The Walnut Creek WTP requires additional filter capacity to meet peak operational demands and to accommodate occasional source water quality problems. Therefore, the District plans to construct two new filters to increase the reliability of the WTP.

Construction of a new Leland Pumping Plant (No. 2) is also planned at the Walnut Creek WTP to correct hydraulic problems in Leland Pressure Zone. The new Leland Pumping Plant would be constructed adjacent to the recently completed backwash water treatment facilities. Two segments of 42-inch-diameter pipelines would be constructed to connect the new pumping plant to the transmission main serving the Leland Pressure Zone.

Sobrante Water Treatment Plant

The Sobrante WTP is located in unincorporated Contra Costa County, adjacent to the City of Richmond. The WTP site is bisected by Valley View Road and D'Avila Way/Amend Road. The entrance to the main portion of the plant site is off of Amend Road; the entrance to the western portion is off of D'Avila Way. San Pablo Creek is parallel to and within the western and southern property boundaries of the western portion of the site.

Improvements at the Sobrante WTP will include: an ozonation system; a backwash water recycle system; and a chlorine contact basin.

Ozonation System

The existing Sobrante WTP ozonation system is undersized for handling poor raw water quality episodes occasionally experienced at the WTP. The existing air-feed system will be converted to a liquid oxygen feed and would include the following components: liquid oxygen tanks, ozone generators, ozone contactor, and ozone destruct units. Other than the two new oxygen tanks, all changes related to upgrading the ozonation system would occur in existing buildings. New ozone generators with the ability to process 1,650 pounds per day would be constructed. The liquid oxygen tanks would be installed above ground and northwest of the existing ozonation building. The existing ozone destruct unit would capture and destroy any excess ozone from the ozone contact basin.

Backwash Water Recycle System

The Sobrante WTP capacity is limited by the existing backwash water treatment system. The existing backwash water treatment system would be converted to a backwash water recycle system, similar to that proposed at the Lafayette and Orinda WTPs. The two existing backwash water settling basins, located in the western part of the plant west of the main plant, would be converted to

backwash water equalization basins. A new filter-to-waste equalization basin would be constructed adjacent to these existing basins. The existing basins are partially above grade; the proposed basin would be partially above grade as well. In addition, two high-rate sedimentation units would be installed near the basin because the western portion of the plant (where backwash water processing occurs) is relatively small and constrained on all sides by public streets or San Pablo Creek. The two high-rate sedimentation units would be prefabricated, epoxy-painted steel structures approximately 50 feet long, 20 feet wide, and 12 feet high.

Chlorine Contact Basin

To assure the District can meet future disinfection byproduct regulations, the District plans to construct a new chlorine contact basin. The basin will be a covered concrete tank approximately 36 feet deep and up to 92 feet in diameter; it will be constructed below ground with a finished at-grade roof.

Upper San Leandro Water Treatment Plant

The Upper San Leandro WTP is located near Interstate 580 (I-580) at Keller Avenue in Oakland. The main entrance to the plant is off of Greenly Drive.

The changes to the ozonation system will include new ozone generators with the ability to process 1,250 pounds per day. Water emerging from the filters following backwash would be diverted to a new filter-to-waste equalization basin and recycled back to the head of the plant via a new return pumping plant. The pumping station and equalization basin would be above-ground structures. The pumping station capacity would be 500 gallons per minute. The equalization basin would be constructed of steel.

Ardith Reservoir/Donald Pumping Plant

The site for the new Ardith Reservoir and relocated Donald Pumping Plant is on EBMUD-owned property at Ardith Drive near Westover Court in Orinda. The Ardith Reservoir is needed for the replacement of the existing Moraga Reservoir. The open-cut Moraga Reservoir has a liner design that is prone to leakage and is oversized. Although there is no significant leakage presently occurring at the Moraga Reservoir, this type of liner design (referred to as "panel craft") has leaked at other District reservoirs, requires special maintenance, and must eventually be removed from service. The Ardith Reservoir must be brought on line (in addition to WTP improvements and the Moraga Road Pipeline) to provide water to customers currently served by the Moraga Reservoir before the latter can be replaced.

The Donald Pumping Plant supplies water from the Bryant Pressure Zone to the Baseline Pressure Zone. There are pressure problems currently constrain pumping plant operations: its elevation is too high, and the pumping plant does not have adequate inlet pressure during summertime demand periods. Relocating the Donald Pumping Plant to a lower elevation at the site and reconfiguring its pumping operations would correct the problem.

Fay Hill Pumping Plant and Pipeline Improvements

The existing Fay Hill Pumping Plant is located at the corner of a shopping center in Moraga, in the southwest quadrant of the intersection of Moraga Road and Rheem Boulevard. The existing Fay Hill Pumping Plant is an underground facility. As part of the WTTIP, EBMUD would replace existing pumps with more powerful units to increase the capacity from 1.6 mgd to 2.2 mgd. In addition, the existing 6-inch diameter pipe that restricts flow from the Fay Hill Pumping Plant to the Fay Hill Reservoir, causes some customers to experience low pressure under certain system operating conditions. The 6-inch diameter pipeline would be replaced by installing about 500 feet of 12-inch-diamater welded steel pipe in Rheem Boulevard. The improvement would improve flows to customers and throughout the pressure zone. The pipeline would operate under pressure. There would be no structural changes to the facility.

Fay Hill Reservoir

The Fay Hill Reservoir is located on existing EBMUD-owned property north of Rheem Boulevard and east of Moraga Road in Moraga. The sealant in the liner of the existing open-cut Fay Hill Reservoir contains zinc. Although it is not health threatening, the U.S. EPA has set non-mandatory drinking water standards for zinc. Replacing the open-cut reservoir with two cylindrical, steel, glass-lined tanks with low-profile dome roofs, will eliminate the need to rehabilitate the reservoir liner, eliminate other maintenance problems generally associated with open-cut reservoirs, provide redundancy should one tank have to be removed from service, and improve water quality in the reservoirs and throughout the pressure zone. As noted in the EIR, there are also significant cost saving is replacing the reservoir at the existing site.

Glen Pipeline Improvements and Glen Reservoir Decommission

The planned Glen Pipeline Improvements consist of a welded-steel pipeline segment that would be constructed in Nordstrom Lane, from Hilltop Drive to Glen Road, then east in Glen Road to just west of Monticello Road in the city of Lafayette. During high-demand periods, the constrained capacity of an existing pipeline and operation of the Valory Pumping Plant cause water levels in the Glen Reservoir to drop below acceptable levels, limiting water available for firefighting and reducing customer water pressure. By increasing the diameter of certain pipelines, the problem would be fixed and the Glen Reservoir (a 0.2 mg redwood tank) would no longer be needed. The reservoir site would remain in its current state until the District determined whether to sell the property.

Happy Valley Pumping Plant and Pipeline

EBMUD plans to construct the Happy Valley Pumping Plant on a privately owned parcel on Miner Road near Camino Sobrante in Orinda. This is the site identified on pages 6-33 through 6-37 of the DEIR. There is currently inadequate pumping capacity to supply the Las Aromas Pressure Zone during maximum-day demand conditions; an additional 3.2 mgd is required to meet maximum-day demand conditions in 2030. To serve the new pumping plant, an approximately 4,850-foot-long, 16-inch-diameter, welded-steel pipe would be constructed

between the plant and the Happy Valley Reservoir (located near the Miner Road/Oak Arbor Road intersection). The proposed project will meet existing and anticipated future demand in this area and would supply the Happy Valley Reservoir.

Highland Reservoir and Pipelines

EBMUD plans to construct the Highland Reservoir on an undeveloped hill slope in oak woodland within the EBMUD-owned Lafayette Reservoir Recreation Area. The proposed 2.5-acre site is on a hillside in the northern portion of the Lafayette Reservoir Recreation Area. The site is traversed by the Rim Trail, which would be permanently re-routed around the tank as part of the project. The design calls for a cylindrical, prestressed-concrete tank constructed on excavated native material. The tank would be partially buried using native backfill. The Highland Reservoir will increase water storage available to the Colorados Pressure Zone and stabilize service pressure.

The reservoir's approximately 1,000-foot long, 20-inch-diameter, welded-steel inlet/outlet pipeline will be constructed between the tank and the Lafayette WTP. From Mt. Diablo Boulevard, the Highland Reservoir inlet/outlet pipeline and the Lafayette Reclaimed Water Pipeline will be located in the same trench.

The alignment for the reservoir's overflow pipeline (from the tank to Lafayette Reservoir) will be the same as for the Lafayette Reclaimed Water Pipeline; the proposed alignment extends into Lafayette Reservoir, terminating at a diffuser. Any overflow from the Highland Reservoir will be dechlorinated in a vault manhole along the overflow pipeline route before discharge into Lafayette Reservoir.

Leland Isolation Pipeline and Bypass Valves

EBMUD plans to construct Pipeline and valve improvements in two areas of Walnut Creek in the Leland Pressure Zone. These improvements would correct hydraulic problems in the Leland Pressure Zone. A 700-foot-long, 24-inch-diameter Leland Isolation Pipeline will be constructed in Lacassie Boulevard in Walnut Creek. Additionally, a 54-inch valve will be closed in North California Boulevard.

The Leland Isolation Bypass Valves will include closure of a 24-inch valve and installation of an 8-inch-diameter bypass pipeline, a new 24-inch valve, a very short length of 24-inch-diameter pipeline at the existing Danville Pumping Plant, and another short length of 12-inch-diameter pipeline in a nearby section of Danville Boulevard.

Moraga Reservoir

The existing Moraga Reservoir is located on EBMUD-owned property at the intersection of Draeger Drive and Claudia Court in Moraga. Planned improvements to the facility include the construction of one concrete tank with a dome-shaped roof in the footprint of the open-cut reservoir. Once the tank is finished, it will be backfilled and partially buried. The tank area will then be replanted with vegetation.

Moraga Road Pipeline

Hydraulic analyses indicate that even with the improvements in WTP production and pumping capacity (at Lafayette WTP), additional transmission capacity to the Moraga Reservoir is required to meet current water demands as well as future (2030) demands. EBMUD plans to construct an approximately three-mile-long pipeline that would be entirely buried and installed primarily within open space in the Lafayette Reservoir Recreation Area and within public roadways in the cities of Lafayette and Moraga.

The pipeline would be part of the Bryant Pressure Zone south of Highway 24. The northern terminus of the Moraga Road Pipeline is at the Lafayette WTP in the city of Lafayette. The southern terminus is in the city of Moraga, in Moraga Road at Draeger Drive, where the Moraga Road Pipeline would connect to an existing pipeline. Table A-3 identifies the streets and areas along the pipeline alignment and the construction technique to be employed in those areas.

TABLE A-3
STREETS AND AREAS ALONG THE PROPOSED MORAGA ROAD PIPELINE ALIGNMENT

Street/Area	Between	Approximate Length (feet)	Construction Technique
Mt. Diablo Boulevard	Lafayette WTP and Lafayette Reservoir Recreation Area	65	Open Trench
Lafayette Reservoir Recreation Area	Mt. Diablo Boulevard and Nemea Court/Moraga Road	5,775	Open Trench
Moraga Road	Nemea Court and Via Granada/ Sky-Hy Drive	1,750	Open Trench
Moraga Road	Via Granada/Sky-Hy Drive and Rheem Boulevard	4,570	Open Trench
Moraga Road	North of Rheem Boulevard and south of Rheem Boulevard	400	Bore and Jack
Moraga Road	Bore-and-jack pit south of Rheem Boulevard to Draeger Drive	4,000	Open Trench
Total (feet)		**16,560**	
Total (miles)		**3.1**	

Sunnyside Pumping Plant

EBMUD plans to construct the new Sunnyside pumping plant on privately owned, currently undeveloped property located in Lafayette, on the Orinda border near the intersection of Happy Valley Road and Sundown Terrace. This facility would be part of the Valley View Pressure Zone which is supplied by the Bryant Pressure Zone (north of Highway 24). The new Sunnyside Pumping Plant would alleviate existing and anticipated capacity deficiencies; its location (closer to the reservoirs than the Valley View Pumping Plant) would also eliminate pressure fluctuation problems. The capacity of the proposed Sunnyside Pumping Plant would be sufficient to replace the Valley View Pumping Plant; the latter would become a backup facility to assist with fire flow supplies.

A 240-foot-long, 12-inch-diameter inlet pipeline and a 120-foot-long outlet pipeline would be constructed to connect the pumping plant to existing pipelines in Happy Valley Road.

Tice Pumping Plant and Pipeline

EBMUD plans to locate the Tice Pumping Plant on privately owned vacant land in unincorporated Contra Costa County, south of Olympic Boulevard. The Tice Pumping Plant would consist of a pumping plant building, a rate control station, a transformer, and switchgear. The pumping plant capacity would be 10 mgd. The access road and areas around the pumping plant building would be paved; part of the site would remain unpaved and would be regraded and landscaped following construction.

A 2,100-foot-long, 20-inch-diameter section of pipeline would be constructed on Boulevard Way from Warren Road to Olympic Boulevard and then to the pumping plant. A discharge pipeline would cross Olympic Boulevard from the pumping plant to an existing 20-inch-diameter pipeline on the north side of Olympic Boulevard. A rate control station, normally closed, and a gate valve on the existing 20-inch-diameter pipeline would be constructed to isolate the southwestern portion of the pressure zone.

Withers Pumping Plant

EBMUD plans to locate the Withers Pumping Plant on EBMUD property at the existing Grayson Reservoir, near the intersection of Reliez Valley Road and Silver Hill Way in an unincorporated area of Contra Costa County. The Withers Pumping Plant would consist of the pumping plant building, transformer, and switchgear. The pumping plant would be constructed with a slab-on-grade foundation. The pumping plant building would be approximately 26 feet in height (above grade). The plant capacity would be 3 mgd.

A 40-foot-long, 16-inch-diameter inlet pipeline would be constructed on EBMUD property. A 50-foot-long, 12-inch-diameter pipeline would be constructed between the pumping plant and an existing 12-inch-diameter pipeline in Reliez Valley Road.

Program-level Elements

The WTTIP EIR also discusses program-level improvements, or projects that EBMUD may implement sometime in the future, depending on (for example) changing water quality regulations, changing source water quality, and/or demand increases or infrastructure improvements needed over the next several years that drive the need for implementation of the facility. The program-level projects discussed in the WTTIP EIR are:

- Lafayette, Orinda, and Walnut Creek WTPs: High-Rate Sedimentation Units, Ultraviolet Light Disinfection
- Orinda WTP: Clearwell, Chlorine Contact Basin
- Leland Reservoir Replacement

- New Leland Pressure Zone Reservoir and Pipeline
- St. Mary's Road/Rohrer Drive Pipeline
- San Pablo Pumping Plant and Pipeline

These projects have not been developed enough to permit a detailed evaluation. Consequently, these elements are evaluated programmatically, in a more general manner. The District will undertake further environmental review pursuant to CEQA following completion of conceptual design and prior to implementation as more details about the specific locations and construction characteristics of these projects are developed.

When the District undertakes subsequent environmental review for facilities evaluated at a program level of detail, the information contained in the EIR will be revisited to determine the accuracy and the adequacy of these evaluations. In accordance with criteria set forth in CEQA, the WTTIP EIR could:

- Provide the basis in an Initial Study for determining whether a specific WTTIP project may have significant effects;
- Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, alternatives, and other factors that apply to the WTTIP as a whole; and/or
- Focus subsequent environmental review to permit discussion solely of new effects or more adverse effects as well as mitigation measures and alternatives other than those considered in this EIR.

Potential future WTTIP projects have been identified and discussed in the WTTIP EIR to allow coordinated planning of related project components and aid EBMUD in identifying scoping issues early into the planning process that will allow focused future project-level planning and environmental documentation. In addition, inclusion of program-level elements in the WTTIP environmental evaluation allows for identification of common mitigation measures that may be applicable to program-level elements.

2.0 CEQA Requirements Regarding Project Impacts

The California Environmental Quality Act (CEQA), Public Resources Code, Section 21000 et seq., requires written findings of project impacts, pursuant to Section 21081. Regarding these findings, CEQA Guidelines, Title 14, California Code of Regulations (CEQA Guidelines), Section 15091, state the following:

a. No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project, which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternative identified in the FEIR.

b. The findings required by subsection (a) shall be supported by substantial evidence in the record.

c. The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

d. When making the findings required in subdivision (a) (1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

e. The public agency shall specify the location and custodian of the documents or other materials which constitute the record of the proceedings upon which its decision is based. The custodian of said records is the District Secretary.

f. A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The changes or alterations referred to in State law, as quoted above, may be mitigation measures, alternatives to the project or changes to the project by the project proponent. The FEIR identifies mitigation measures that are proposed to minimize significant environmental effects of the project or to mitigate other potential effects that may not be, strictly speaking, environmental effects under CEQA. These mitigation measures will be incorporated into the design of the project. A Mitigation Monitoring and Reporting Plan (MMRP, see Exhibit B) is also adopted by the EBMUD Board of Directors to insure that all relevant mitigation measures identified in the FEIR and these Findings will be implemented.

3.0 Findings Regarding Independent Review and Judgment

Each member of the EBMUD Board of Directors was provided with a copy of the Draft EIR in June 2006 and a complete copy of the FEIR for the Project in December 2006. The Board hereby finds that the FEIR reflects the Board's own independent judgment, and that the Board has

independently reviewed and analyzed the FEIR prior to taking any final action with respect to the Project.

4.0 Findings Regarding The Project

Having reviewed and considered the information contained in the FEIR and the MMRP, the EBMUD Board of Directors hereby adopts the following findings regarding Project impacts and mitigation measures.

4.1 Findings Regarding Significant and Unavoidable Effects

There are eight potentially significant and unavoidable effects resulting from the Project. Mitigation measures proposed in the FEIR will lessen the impacts of these effects, but may not completely mitigate adverse environmental impacts to a less-than-significant level. These findings reflect the EBMUD Board's decision to adopt the Project.

1. Significant and Unavoidable Impact 3.3-2: Alteration of the appearance of WTTIP sites.

   Impacts would be significant and unavoidable at the following project site:

   - Highland Reservoir and Pipelines

   Impacts would be less than significant with mitigation at the following project sites:

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Happy Valley Pumping Plant and Pipeline
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Road Pipeline
   - Sunnyside Pumping Plant
   - Tice Pumping Plant and Pipeline
   - Withers Pumping Plant

   Impacts would be less than significant and mitigation would not be required at the following project sites:

   - Upper San Leandro WTP
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Moraga Reservoir

   Findings: To varying degrees, the above-ground changes proposed as part of the WTTIP projects would alter the existing appearance of the facility sites. The above-ground visual

quality impacts associated with proposed facilities would be reduced to a less-than-significant level for the above-listed project sites with implementation of Mitigation Measures 3.3-2a through 3.3-2c (see DEIR pages 3.3-35 through 3.3-36), in addition to tree-related mitigation measures (3.6-1a through 3.6-1d). However, impacts to the Highland Reservoir and Pipelines would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Highland Reservoir and Pipelines, this impact was identified as significant and unavoidable in the DEIR because of the proposed facility would add prominent new built structures that would appear in strong visual contrast to the natural landform and vegetation pattern. These changes would substantially alter the site's undeveloped oak woodland hillside appearance. Even with implementation of Mitigation Measures 3.3-2a through 3.3-2c and Measures 3.6-1a through 3.6-1e, this visual impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measures 3.3-2a through 3.3-2c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD to:

- Implement landscaping plans, in consultation with applicable jurisdiction.
- Plant native vegetation and/or construct earth berms around all proposed above-ground facilities to provide screening.
- Revegetate disturbed areas to minimize textural contrasts with the surrounding vegetation.
- Replace any landscaping at the WTTIP project sites that is removed or destroyed during construction, consistent with the landscape plan, using grasses, shrubs, and trees typical of the surrounding area.
- Require the contractor to warrant landscape plantings for one year after project completion.

The mitigation measures which are recommended on pages 3.3-35 and 3.3-36 of the Draft EIR are hereby imposed and shall be monitored in compliance with the MMRP. Because the District has agreed to these mitigations, impacts related to the alteration of the appearance of the WTTIP sites have been reduced to a less-than-significant level for the above listed project sites, with the exception of the effect at the Highland Reservoir and Pipelines site.

2. Significant and Unavoidable Impact 3.3-3: Effects on views from the surrounding area, including public roadways, public trails, and open space and residential areas.

Impacts would be significant and unavoidable at the following project site:

- Highland Reservoir and Pipelines

Impacts would be less than significant with mitigation at the following project sites:

- Lafayette WTP
- Orinda WTP

- Walnut Creek WTP
- Sobrante WTP
- Ardith Reservoir/Donald Pumping Plant
- Happy Valley Pumping Plant and Pipeline
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and would not require implementation of mitigation measures at the following sites:

- Upper San Leandro WTP
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Moraga Reservoir

Findings: The above-ground changes proposed as part of the WTTIP projects would alter the existing appearance of the facility sites from public roadways, public trails, and open space and residential areas. The above-ground visual quality impacts associated with proposed facilities would be reduced to a less-than-significant level for the above-listed project sites with implementation of Mitigation Measures 3.3-2a through 3.3-2c (see DEIR pages 3.3-35 through 3.3-36), in addition to tree-related mitigation measures 3.6-1a through 3.6-1d. However, impacts to the Highland Reservoir and Pipelines would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Highland Reservoir and Pipelines, this impact was identified as significant and unavoidable in the DEIR because the proposed facility would add prominent new built structures that would appear in strong visual contrast to the natural landform and vegetation pattern. Given the degree of visual contrast between proposed project facilities and the natural landscape setting, and in light of City of Lafayette policies regarding hillside and tree protection, as well as District policies regarding visual quality at recreation sites, there would be an effect on trail views from the Lafayette Reservoir Recreation Area Rim Trail. Even with implementation of Mitigation Measures 3.3-2a through 3.3-2c and Measures 3.6-1a through 3.6-1e, this visual impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measures 3.3-1a through 3.3-1c are hereby adopted and will be implemented as set forth in the MMRP. These measures are described above under Significant and Unavoidable Impact 1.

The mitigation measures which are recommended on pages 3.3-35 and 3.3-36 of the Draft EIR are hereby imposed and shall be monitored in compliance with the MMRP. Because the District has agreed to these mitigations, impacts related to the effects on views from the surrounding area have been reduced to a less-than-significant level for the above listed project sites, with the exception of effect at the Highland Reservoir and Pipelines site.

3. Significant and Unavoidable Impact 3.3-4: Effects on a scenic vista.

Impacts would be significant and unavoidable at the following project site:

- Highland Reservoir and Pipelines

Impacts would be less than significant and would not require implementation of mitigation measures at all other WTTIP project sites.

Findings: The above-ground changes proposed for the Highland Reservoir and Pipelines as part of the WTTIP projects would alter the existing appearance of the facility sites from a scenic vista that is currently available to the public. The above-ground visual quality impacts associated with proposed Highland Reservoir and Pipelines would be reduced with implementation of Mitigation Measures 3.3-2a through 3.3-2c (see DEIR pages 3.3-35 through 3.3-36), in addition to tree-related mitigation measures 3.6-1a through 3.6-1d; however, impacts to the Highland Reservoir and Pipelines would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Highland Reservoir and Pipelines, this impact was identified as significant and unavoidable in the DEIR because the proposed facility would add prominent new built structures that would appear in strong visual contrast to the natural landform and vegetation pattern. Given the degree of visual contrast between proposed project facilities and the natural landscape setting, and in light of City of Lafayette policies regarding hillside and tree protection, as well as District policies regarding visual quality at recreation sites, even with the addition of new replacement trees and landscape screening, there would be an effect on scenic trail views. Even with implementation of Mitigation Measures 3.3-2a through 3.3-2c and Measures 3.6-1a through 3.6-1e, this visual impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measures 3.3-2a through 3.3-2c are hereby adopted and will be implemented as set forth in the MMRP. These measures are described above under Significant and Unavoidable Impact 1.

The mitigation measures which are recommended on pages 3.3-35 and 3.3-36 of the Draft EIR are hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, impacts related to effects on a scenic vista have not been reduced to a less-than-significant level at the Highland Reservoir and Pipelines site.

4. Significant and Unavoidable Impact 3.6-1: Loss of or damage to protected trees.

Impacts would be significant and unavoidable at the following project site:

- Highland Reservoir and Pipelines

Impacts would be less than significant with mitigation at the following project sites:

- Lafayette WTP
- Sobrante WTP
- Upper San Leandro WTP
- Fay Hill Reservoir

- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and would not require implementation of mitigation measures at the following project sites:

- Orinda WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements sites

No impact would occur at the following project site:

- Walnut Creek WTP

Findings: Construction activities at most WTTIP project sites would result in removal of or damage to the root zone of protected trees that are adjacent to or within the construction zone. Numerous multi-stemmed, large-diameter native and non-native trees overhang proposed facility sites and pipeline alignments and likely have supporting root structures beneath the roads or proposed facilities. Many of these trees meet the criteria for protected trees in the pertinent tree ordinances described above. Trees that occur within, or immediately adjacent to, construction zones could be damaged by excavation, grading, and soil compaction; extensive damage could result in mortality. The closer the construction activity is to the trunk of a tree, the greater the damage. Each root that is damaged reduces the tree's capacity to supply water and nutrients to the leaves.

The impact to protected trees associated with proposed Highland Reservoir and Pipelines would be reduced with implementation of Mitigation Measures 3.6-1a through 3.6-1e (see DEIR pages 3.6-33 through 3.6-34); however, impacts to the Highland Reservoir and Pipelines would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternatives identified in the FEIR.

For the Highland Reservoir and Pipelines, this impact was identified as significant and unavoidable in the DEIR because of the proposed facility would require removal of approximately 34 trees, eight of which are 30 inches or greater in diameter and of these, three have a dbh of 40 inches or greater. These impacts have been reduced through a revision to the location of the tank on the site. Nonetheless, loss of a number of multi-stemmed, large-diameter native oak trees that are protected by the City of Lafayette's tree ordinance cannot be fully mitigated. Even with implementation of Mitigation Measures 3.6-1a through 3.6-1e, this biological resources impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measures 3.6-1a through 3.6-1e are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD to:

- Prior to construction, trees to be retained that are adjacent to or within project construction areas will be identified, mapped, and clearly delineated by protective fencing (e.g., short post and plank walls), installed at the tree dripline. Where dripline encroachment must occur, use special construction techniques (e.g., hand trenching) to allow the roots to breathe and obtain water. No storage of equipment, machinery, stockpiles of excavated soils, or construction materials; or dumping of oils or chemicals within retained tree driplines.
- For each project site all pruning of preserved trees will be performed by a certified arborist.
- No more than 25 percent of a tree's canopy removed during the pruning of retained trees.
- Removal of protected trees native to the local area, such as valley oak and coast live oak, replaced by native trees on a 3:1 basis. Non-native protected trees replaced at a 1:1 ratio with a native tree species.
- Warrant the health of all trees to be preserved within and adjacent to the construction corridor of project-related pipeline and facility sites for three years (five years if dripline area was disturbed). Of this preservation period, the contractor shall warrant tree health for the first year after project completion
- Replace any tree that is to be retained, but that dies as a result of project construction activities during the warranty period, with a tree of the same species.
- Develop and implement a five-year tree monitoring program with appropriate performance standards.
- Refine pipeline alignments in the field, to the extent feasible and within hydraulic constraints, to avoid removal of protected trees.
- 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.

The mitigation measures recommended on pages 3.6-33 and 3.6-34 of the Draft EIR are hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, impacts related to the loss of and damage to protected trees have not been reduced to a less-than-significant level at the Highland Reservoir and Pipelines site.

5. Significant and Unavoidable Impact 3.8-2: Reduction in the number of, or the available width of, travel lanes on roads where pipeline construction would occur, resulting in short-term traffic delays for vehicles traveling past the construction zones.

Impacts would be significant and unavoidable at the following project site:

- Glen Pipeline Improvements

Impacts would be less than significant with mitigation at the following project sites:

- Lafayette WTP
- Fay Hill Pumping Plant and Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

No impact would occur at the following project sites:

- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Reservoir
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: The WTTIP includes installation of new pipelines in both unpaved areas and paved roadways. These actions could temporarily disrupt existing transportation and circulation patterns in the vicinity. Impacts would include direct disruption of traffic flows and street operations. Lane blockages or street closures during construction would result in a reduction in travel lanes and curb parking. Construction operations related to facility installation within and/or across high-traffic volume arterials could have a significant adverse impact on traffic flow and operations at these locations.

The impact to paved roadways at the Glen Pipeline Improvements site would be reduced with implementation of Mitigation Measure 3.8-1 (see DEIR pages 3.8-13 through 3.8-15); however, impacts to the Glen Pipeline Improvements site would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Glen Pipeline Improvements, this impact was identified as significant and unavoidable in the DEIR because construction of the proposed facility would require road closure along Nordstrom Lane and Glen Road, with no detour route available. Even with implementation of Mitigation Measure 3.8-1, this traffic and transportation impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure is described below under Findings Regarding

Significant Effects Mitigated to Less-Than-Significant Levels, Potentially Significant Impact 3.8-1.

The mitigation measure recommended on pages 3.8-13 through 3.8-15 of the Draft EIR is hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, such impacts have not been reduced to a less-than-significant level at the Glen Pipeline Improvements site.

6. Significant and Unavoidable Impact 3.8-5: Project implementation would result in access disruption to adjacent land uses and streets for both general traffic and emergency vehicles, as well as disruption to bicycle/pedestrian access and circulation.

Impacts would be significant and unavoidable at the following project site:

- Glen Pipeline Improvements

Impacts would be less than significant with mitigation at the following project sites:

- Fay Hill Pumping Plant and Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

Impacts would be less than significant and mitigation would not be required at the following project sites:

- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves

No impact would occur at the following project sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Reservoir
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Pipeline construction within or across streets, and temporary reduction in travel lanes, could result in delays for emergency vehicle access in the vicinity of the worksites. In addition, access to driveways and to cross streets along the construction route could be temporarily blocked due to trenching and paving. This could be an inconvenience to some and a significant problem for others, particularly schools and emergency service providers (e.g., police and fire). Vehicle access would be restored at the end of each workday through the use of steel trench plates or trench backfilling. Employees and customers would continue to have access to the affected business establishments; only access to parking (on- or off-street) adjacent to the business would be affected, and truck deliveries could be made

difficult. With sufficient advance notification regarding the timing of construction in front of each affected property, this short-term inconvenience would result in a less-than-significant impact.

The impact of access disruption at the Glen Pipeline Improvements site would be reduced with implementation of Mitigation Measure 3.8-1 (see DEIR pages 3.8-13 through 3.8-15); however, impacts to the Glen Pipeline Improvements site would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Glen Pipeline Improvements, this impact was identified as significant and unavoidable in the DEIR because construction of the proposed facility would require road closure along Nordstrom Lane and Glen Road, with no detour route available. Even with implementation of Mitigation Measure 3.8-1, this traffic and transportation impact would remain significant. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure is described below under Findings Regarding Significant Effects Mitigated to Less-Than-Significant Levels, Potentially Significant Impact 3.8-1.

The mitigation measure recommended on pages 3.8-13 through 3.8-15 of the Draft EIR is hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, impacts related to access disruption have not been reduced to a less-than-significant level at the Glen Pipeline Improvements site.

7. Significant and Unavoidable Impact 3.8-6: Project implementation would result in disruptions to transit service on pipeline alignment routes.

Impacts would be significant and unavoidable at the following project sites:

- Happy Valley Pumping Plant and Pipeline
- Tice Pumping Plant and Pipeline

Impacts would be less than significant with mitigation at the following project site:

- Moraga Road Pipeline

Impacts would be less than significant and mitigation would not be required at the following project sites:

- Fay Hill Pumping Plant and Pipeline Improvements
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves

No impact would occur at the following project sites:

- Lafayette WTP
- Orinda WTP

- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: The proposed project could have temporary effects on traffic flow, particularly during pipeline installations proposed within road segments. Pipeline construction within or across streets, and temporary reduction in travel lanes, could result in delays for County Connection transit service in the vicinity of the worksites. Installation of new pipelines could disrupt access to bus stops along the alignments and could slow bus movements. Bus routes may need to be temporarily detoured, and/or bus stops temporarily relocated, to reduce impacts to less than significant levels. See DEIR pages 3.8-19 and 3.8-20.

The impact to transit service through the Happy Valley Pumping Plant and Pipeline and Tice Pumping Plant and Pipeline would be reduced with implementation of Mitigation Measure 3.8-1 (see DEIR pages 3.8-13 through 3.8-15); however, impacts to the Happy Valley Pumping Plant and Pipeline and Tice Pumping Plant and Pipeline sites would not be lessened to a level of insignificance and specific economic, legal, social, technological, or other considerations make infeasible the project alternative identified in the FEIR.

For the Happy Valley Pumping Plant and Pipeline and Tice Pumping Plant and Pipeline sites, this impact was identified as significant and unavoidable in the DEIR because available detour routings would not serve as adequate replacement routing for the affected bus lines. Even with implementation of Mitigation Measure 3.8-1, this traffic and transportation impact would remain significant. In addition, measures proposed by commenters to reduce the impacts to a level that is less than significant are not feasible because of the utilities in Miner Road and Lombardy Lane and because of additional impacts that would result from alterations to the roads. Therefore, EBMUD hereby makes finding (a)(3), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to these effects.

Facts in Support of Findings: Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure is described below under Findings Regarding Significant Effects Mitigated to Less-Than-Significant Levels, Potentially Significant Impact 3.8-1.

The mitigation measure recommended on pages 3.8-13 through 3.8-15 of the Draft EIR is hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, some impacts related to disruption in transit service have not been reduced to a less-than-significant level at the Happy Valley Pumping Plant and Pipeline and Tice Pumping Plant and Pipeline site.

8. Significant and Unavoidable Impact G-1: Project implementation would result in secondary effects of planned growth.

Findings: Implementation of the WTTIP would support an amount of growth that is consistent with regional growth projections. Nonetheless, according to the CEQA

Guidelines, the project could indirectly contribute to potentially significant secondary effects by removing a potential obstacle to projected development. Some of these secondary effects of planned growth have been identified in CEQA documents prepared by land use agencies as significant and unavoidable, while others have been identified as significant but mitigable. Identified unavoidable impacts that could occur as a result of planned growth include: loss of open space, traffic increases, degradation of air quality, and change in the visual character of the region.

EBMUD hereby makes finding (a)(1), as described in Section 2.0 above, as required by CEQA, Section 21081, and as stated in the CEQA Guidelines, Section 15091, with respect to the above-identified effect. The implementation of identified mitigation measures would reduce the impact but not lessen the impact to a less-than-significant level. See Draft EIR pages 4-21 through 4-22.

Facts in Support of Findings: Measure G-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD to:

- Participate in efforts to improve regional planning in the Bay Area.
- Encourage local land use planning agencies to coordinate land use planning functions and the provision of utility services.
- Encourage cities and counties to adopt general plans and zoning ordinances that favor high-density development and urban infilling, provide incentives for more housing near public transit, and to adopt ordinances that conserve open spaces, protect wildlife habitat, and conserve energy and water resources.

The mitigation measure recommended on pages 4-22 and 4-23 of the Draft EIR are hereby imposed and shall be monitored in compliance with the MMRP. While the District has agreed to these mitigations, such impacts have not been reduced to a less-than-significant level.

4.2 Findings Regarding Significant Effects Mitigated to Less-Than-Significant Levels

It has been determined that mitigation measures proposed in the FEIR will avoid or mitigate the following effects to a less-than-significant impact level.

A. Visual Quality

1. Potentially Significant Impact 3.3-5: Project implementation would result in new sources of light and glare.

   Impacts would be less than significant with mitigation at the following project sites:

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements

- Fay Hill Reservoir
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and mitigation measures would not be required at the following project sites:

- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline

Findings: The implementation of Mitigation Measures 3.3-5a through 3.3-5c would reduce light and glare impacts to a less-than-significant level. See Draft EIR page 3.3-48.

Facts in Support of Findings: Mitigation Measures 3.3-5a through Measure 3.3-5c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD to:

- Ensure that lighting used during nighttime construction is directed downward and oriented such that no light source is directly visible from neighboring residential areas to the extent possible.

- Ensure that new lighting utilizes cutoff shields and nonglare fixture design.

- Ensure that all permanent exterior lighting is directed onsite and downward to the extent possible.

- Use motion-sensor activation, landscaping, and avoid highly reflective building materials and/or finishes.

B. Geology, Soils, and Seismicity

1. Potentially Significant Impact 3.4-1: The proposed project would result in potential injury and/or damage resulting from unstable slopes.

   Impacts would be less than significant with mitigation at the following project sites:

   - Walnut Creek WTP
   - Sobrante WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Reservoir
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Moraga Reservoir
   - Moraga Road Pipeline

- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and mitigation measures would not be required at the following sites:

- Lafayette WTP
- Orinda WTP
- Upper San Leandro WTP
- Fay Hill Pumping Plant and Pipeline Improvements
- Glen Pipeline Improvements
- Leland Isolation Pipeline and Bypass Valves

Findings: Implementation Mitigation Measure 3.4-1 would reduce slope stability impacts to a less-than-significant level. See Draft EIR pages 3.4-25 and 3.4-26.

Facts in Support of Findings: Mitigation Measure 3.4-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Perform site-specific design-level geotechnical evaluations for non-pipeline projects, including detailed slope stability evaluations, to identify specific hazards and mitigate those hazards in final design and during construction. Slope stabilization measures may include: 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, and/or erosion control measures. Mitigation measures included in the geotechnical report will be incorporated into project construction specifications and become part of the project.

2. Potentially Significant Impact 3.4-2: Implementation of the proposed project could result in facility damage or service interruptions resulting from strong groundshaking. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measure 3.4-2 would reduce impacts related to the effects of strong groundshaking to a less-than-significant level at all project sites. See Draft EIR page 3.4-27.

   Facts in Support of Findings: Mitigation Measure 3.4-2 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD to:

   - Perform site-specific design-level geotechnical evaluations to identify potential secondary ground failure hazards (i.e. seismically induced settlement) associated with the expected level of seismic ground shaking for non-pipeline projects, including subsurface exploration, drilling, soil testing, and analysis of site seismic response and incorporate seismic design criteria to ensure that facilities are designed to withstand the highest expected peak acceleration. Design and construct buildings in accordance with the District's seismic design standards and/or meet or exceed design standards for Seismic Zone 4 in the most recent edition of the Uniform Building Code.

3. Potentially Significant Impact 3.4-3: Implementation of the proposed project could result in facility damage resulting from settlement or uplift caused by expansive or compressible soils. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.4-3a and 3.4-3b would reduce impacts related to the effects of expansive or compressible soils to a less-than-significant level at all project sites. See Draft EIR pages 3.4-27 through 3.4-28.

   Facts in Support of Findings: Mitigation Measures 3.4-3a and 3.4-3b are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD to:

   - Perform site-specific investigations for non-pipeline projects to determine the presence and characteristics of potentially compressible soils, the engineering properties of the foundation material, the depth and thickness of soil layers, and the depth to groundwater. A California registered professional engineer would conduct the investigations. If potentially compressible soils were found, the engineer would formulate measures to reduce the expansivity index of the soil to a low expansion potential as defined by the 1997 Uniform Building Code.

   - Include measures to reduce settlement or uplift, including: removal and replacement of soil, deep foundations, and/or deep mixing of compressible or expansive soils with stabilizing agents.

   - Any fill used 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.

4. Potentially Significant Impact 3.4-4: Implementation of the proposed project could result in facility damage resulting from a major earthquake in areas susceptible to liquefaction.

   Impacts would be less than significant with mitigation at the following sites:

   - Lafayette WTP
   - Orinda WTP
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Road Pipeline
   - Tice Pumping Plant and Pipeline

   Impacts would be less than significant and mitigation measures would not be required at the following sites:

   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Moraga Reservoir

- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.4-4 would reduce impacts related to the effects of liquefaction to a less-than-significant level. See Draft EIR page 3.4-32.

Facts in Support of Findings: Mitigation Measure 3.4-4 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD to:

- Perform site-specific geotechnical evaluation to identify geologic hazards and provide recommendations to mitigate those hazards in the final design and during construction. Design level geotechnical evaluations will include the collection of surface data for determining liquefaction potential.

- Evaluation and mitigation of liquefaction hazards shall be in conformance with the *California for Evaluation and Mitigation 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.

- All pipelines located in liquefaction hazard areas will be constructed with appropriate piping material with the ability to deform without rupture (e.g. ductile steel). For large diameter pipes (greater than 12 inches diameter) located in high liquefaction hazard areas, a geotechnical evaluation will be conducted.

- Minimize significant liquefaction hazards through: densification or dewatering of surface or subsurface soils, construction of pile or pier foundations to support pipelines and/or buildings, and/or removal and replacement of liquefiable material with more appropriate material, and modification of site geometry to reduce the risk of translational site instability.

C. Hydrology and Water Quality

1. Potentially Significant Impact 3.5-1: Project implementation could result in potential degradation of water quality from construction in or adjacent to creeks. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.5-1a and 3.5-1b would reduce water quality impacts to a less-than-significant level. See Draft EIR page 3.5-31.

   Facts in Support of Findings: Mitigation Measures 3.5-1a and 3.5-1b are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

   - Grade construction staging areas to contain surface runoff so that contaminants such as oil, grease, and fuel products do not drain towards creeks and other receiving waters.

   - If heavy-duty construction equipment is stored overnight at the construction staging areas, place drip pans beneath the machinery engine block and hydraulic systems to prevent any leakage from entering site runoff or reaching receiving waters.

- For construction adjacent to or crossing any creeks or drainage channels, obtain an encroachment permit from the Contra Costa County Flood Control and Water Conservation District and comply with state and federal agency requirements pertaining to work in or near wetlands or streambeds.

2. Potentially Significant Impact 3.5-3: Project construction in 100-year flood zones, could impede flood flows and discharge sediments and pollutants to flood zones, if a flood occurred during construction. Activities requiring the excavation and stockpiling of soil in a 100-year flood zone could also impede and redirect storm flows and combine sediment to flood floods if a flood occurred during construction. In addition, hazardous materials and debris could be released to flood flows if these were stored in a flood zone.

Impacts would be less than significant with mitigation at the following sites:

- Happy Valley Pumping Plant and Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

No impact would occur at the following sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.5-3 would reduce flood zone impacts to a less-than-significant level. See Draft EIR page 3.5-36.

Facts in Support of Findings: Mitigation Measure 3.5-3 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD to incorporate into the contract specifications a requirement that its contractors:

- Include a measure in a erosion control plan or SWPP for the project which prohibits the stockpiling of soil, storage of hazardous materials, and stockpiling of construction materials in flood zones during the rainy season.

D. Biological Resources

1. Potentially Significant Impact 3.6-2: Project implementation would result in degradation to streams, wetlands, and riparian habitats potentially subject to state and federal protection during construction.

   Impacts would be less than significant with mitigation at the following sites:

   - Lafayette WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Road Pipeline
   - Tice Pumping Plant and Pipeline

   Impacts at the Wither Pumping Plant site would be less than significant and mitigation would not be required.

   No impact would occur at the following sites:

   - Orinda WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Moraga Reservoir
   - Sunnyside Pumping Plant

   Findings: Implementation of Mitigation Measures 3.6-2a through 3.6-2f would reduce streams, wetlands, and riparian habitats impacts to a less-than-significant level. See Draft EIR pages 3.6-39 through 3.6-41.

   Facts in Support of Findings: Mitigation Measures 3.6-2a through 3.6-2f are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

   - Confine construction activities to areas above or below the stream crossing, or by using jack-and-bore or similar construction where feasible and where no other sensitive habitat (e.g., stream, riparian habitat, or protected trees) would be affected.

   - Establish a minimum 25-foot construction exclusion zone (from the edge of wetland, riparian habitat, or the creek banks, whichever is greater), using protective fencing.

   - If impacts to potentially jurisdictional features and associated riparian vegetation cannot be avoided or minimized, a qualified biologist will complete a wetland delineation in accordance with Corps guidelines and will obtain the appropriate permits/agreements, including a Section 401 water quality certification from the

RWQCB, a Section 404 wetland permit from the Corps, and/or a Section 1602 Streambed Alteration Agreement from the CDFG.

- Recontour and revegetate any temporarily or permanently disturbed portions of a creek, wetland, or riparian habitat at a ratio depending on type of disturbance and location of restoration opportunity.

- Develop and implement a five-year wetland mitigation and monitoring program with appropriate performance standards (i.e., 75 percent survival rate or plant cover of restoration plantings; absence of non-native, invasive plant species; and a functioning, self-sustaining creek or wetland system).

- Protect the unvegetated creek banks by replanting banks using native or sterile non-native seeds or seedlings following construction within the creek, removing non-native vegetation from stream banks, and employing biotechnical bank stabilization methods, such as willow wattles and biodegradable erosion control mats, where appropriate.

- Where applicable for overflow discharges into a creek or reservoir, install energy diffusers, such as riprap, in the creek to minimize erosion and water quality effects.

- Where construction activities occur adjacent to or within the dripline of riparian habitat, the District will implement special construction techniques, including hand equipment for tunnels and trenching, and allowing only one pass through a riparian tree's dripline to allow the roots of riparian trees to breathe and obtain water. Excavation adjacent to or within the dripline of any riparian tree will occur in a manner that causes only minimal root damage.

- Ensure that work activities within creeks are completed during the low-flow period (between April 1 and October 15), unless otherwise approved by appropriate regulatory agencies.

- Store equipment and materials away from waterways to the extent feasible. No debris will be deposited within 60 feet of creeks for most WTTIP projects.

- Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around the creeks. Conduct maintenance and fueling activities away from the creek.

- Install silt fencing material at the edge of established buffer zones for riparian habitat, or at the edge of the creek where no riparian habitat is present.

- Minimize the removal of riparian and wetland vegetation.

2. Potentially Significant Impact 3.6-3: Project implementation would result in loss or damage to special-status plants and sensitive natural communities.

   Impacts would be less than significant with mitigation at the following sites:

   - Lafayette WTP
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines

- Lafayette Reclaimed Water Pipeline
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

No impact would occur at the following sites:

- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measures 3.6-3a through 3.6-3c would reduce special-status plants and sensitive natural communities impacts to a less-than-significant level. See Draft EIR pages 3.6-42 through 3.6-43.

Facts in Support of Findings: Mitigation Measures 3.6-3a through 3.6-3c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

- Conduct seasonal presence/absence surveys for special-status plant species and sensitive plant communities within the limits of construction prior to construction during the year prior to construction.

- Sensitive plant communities that are located within the project site footprints will be mapped and quantified prior to construction to aid in later avoidance, revegetation, and replacement efforts.

- If identified, avoid (through facility redesign if necessary) to the extent feasible and/or establish a visible buffer zone (25 feet at minimum) prior to construction. If it is not feasible to avoid disturbance or mortality, restore special-status plant habitat and/or sensitive plant communities at an equal ratio. Develop and implement a five-year restoration mitigation and monitoring program, with appropriate performance standards.

- Revegetate all natural areas temporarily disturbed due to project activities and restore using locally collected plant materials specific to that community.

- Monitor all revegetated sites for five years using appropriate performance standards.

3. Potentially Significant Impact 3.6-4: Project implementation would result in disturbance to nesting raptors, other special-status nesting birds, or bald eagle. Impacts would be less than significant with mitigation at all project sites.

Findings: Implementation of Mitigation Measures 3.6-4a through 3.6-4c would reduce nesting raptor, special-status nesting bird, and bald eagle impacts to a less-than-significant level. See Draft EIR pages 3.6-49 through 3.6-51.

Facts in Support of Findings: Mitigation Measures 3.6-4a through 3.6-4c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

- Schedule construction activities during the nonbreeding season (September 1 through January 31) to the extent feasible. Otherwise implement the following:
  - Retain a qualified wildlife biologist to conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction activities where access is available.
  - If active nests are found during preconstruction surveys, create a no-disturbance buffer (acceptable in size to the CDFG) around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers include 500 feet for raptors and 250 feet for other nesting birds.
- Retain a qualified biologist to conduct preconstruction burrowing owl surveys in all areas that may provide suitable habitat for this species. If present, avoid disturbing active burrowing owl nests during the breeding season and implement standard CDFG guidelines during the nonbreeding season.
- Avoid disturbing winter roosts of bald eagles by performing preconstruction surveys, avoiding known wintering habitat, and creating no-disturbance buffers.

4. Potentially Significant Impact 3.6-5: Project implementation would result in disturbance to special-status bat species.

Impacts would be less than significant with mitigation at the following sites:

- Lafayette WTP
- Walnut Creek WTP
- Sobrante WTP
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline

No impact would occur at the following sites:

- Orinda WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements

- Moraga Reservoir
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.6-5 would reduce special-status bat species impacts to a less-than-significant level. See Draft EIR pages 3.6-55 through 3.6-56.

Facts in Support of Findings: Mitigation Measure 3.6-5 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Prior to construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) within 200 feet of trees that potential support special-status bats, retain a qualified bat biologist to survey for special-status bats. If present, create a no-disturbance buffer (acceptable in size to the CDFG) around active bat roosts during the breeding season (April 15 through August 15).

- Removal of trees showing evidence of bat activity will occur during the period least likely to affect bats, as determined by a qualified at biologist.

5. Potentially Significant Impact 3.6-6: Project implementation would result in disturbance to San Francisco dusky-footed woodrat.

Impacts would be less than significant with mitigation at the following sites:

- Lafayette WTP
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Moraga Road Pipeline

Impacts would be less than significant and mitigation would not be required at the following sites:

- Sobrante WTP
- Tice Pumping Plant

No impact would occur at the following sites:

- Orinda WTP
- Walnut Creek WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.6-6 would reduce San Francisco dusky-footed woodrat impacts to a less-than-significant level. See Draft EIR pages 3.6-58 through 3.6-59.

Facts in Support of Findings: Mitigation Measure 3.6-6 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Conduct preconstruction surveys to identify possible nests and, if present, avoid or relocate nests prior to construction.

6. Potentially Significant Impact 3.6-7: Project implementation would result in degradation of special-status aquatic species habitat.

Impacts would be less than significant with mitigation at the following sites:

- Lafayette WTP
- Sobrante WTP
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Moraga Road Pipeline
- Tice Pumping Plant

No impact would occur at the following sites:

- Orinda WTP
- Walnut Creek WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measures 3.6-7a through 3.6-7c would reduce special-status aquatic species impacts to a less-than-significant level. See Draft EIR pages 3.6-63 through 3.6-66.

Facts in Support of Findings: Mitigation Measures 3.6-7a through 3.6-7c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

- Implement best management practices (BMPs) for construction activities, to reduce potential impacts to steelhead and other aquatic species and habitat resulting from sedimentation, turbidity, and accidental hazardous material inputs.

- Implement a biological resource education program for construction crews and contractors that includes materials describing sensitive resources, resource avoidance,

permit conditions, and possible fines for violations of state or federal environmental laws.

- Monitor construction activities within and adjacent to aquatic and riparian habitats.
- Divert water from around the section of any worksite that is within the actively flowing channel of creeks.
- Place sediment curtains downstream of the construction or maintenance activity zone to prevent sediment disturbed during trenching activities within or near creeks.
- If groundwater is encountered, or if water remains within the worksite after flows are diverted, pump out of the construction area and into a suitably constructed retention basin.
- Install silt fencing in all areas where construction occurs within 100 feet of actively flowing water.
- Prepare and implement a spill prevention plan to ensure the proper handling and storage of potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, construct containment berms to prevent spilled materials from reaching the creek channels.
- Store equipment and materials at least 60 feet from waterways. No debris (such as trash and spoils) deposition within 100 feet of wetlands. Locate staging and storage areas for equipment, materials, fuels, lubricants, and solvents outside of the stream channel and banks and within the smallest area feasible. Place drip pans under stationary equipment such as motors, pumps, generators, compressors, and welders located within or adjacent to creek.
- Proper and timely maintenance of vehicles and equipment will be performed to reduce the potential for mechanical breakdowns that could lead to a spill of materials into or around creeks.
- Project sites will be revegatated with an appropriate assemblage of native upland vegetation and, if necessary, riparian and wetland vegetation suitable for the area.
- Avoid potential habitat for California red-legged frog through the use of bore-and-jack or other trenchless construction techniques; creek crossings will be constructed above or below the culverts within paved roads to Lauterwasser Creek and its tributaries, Las Trampas Creek, and at unnamed drainages along Moraga Road. California red-legged frog habitat within the San Pablo Creek near the Sobrante WTP will be avoided by constructing outside the riparian corridor. Employ reasonable and prudent measures such as environmental training, construction equipment and materials storage guidelines, silt fencing, and revegetation.
- Avoid disturbing western pond turtle, foothill yellow-legged frog, and their habitats by conducting pre-construction surveys to determine presence, and if appropriate, by temporarily relocating any identified western pond turtles or foothill yellow frogs upstream of the construction site, and placing temporary barriers around the construction site to prevent ingress.

E. Cultural Resources

1. Potentially Significant Impact 3.7-1: Project implementation would result in potential disturbance to archaeological resources, including unrecorded cultural resources. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.7-1a through 3.7-1b would reduce archaeological resources impacts to a less-than-significant level. See Draft EIR pages 3.7-24 through 3.7-25.

   Facts in Support of Findings: Mitigation Measures 3.7-1a through 3.7-1b are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

   - In the event of accidental discovery of cultural resources, such as structural features, bone, shell, artifacts, human remains, architectural remains (such as bricks or other foundation elements), or historic archaeological artifacts (such as antique glass bottles, ceramics, horseshoes, etc.), suspend work, and retain a qualified cultural resource specialist to investigate and determine the significance of the find.

   - Retain a qualified archaeological consultant to monitor ground-disturbing or vegetation removal activity within 500 feet of a known archaeological site. If an intact archaeological deposit is encountered, cease all soil-disturbing activities in the vicinity of the deposit, evaluate the deposit, and take appropriate remedial actions.

2. Potentially Significant Impact 3.7-2: Project implementation would result in potential disturbance to paleontological resources. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measure 3.7-2 would reduce paleontological resources impacts to a less-than-significant level. See Draft EIR page 3.7-26.

   Facts in Support of Findings: Mitigation Measure 3.7-2 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

   - In the event a fossil is discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist. The significance of the find will be evaluated, and appropriate remedial actions will be taken.

F. Traffic and Circulation

1. Potentially Significant Impact 3.8-1: Project implementation would result in short-term increases in vehicle trips by construction workers and construction vehicles. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measure 3.8-1 would reduce construction trip vehicle trip impacts to a less-than-significant level. See Draft EIR pages 3.8-13 through 3.8-15.

Facts in Support of Findings: Mitigation Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Obtain any necessary road encroachment permits prior to construction.
- Coordinate development of a traffic safety / traffic management plan (for work in the public right-of-way) with agencies having jurisdiction over the affected roads.
- Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. Use flaggers and/or signage to guide vehicles through and/or around the construction zone.
- Control and monitor construction vehicle movements through the enforcement of standard construction specifications by periodic onsite inspections.
- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
- Limit lane closures during peak hours to the extent possible. Restore roads and streets to normal operation by covering trenches with steel plates outside of allowed working hours or when work is not in progress.
- 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. Parking may be prohibited if necessary to facilitate construction activities or traffic movement. If the work zone width loss does not allow a 10-foot-wide paved travel lane, then close the road to through-traffic (except emergency vehicles) and use detour signing for alternative access streets.
- Include signage to direct pedestrians and bicyclists around project construction work zones that displace sidewalks and/or bike lanes.
- 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.
- 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 the worksite).
- Comply with roadside safety protocols. Provide "Road Work Ahead" warning signs and speed control (including signs informing drivers of state-legislated double fines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone.
- Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures.
- 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, provide flaggers in the school areas to ensure traffic and pedestrian safety.

- Coordinate with the County Connection so the transit provider can temporarily relocate bus routes or bus stops in work zones as it deems necessary.

- To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule construction of project elements to avoid overlapping maximum trip-generation construction phases.

- 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 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.

- 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.

2. Potentially Significant Impact 3.8-3: Project implementation would result in demand for parking spaces to accommodate construction worker vehicles and temporary displacement of on-street parking along pipeline alignment routes.

   Impacts would be less than significant with mitigation at the following sites:

   - Lafayette WTP
   - Orinda WTP
   - Sobrante WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Reservoir
   - Moraga Road Pipeline
   - Tice Pumping Plant and Pipeline

   Impacts would be less than significant and mitigation would not be required at the following sites:

   - Walnut Creek WTP

- Upper San Leandro WTP
- Fay Hill Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.8-1 would reduce construction phase parking impacts to a less-than-significant level. See Draft EIR pages 3.8-13 through 3.8-15.

Facts in Support of Findings: Mitigation Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure is described above under Potentially Significant Impact 3.8-1.

3. Potentially Significant Impact 3.8-4: Project implementation would result in potential traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measure 3.8-1 would reduce traffic safety hazard impacts to a less-than-significant level. See Draft EIR pages 3.8-13 through 3.8-15.

   Facts in Support of Findings: Mitigation Measure 3.8-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure is described above under Potentially Significant Impact 3.8-1.

4. Potentially Significant Impact 3.8-7: Project implementation would result in increased wear-and-tear on the designated haul routes used by construction vehicles.

   Impacts would be less than significant with mitigation at the following sites:

   - Walnut Creek WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Moraga Reservoir
   - Tice Pumping Plant and Pipeline

   Impacts would be less than significant and mitigation would not be required at the following sites:

   - Lafayette WTP
   - Orinda WTP
   - Sobrante WTP
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Moraga Road Pipeline
   - Sunnyside Pumping Plant
   - Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.8-7 would reduce construction phase wear-and-tear on designated haul routes to a less-than-significant level. See Draft EIR page 3.8-23.

Facts in Support of Findings: Mitigation Measure 3.8-7 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Prior to project construction, document road conditions for all routes to be used by project-related vehicles. Repair roads damaged by construction to a structural condition at least equal to that which existed prior to construction activity.

G. Air Quality

1. Potentially Significant Impact 3.9-1: Project implementation would result in short-term increases in fugitive dust (including inhalable particulates) and other criteria pollutants as a result of equipment exhaust emissions during construction activities, haul truck trips, and related worker commute trips. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.9-1a through 3.9-1c would reduce construction fugitive dust and exhaust emissions impacts to a less-than-significant level. See Draft EIR pages 3.9-24 through 3.9-25.

   Facts in Support of Findings: Mitigation Measures 3.9-1a through 3.9-1c are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD to incorporate into the contract specifications a requirement that is contractor(s) implement the following BAAQMD Basic and Enhanced Control Measures:

   - Maintain dust control within the site and provide adequate measures to prevent a dust problem for neighbors. Use water sprinkling, temporary enclosures, and other suitable methods to limit the rising of dust and dirt. Ensure that no visible dust clouds extend beyond the project boundaries or extend more than 50 feet from the source of any onsite project construction activities.

   - Load trucks in a manner to prevent materials or debris from dropping on streets. Trim loads and remove all material from shelf areas of vehicles to prevent spillage. Take precautions when necessary to avoid cresting dust and littering by watering the load after trimming and by promptly sweeping the pavement to remove dirt and dust.

   - Cover all trucks hauling soil, sand, and other loose materials.

   - Pave, apply water, or apply nontoxic soil stabilizers or rock on all unpaved access roads, parking areas, and staging areas at construction sites.

   - Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites.

   - Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets.

- Hydroseed or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more).
- Enclose, cover, water, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit traffic speeds on unpaved roads to 15 miles per hour.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Replant vegetation in disturbed areas as quickly as possible.

BAAQMD Exhaust Controls:

- Limit the idling of all mobile and stationary construction equipment to five minutes; limit the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds, both California- or non-California-based trucks) to 30 seconds at a school or five minutes at any location. In addition, limit the use of diesel auxiliary power systems and main engines to five minutes when within 100 feet of homes or schools while driver is resting.
- Operate any stationary, diesel-fueled, compression-ignition engines as part of construction of WTTIP facilities to comply with applicable fuel and fuel additive requirements and emission standards.
- If stationary equipment (such as generators for ventilation fans) must be operated continuously, locate such equipment at least 100 feet from homes or schools where possible.
- Perform tune-ups regularly for all equipment, particularly for haul and delivery trucks.

H. Noise and Vibration

1. Potentially Significant Impact 3.10-1: Project implementation would result in intermittent and temporary noise above existing ambient levels during construction. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.10-1a through 3.10-1e would reduce construction noise impacts to a less-than-significant level. See Draft EIR pages 3.10-30 through 3.10-33.

   Facts in Support of Findings: Mitigation Measures 3.10-1a through 3.10-1e are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

   - Manage construction activities at the construction site so that they do not cause daytime noise levels to exceed the 70-dBA speech interference criterion at the closest affected sensitive receptors, nor be inconsistent with local ordinances, where feasible.
   - Limit truck operations (haul trucks and concrete delivery trucks) to specified daytime hours.

- Use best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) for all equipment and trucks as necessary.

- If impact equipment (e.g., jack hammers, pavement breakers, and rock drills) is used during project construction, use hydraulically or electric-powered equipment wherever possible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where such use is unavoidable, use an exhaust muffler on the compressed-air exhaust. Use external jackets on the tools themselves, where feasible. Employ quieter procedures, such as drilling rather than impact equipment, whenever feasible.

- Wherever pile driving is required (possibly at tunnel shafts, jack-and-bore pit shafts, and Moraga Reservoir and Tice Pumping Plant sites for example), predrill pile holes to minimize the duration of pile driving.

- Locate stationary noise sources as far from sensitive receptors as possible. If they must be located near receptors, use adequate muffling (with enclosures). Orient enclosure opening or venting away from sensitive receptors.

- Locate material stockpiles as well as maintenance/equipment staging and parking areas as far as practicable from residences and schools.

- If any pipeline construction zones are located within 50 feet of school classrooms or childcare facilities, schedule pipeline construction activities (or at least the noisier phases of construction) on weekend or school vacation days to the extent feasible, avoiding weekday hours when schools are in session. If construction must occur when school is in session, construction noise will comply with applicable noise ordinance noise limits.

- Designate a contact person responsible for responding to construction-related issues, including noise.

- Limit construction at the WTTIP project sites to the hours of operation specified by each jurisdiction's noise ordinance except during critical water service outages or other emergencies and special situations. Where feasible, subject any equipment operating beyond these hours to the day and night noise limits of each jurisdiction for various activities in single-family residential zones.

- Conduct a noise monitoring program prior to implementation of any project where construction would extend beyond ordinance time limits to determine baseline ambient noise levels at the closest residential receptors and to measure increases in 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. Adjust project noise limits and/or incorporate additional control measures, e.g., sound barriers and/or engine controls, appropriate depending on the results of this monitoring program.

- At the Upper San Leandro WTP, make a reasonable effort to limit operation of impact construction equipment to less than 10 days to be consistent with Oakland Noise Ordinance construction noise limits. However, if this limit cannot be met, construction at this site will occur in a manner consistent with the Oakland City Council Adopted Construction Noise Mitigation Measures to the extent feasible.

- Reduce construction-related noise levels associated with any WTTIP projects that involve construction of tunnel shafts (including jack-and-bore pits) by retaining an acoustical engineer to design sound abatement measures that will meet the local ordinance limits, to the extent possible. Among other things, the acoustical engineer will provide design specifications for the sound barrier design and the specific ventilation fan to be used (based on type, size, orientation, location, exhaust, etc.) at tunnel portals.

- Use quiet tunnel ventilation fans directed away from sensitive receptors. Additional measures that could be employed to reduce fan noise, if necessary, include enclosing fans, treating the interior surface of the enclosure for acoustical absorption, or using silencers or acoustically lined inlet plena to control the inlet noise.

- Prior to construction, take baseline noise measurements at the entry and exit shafts. If baseline ambient noise levels already exceed applicable noise ordinance limits at the closest residential receptors, adjust the project noise limits appropriately so that construction noise levels do not result in a noticeable (3-5 dB) increase in ambient noise levels at these receptors.

- Cease loader operations at the surface (the area outside the tunnel shaft) in the tunnel portal vicinities at 6 p.m. on weekdays and do not operate on weekends except during critical water service outages or other emergencies and special situations.

- Construct bins used to transport spoils, including rocks and debris, of nonmetallic material or have a nonmetallic liner (such as cardboard), if feasible. Perform muck box tipping/dumping at the surface in a manner that minimizes clanging, banging, or booming noises (metal to metal contact) during evening and nighttime hours (6 p.m. to 8:00 a.m. on weekdays).

- Restrict underground controlled detonation in the tunnel shaft areas to the hours of 8:00 a.m. to 6:00 p.m. Limit the amount of explosive and the delay times of any explosive charges used so as to produce a maximum noise level at the closest adjacent receptor of 60 dBA (Ldn).

- Do not operate backup alarms on any equipment during nighttime hours (10:00 p.m. to 7:00 a.m.).

- Erect sound barriers around the tunnel entry and exit shafts to minimize noise impacts on adjacent receptors.

- Locate proposed jack-and-bore pits as far from sensitive receptors as technically feasible.

- Wherever a sensitive receptor is located within 150 feet of a construction site at a treatment plant, reservoir, or pumping plant, and at both tunnel shafts, provide temporary sound barriers between the construction site and the closest receptors to reduce noise levels to below the speech interference criterion at the closest receptor. Use sound-absorbing blankets at appropriate locations as necessary.

- Locate any openings in sound barriers that are provided for truck/vehicle access away from sensitive receptors.

2. Potentially Significant Impact 3.10-3: Project construction could cause vibration that could disturb local residents and cause cosmetic damage to buildings and structures.

   Impacts would be less than significant with mitigation at the following sites:

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Moraga Reservoir
   - Moraga Road Pipeline
   - Tice Pumping Plant and Pipeline

   Impacts would be less than significant and mitigation would not be required at the following sites:

   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Sunnyside Pumping Plant
   - Withers Pumping Plant

   Findings: Implementation of Mitigation Measures 3.10-3a through 3.10-3b would reduce vibration impacts to a less-than-significant level. See Draft EIR page 3.10-40.

   Facts in Support of Findings: Mitigation Measures 3.10-3a through 3.10-3b are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

   - Limit surface vibration caused by sheetpile driving, pile driving, or tunnel construction to no more than 0.5 in/sec PPV, measured at the nearest residential or other sensitive structure. Conduct monitoring to verify.

   - Prior to any controlled detonations, perform tests to determine the rock properties so that vibrations from the blast remain within the required PPV limit of 0.5 in/sec at the nearest structure.

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

3. Potentially Significant Impact 3.10-4: Project implementation would result in noise increases during facility operations.

   Impacts would be less than significant with mitigation at the following sites:

- Lafayette WTP
- Walnut Creek WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and mitigation would not be required at the following sites:

- Orinda WTP
- Sobrante WTP
- Upper San Leandro WTP
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline

Findings: Implementation of Mitigation Measure 3.10-4 would reduce operational noise impacts to a less-than-significant level. See Draft EIR page 3.10-48.

Facts in Support of Findings: Mitigation Measure 3.10-4 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Enclose pumping and emergency generator facilities, and locate vents on the building facades facing away from adjacent residential receptors.

- Build enclosures to provide at least 40 dB of attenuation on solid walls and a 20-dB reduction on the louvered side of the enclosure, when measured at 6 feet from the wall, directly in front of the louvers.

- Construct masonry sound barriers around transformers, and make substations of sufficient height to provide at least 10 dB or more of noise attenuation.

I. Hazards and Hazardous Materials

1. Potentially Significant Impact 3.11-1: Project implementation would result in exposure of workers and the public to hazardous materials that could be present in excavated soil, tunnel muck, or groundwater. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measure 3.11-1 would reduce construction phase hazardous materials in soil and groundwater impacts to a less-than-significant level. See Draft EIR page 3.11-27.

Facts in Support of Findings: Mitigation Measure 3.11-1 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- For construction of all facilities requiring excavation of more than 50 cubic yards of soil, conduct a Phase I and, if warranted, Phase II environmental site assessment and take remedial actions as appropriate.

- For pipeline projects, the District will conduct an environmental database review to identify environmental cases, permitted hazardous materials uses, and spill sites within one-quarter mile of the pipeline alignment. Regulatory agency files will be reviewed for those sites that could potentially affect soil and groundwater quality within the pipeline alignment.

2. Potentially Significant Impact 3.11-2: Project implementation could result in exposure of workers and the public to hazardous materials during demolition or renovation of existing structures.

Impacts would be less than significant with mitigation at the following project sites:

- Lafayette WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Moraga Reservoir

No impact would occur at the following project sites:

- Orinda WTP
- Walnut Creek WTP
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: Implementation of Mitigation Measure 3.11-2 would reduce construction phase hazardous building materials impacts to a less-than-significant level. See Draft EIR page 3.11-30.

Facts in Support of Findings: Mitigation Measure 3.11-2 is hereby adopted and will be implemented as set forth in the MMRP. This measure commits EBMUD or its contractor(s) to:

- Conduct a hazardous building materials survey for each of the structures subject to demolition or renovation activities and take appropriate abatement action, such as containment and/or removal.

3. Potentially Significant Impact 3.11-4: Project implementation could result in rupture of a high-pressure gas line.

   Impacts would be less than significant with mitigation at the following project sites:

   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Road Pipeline
   - Sunnyside Pumping Plant
   - Tice Pumping Plant and Pipeline

   No impact would occur at the following project sites:

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Moraga Reservoir
   - Withers Pumping Plant

   Findings: Implementation of Mitigation Measure 3.12-1c would reduce potential gas line rupture impacts to a less-than-significant level. See Draft EIR page 3.12-16.

   Facts in Support of Findings: Mitigation Measure 3.12-1c is hereby adopted and will be implemented as set forth in the MMRP. This measure is described below under Public Services and Utilities Impact 3.12-1.

J. Public Services and Utilities

1. Potentially Significant Impact 3.12-1: Project implementation could result in potential damage to or interference with existing public utilities. Impacts would be less than significant with mitigation at all project sites.

   Findings: Implementation of Mitigation Measures 3.12-1a through 3.12-1h would reduce disruption of utility line impacts to a less-than-significant level. See Draft EIR pages 3.12-16 through 3.12-17.

   Facts in Support of Findings: Mitigation Measures 3.12-1a through 3.12-1h are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

- Locate overhead and underground utility lines, such as natural gas, electricity, sewage, telephone, fuel, and water lines that may reasonably be expected to be encountered during excavation work.

- Find the location of underground utilities by safe and acceptable means, including the use of hand and modern techniques as well as customary types of equipment. Information regarding the size, color, and location of existing facilities will be confirmed before construction activities begin.

- Highlight all high-priority utilities in construction drawings.

- Coordinate regularly on planned excavation occurring near a high priority utility.

- Specify a safe distance to work near high-pressure gas lines, and do not authorize excavation closer to the pipeline until the designated health and safety officer confirms and documents in the construction records that: (1) the line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device, and (2) the location was verified by hand by the construction contractor.

- Protect, support, or remove underground utilities as necessary to safeguard employees.

- Notify local fire departments any time damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.

- Promptly contact utility owner if any damage occurs as a result of the project and reconnect disconnected cables and lines with owner approval.

- Observe Department of Health Services (DHS) standards, which require: (1) a 10-foot horizontal separation between parallel sewage and water mains (gravity or force mains); (2) a 1-foot vertical separation between perpendicular water and sewage line crossings; and (3) encasement of sewage mains in protective sleeves where a new water line crosses under or over an existing wastewater main.

- Coordinate final construction plans and specifications with affected utilities, such as PG&E.

2. Potentially Significant Impact 3.12-4: Project implementation could result in potential adverse effects on solid waste landfill capacity.

   Impacts would be less than significant with mitigation at the following project sites.

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline Improvements
   - Highland Reservoir and Pipelines

- Lafayette Reclaimed Water Pipeline
- Moraga Reservoir
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Impacts would be less than significant and mitigation would not be required at the following project site:

- Leland Isolation Pipeline and Bypass Valves

No impact would occur at the following project site:

- Sunnyside Pumping Plant

Findings: Implementation of Mitigation Measures 3.12-4a through 3.12-4b would reduce landfill capacity impacts to a less-than-significant level. See Draft EIR page 3.12-20.

Facts in Support of Findings: Mitigation Measures 3.12-4a through 3.12-4b are hereby adopted and will be implemented as set forth in the MMRP. These measures commit EBMUD or its contractor(s) to:

- Encourage project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused.

- Require plans for recovering, reusing, and recycling wastes produced through construction, demolition, and excavation activities.

3. Potentially Significant Impact 3.12-5: Project implementation could result in potential failure to achieve state-mandated solid waste diversion rates.

Impacts would be less than significant with mitigation at the following project sites.

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline Improvements
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

No impact would occur at the following project site:

- Sunnyside Pumping Plant

Findings: Implementation of Mitigation Measures 3.12-4a through 3.12-4b would reduce waste diversion rate impacts to a less-than-significant level. See Draft EIR page 3.12-20.

Facts in Support of Findings: Mitigation Measures 3.12-4a through 3.12-4b are hereby adopted and will be implemented as set forth in the MMRP. These measures are described above under Potentially Significant Impact 3.12-4.

4.3 Findings Regarding Less than Significant Effects

It has been determined that the following effects would be less-than-significant or there is no impact.

A. Land Use, Planning, and Recreation

1. Less Than Significant Impacts 3.2-1, 3.2-2, and 3.2-3: The project would not have a significant impact on division of an established community, agricultural resources, or recreational resources.

   Findings: No mitigation is needed. (See Draft EIR pages 3.2-14 through 3.2-22.)

   Facts in Support of Division of Established Community Findings (Impact 3.2-1): The impact would be less than significant and mitigation would not be required at the following project sites:

   - Lafayette WTP
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Leland Isolation Pipeline and Bypass Valves
   - Moraga Road Pipeline
   - Sunnyside Pumping Plant
   - Tice Pumping Plant and Pipeline

   No impact would occur at the following project sites:

   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Reservoir
   - Moraga Reservoir
   - Withers Pumping Plant

Several of the project sites would be located at existing EBMUD facilities, near or within the developed areas of those facilities sites and implementation of the project would not disrupt or divide the existing communities they are located in. Facilities for sites that are privately owned property (residential and open space areas) would be relatively small, compact facilities that would not disrupt or divide the existing communities they are located in. Pipeline project components within and/or across public roads would temporarily disrupt access; however, following construction, access would be reestablished.

Facts in Support of Agricultural Findings (Impact 3.2-2): The impact would be less than significant and mitigation would not be required at the following project sites:

- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Withers Pumping Plant

No impact would occur at the following project sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Tice Pumping Plant and Pipeline

None of the construction areas associated with the WTTIP contains prime farmland. Some components are located on designated Grazing Land or are adjacent to land with grazing uses or designations and grazing use could be temporarily disturbed during project construction. The project would not affect or convert farmland to nonagricultural uses. The project would not conflict with existing zoning for agricultural use or with a Williamson Act contract.

Facts in Support of Recreational Findings (Impact 3.2-3): The impact would be less than significant and mitigation would not be required at the following project sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline

- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

No impact would occur at the following project sites:

- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Moraga Reservoir
- Sunnyside Pumping Plant

The project would not result in permanent loss of recreation opportunities. Construction and operation of some of the WTTIP facilities would temporarily disrupt access to or enjoyment of existing recreation facilities. However, construction of project components would be phased, operation activities would be periodic, a variety of recreation types would be affected (i.e., paved trails in urban areas, rural recreation opportunities, golf courses), and effects would be distributed over a relatively large area within the EBMUD service area. Further, given the availability and diversity of recreation opportunities in the vicinity of the project components, diversion of recreation users to other opportunities would not likely result in overcrowding and associated potential deterioration of facilities and natural and cultural resources.

B. Visual Quality

1. Less than Significant Impact 3.3-1: The project would not have a significant impact associated with short-term visual effects. The impact would be less than significant and mitigation would not be required at all project sites.

   Findings: No mitigation is needed. (See Draft EIR pages 3.3-19 through 3.3-23.)

   Facts in Support of Findings: Due to the limited duration of construction activities at any particular location, potential visual impacts due to construction activities are considered less than significant at all WTTIP sites. In addition, the adoption of, Measure 3.3-1 and implementation as set forth in the MMRP to help ensure that publicly visible construction sites would be maintained and screened where practical would further ensure that short term visual impacts are less than significant. For stationary projects where construction is expected to last one year or more, the measure commits EBMUD to:

   - Require the contractor to ensure that construction-related activity is as clean and inconspicuous as practical.

C. Hydrology and Water Quality

1. Less than Significant Impact 3.5-2: The project would not have a significant impact associated with degradation of water quality from dewatering.

   The impact would be less than significant and mitigation would not be required for the following sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

No impact would occur at the following sites:

- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Sunnyside Pumping Plant
- Withers Pumping Plant.

Findings: No mitigation is needed. (See Draft EIR pages 3.5-32 through 3.5-35.)

Facts in Support of Findings: With preparation of the water control and disposal plan required in EBMUD construction specifications for discharge of groundwater produced during dewatering, including compliance with regulatory requirements, water quality impacts related to construction dewatering would be less than significant for all project components requiring dewatering.

2. Less than Significant Impact 3.5-4: The project would not have a significant impact associated with discharge of chloraminated water to surface water during construction.

The impact would be less than significant at the following sites:

- Lafayette WTP
- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Fay Hill Reservoir
- Moraga Reservoir

No impact would occur at the following sites:

- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline

- Leland Isolation Pipeline and Bypass Valves
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: No mitigation is needed. (See Draft EIR pages 3.5-36 through 3.5-37.)

Facts in Support of Findings: With preparation of the water control and disposal plan required in EBMUD construction specifications, the contractor would be responsible for verifying that the discharge has a nondetectable total chlorine residual and appropriate pH. In addition, each of the water treatment plants is permitted for nonroutine discharges under the Regionwide General NPDES Permit for Discharges from Surface Water Treatments for Potable Supply, and the discharge would be conducted in accordance with the site-specific BMP plan that has been approved by the RWQCB.

3. Less than Significant Impact 3.5-5: The project would not have a significant impact associated with operational discharge of chloraminated water to surface water.

The impact would be less than significant at the following sites:

- Lafayette WTP
- Ardith Reservoir/Donald Pumping Plant
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline

No impact would occur at the following sites:

- Orinda WTP
- Walnut Creek WTP
- Sobrante WTP
- Upper San Leandro WTP
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: No mitigation is needed. (See DEIR pages 3.5-37 through 3.5-41.)

Facts in Support of Findings: All operational discharges to a surface water body would be dechlorinated prior to discharge to conform to Basin Plan standards for chlorine residual, and the proposed discharges from the Lafayette Reclaimed Water Pipeline would be managed in accordance with an NPDES permit to avoid adverse water quality effects. Therefore, impacts related to operational discharges of chloraminated water under the WTTIP would be less than significant.

4. Less than Significant Impact 3.5-6: The project would not have a significant impact associated with changes to impervious surfaces and stormwater runoff. Impacts would be less than significant and mitigation would not be required at all project sites.

   Findings: No mitigation is needed. (See Draft EIR pages 3.5-41 through 3.5-46 and FEIR Response to Comments pages 3.2-9 through 3.2-15.)

   Facts in Support of Findings: Implementation of the Project would not substantially increase stormwater flows or pollutants because stormwater at all WTTIP sites would be managed in accordance with provision C.3 of the Contra Costa County municipal stormwater permit. In accordance with these requirements, all WTTIP sites which 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. Furthermore, in accordance with Provision C.3.f of the municipal stormwater permit, improvement that would create or replace one or more acre of impervious surfaces would 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 of creek beds or banks, silt pollutant generation, or other adverse effects that would affect beneficial uses of the receiving water. Stormwater controls at each site subject to these requirements, would be described in the construction stormwater pollution prevention control plan and the post-construction stormwater management plan 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 for all WTTIP sites that create or replace 10,000 square feet or more of impervious surfaces and no mitigation would be required. For WTTIP projects that involve the creation or replacement of less than 10,000 square feet of impervious surfaces, water quality impacts related to an increase in impervious surfaces would be less than significant, and no mitigation is required.

D. Biological Resources

1. Less than Significant Impact 3.6-8: The project would not have a significant impact associated with disruption to existing migratory corridors on WTTIP project sites and fragmentation of this wildlife habitat.

   The impact would be less than significant at the following sites:

   - Lafayette WTP
   - Sobrante WTP
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Moraga Road Pipeline
   - Sunnyside Pumping Plant
   - Tice Pumping Plant and Pipeline

No impact would occur at the following sites:

- Orinda WTP
- Walnut Creek WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Withers Pumping Plant

Findings: No mitigation is needed. (See Draft EIR pages 3.6-66 through 3.6-70.)

Facts in Support of Findings: Habitat at most WTTIP project sites does not support mountain lions or constitute a substantial portion of an established migratory wildlife corridor. However, woodland and scrubland habitats suitable for mountain lions and other migratory wildlife are present within the Lafayette Reservoir Recreation Area at the Highland Reservoir and Pipelines site along the Moraga Road Pipeline alignment. The Highland Reservoir site and permanent paved access road would continue to facilitate wildlife movement through the project area. Thus, proposed activities are not likely to significantly affect wildlife movement through the Lafayette Reservoir Recreation Area or fragment habitat for migratory or resident wildlife. Any construction in the vicinity of woodland and scrubland habitats suitable for mountain lions and other migratory wildlife would be temporary in nature, disturbed areas would be revegetated post-construction with native species, aquatic and riparian habitat would be avoided through pipeline installation at culverts for most stream crossings, and low-impact lighting focused away from sensitive habitat would be used, therefore the remaining WTTIP projects would have a less-than-significant impact on migratory wildlife corridors.

E. Cultural Resources

1. Less than Significant Impact 3.7-3: The project would not have a significant impact associated with disturbance or alteration to historic resources.

   The impact would be less than significant at the following sites:

   - Lafayette WTP
   - Orinda WTP
   - Highland Reservoir and Pipelines
   - Lafayette Reclaimed Water Pipeline
   - Moraga Road Pipeline

   No impact would occur at the following sites:

   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro WTP
   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements

- Happy Valley Pumping Plant and Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: No mitigation is needed. (See Draft EIR pages 3.7-26 through 3.7-32.)

Facts in Support of Findings: No significant direct impacts, such as demolition or substantial alteration, to historic or potentially historic resources at project sites with historic resources are expected. In addition, substantial alteration to the immediate setting is not expected.

F. Air Quality

1. Less than Significant Impact 3.9-2: The project would not have a significant impact associated with exposure of sensitive receptors to short-term increases in diesel particulates along truck haul routes during project construction. The impact would be less than significant at all project sites.

   Findings: No mitigation is needed. (See Draft EIR pages 3.9-25 through 3.9-28.)

   Facts in Support of Findings: Projects are expected to be scheduled be scheduled during different construction phases on any given day, and therefore peak truck volumes would not occur at the same time. When determining haul routes for each WTTIP project, EBMUD will consider all other scheduled WTTIP projects in the area that would use this route and will coordinate project schedules to ensure that the combined daily truck volume does not exceed 600 trips per day. In addition, measures required under Measure 3.9-1c are expected to assist in reducing the potential for impacts associated with exposure to short-term increases in particulates. Therefore, the impact is not considered significant, and no mitigation is necessary.

2. Less than Significant Impact 3.9-4: The project would not have a significant impact associated with long-term increases in criteria pollutants during operation of upgraded treatment facilities.

   The impact would be less than significant the following project sites:

   - Lafayette WTP
   - Orinda WTP
   - Walnut Creek WTP
   - Sobrante WTP
   - Upper San Leandro LTP

   No impact would occur at the following project sites:

   - Ardith Reservoir/Donald Pumping Plant
   - Fay Hill Pumping Plant and Pipeline Improvements
   - Fay Hill Reservoir
   - Glen Pipeline Improvements
   - Happy Valley Pumping Plant and Pipeline

- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: No mitigation is needed. (See Draft EIR pages 3.9-29 through 3.9-32.)

Facts in Support of Findings: Water treatment facilities are not generally associated with "traditional" air pollution emissions, such as pollutants with state and federal standards, or those that might cause a localized nuisance due to odors, fumes, mist, etc. The proposed modifications to treatment processes at WTTIP treatment facilities would result in minimal increases in air emissions. Other WTTIP pumping plant, reservoir, pipeline, chemical feed, and electrical facilities would be closed systems with no associated criteria pollutant emissions.

Operation of the project would also result in a nominal increase in the number of employee trips per day, but such minimal increases in traffic would have a less-than-significant impact on local and regional air quality.

3. Less than Significant Impact 3.9-5: The project would not have a significant impact associated with generation of odors during operation of the project facilities. The impact would be less than significant at all project sites.

   Findings: No mitigation is needed. (See Draft EIR page 3.9-32.)

   Facts in Support of Findings: Nuisance odor problems are not expected to result from operation of the proposed WTTIP water facilities due to the low biological content (and consequent anaerobic activity) in the water as well as the enclosed nature of most proposed facilities. With the exception of filters and some basins at water treatment facilities, existing treatment, conveyance, and storage facilities are enclosed.

   Filters at water treatment facilities are not typically a source of odors; odors associated with anaerobic activity do not occur since the water is aerated. Implementation of the WTTIP would result in the relocation of existing flocculation/ sedimentation basins at the Lafayette WTP and the Orinda WTP. The existing basins are currently a minor source of odors, and the potential for nuisance odors is not expected to change significantly with the proposed minor relocation of these basins within the WTP facility sites.

4. Less than Significant Impact 3.9-6: The project would not have a significant impact associated with secondary emissions at power plants due to the generation of electricity to operate pumps and other facilities, and short-term increases in criteria air pollutants during power outages requiring the use of emergency generators. The impact would be less than significant at all project sites.

   Findings: No mitigation is needed. (See Draft EIR page 3.9-33.)

   Facts in Support of Findings: Construction of the WTTIP facilities would result in an irretrievable and irreversible commitment of natural resources through direct consumption

of fossil fuels and use of materials. That commitment of resources would end when construction is completed. Over the long term, the WTTIP would result in an increase in emissions primarily through energy consumption. Electricity generation related to fossil-fuel combustion generates air pollutants. However, approximately 30 percent of PG&E's electricity is derived from renewable energy resources, and PG&E plans to increase this amount by 8 percent by 2010. In addition, power generation and transmission within the PG&E service area is part of the regional power grid (controlled the California Independent System Operator). Since emissions associated with power generation are regional in nature and could occur outside the air basin or outside California, the project's incremental increase in operational power demand is not expected to create a significant secondary air quality impact within the air basin. To help reduce future energy demand, EBMUD actively seeks to minimize fossil fuel use through its renewable energy program.

G. Noise and Vibration

1. Less than Significant Impact 3.10-2: The project would not have a significant impact associated with increased noise levels along truck haul routes. The impact would be less than significant at all project sites.

   Findings: No mitigation is needed. (See Draft EIR pages 3.10-33 through 3.10-38.)

   Facts in Support of Findings: Based on noise measurements collected in the Lamorinda area, most residential streets located away from freeways and major arterials are generally subject to daytime noise levels between 50 and 60 dBA (Leq). Daytime noise levels along arterials (such as Camino Pablo) are generally between 60 and 70 dBA (Leq). Areas adjacent to Highway 24 are generally subject to daytime noise levels of 70 dBA or higher. Based on a comparison of the haul truck noise levels with the ambient noise environments, peak hourly truck volumes would not be noticeable in areas adjacent to freeways. Project-related haul truck volumes would be noticeable on the quiet residential streets, and along arterials on days when peak truck volumes of 10 or more trips per hour occur; however, estimated maximum hourly truck noise levels would not exceed the 70-dBA speech interference criterion, and therefore short-term maximum noise increases that could result from project-related trucks would be less than significant. In addition, offsite truck trips to or from project sites will be restricted to the hours of 9:00 a.m. until 4:00 p.m., Monday through Friday, which would further reduce the potential for noise impacts.

H. Hazards and Hazardous Materials

1. Less than Significant Impact 3.11-5: The project would not have a significant impact associated with increased risk of wildland fire during construction in high fire hazard areas.

   The impact would be less than significant at the following project sites:

   - Orinda WTP
   - Happy Valley Pumping Plant and Pipeline
   - Sunnyside Pumping Plant
   - Withers Pumping Plant

   No impact would occur at the following project sites:

   - Lafayette WTP
   - Walnut Creek WTP

- Sobrante WTP
- Upper San Leandro WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Highland Reservoir and Pipelines
- Lafayette Reclaimed Water Pipeline
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Tice Pumping Plant and Pipeline

Findings: No mitigation is needed. (See Draft EIR pages 3.11-31 though 3.11-32.)

Facts in Support of Findings: Regulations governing the use of construction equipment in fireprone areas are designed to minimize the risk of wildland fires during construction activity. In accordance with the Public Resources Code, the construction contractor would be required to comply with the following legal requirements during construction activities any projects that are located in a "Very High Fire Hazard Severity Zone" based on mapping at the time of construction. With compliance with the requirements of the Public Resources Code, and any additional requirements imposed by the Contra Costa County Fire Protection District or the Moraga-Orinda Fire District, potential impacts related to wildland fires due to construction activities would be less than significant.

2. Less than Significant Impact 3.11-6: The project would not have a significant impact associated with potential for accidental release of hazardous materials from construction activities. The impact would be less than significant at all WTTIP project sites.

   Findings: No mitigation is needed. (See Draft EIR page 3.11-32.)

   Facts in Support of Findings: Compliance with Section 01125 of the EBMUD construction specifications would reduce the potential for release of construction-related fuels and other hazardous materials to stormwater and receiving water. Furthermore, the contractor would prepare a spill prevention and response plan in accordance with Section 01125, requiring listing of the hazardous materials (including petroleum products) proposed for use or generated at the job site and describing measures for preventing spills, monitoring hazardous materials, and providing immediate response to spills. Spill response measures would address notification of EBMUD; safety issues regarding construction personnel and public health; and methods for spill response and cleanup. To provide further protection of water quality, as specified in Measure 3.5-1a, the District will incorporate into the contract specifications the requirement that the contractor design staging areas to contain surface runoff and place drip pans under heavy equipment stored overnight. With compliance with EBMUD contract specifications and implementation of Measure 3.5-1a, hazardous materials impacts associated with potential chemical spills or releases of petroleum products during construction would be less than significant at all WTTIP sites.

3. Less than Significant Impact 3.11-7: The project would not have a significant impact associated with potential for accidental release of chemical stored at WTPs.

   The impact would be less than significant at the following project sites:

- Lafayette WTP
- Sobrante WTP
- Upper San Leandro WTP
- Lafayette Reclaimed Water Pipeline

No impact would occur at the following project sites:

- Orinda WTP
- Walnut Creek WTP
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Happy Valley Pumping Plant and Pipeline
- Highland Reservoir and Pipelines
- Leland Isolation Pipeline and Bypass Valves
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant
- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

Findings: No mitigation is needed. (See Draft EIR page 3.11-33.)

Facts in Support of Findings: The chemical storage and handling systems required for the proposed project would be designed and constructed in accordance with legal requirements for the safe storage of hazardous material. Incorporation of these legally required design features would reduce the potential for spills resulting from the storage and handling of hazardous materials that would be used at the WTPs. In addition, the District would be required by the Contra Costa County Health Services Department and the Oakland Fire Department to update the HMBPs for each WTP to reflect the changes in chemical storage and to update the RMPs for the Lafayette WTP, Sobrante WTP, and Upper San Leandro WTP to reflect the changes in storage of ammonia. With compliance with these legal requirements, potential impacts related to a release of chemicals from one of the WTPs would be less than significant.

I. Public Services and Utilities

1. Less than Significant Impact 3.12-2: The project would not have a significant impact associated with short-term and long-term in creases in energy demand. The impact would be less than significant at all WTTIP project sites.

   Findings: No mitigation is needed. (See Draft EIR pages 3.12-17 through 3.12-18.)

   Facts in Support of Findings: Construction of the WTTIP facilities would result in an irretrievable and irreversible commitment of natural resources though direct consumption of fossil fuels and use of materials. WTTIP projects would require connections to existing power sources, which would increase the short-term use of electricity and refined petroleum products during the operation of construction equipment (primarily gas, diesel, and oil). Equipment manufacturers have made progress in addressing fuel efficiency during construction, including the development of fuel-efficient engines and equipment. This

short-term increase in electricity demand would not be significant, and no mitigation is required.

Consistent with the *California Energy Action Plan II* priorities for reducing energy usage and the *Renewable Energy Facilitation Plan*, the District would ensure that energy-efficient equipment is used for all WTTIP projects and would continue to time energy usage during nonpeak periods. Where possible, electricity for WTTIP projects would be supplied from a renewable energy resource, or an alternative renewable energy resource such as solar power. Therefore, the long-term increase in electricity demand would not be significant, and no mitigation is required.

2. Less than Significant Impact 3.12-3: The project would not have a significant impact associated with potential short-term demand for police and fire services. The impact would be less than significant at all WTTIP project sites.

   Findings: No mitigation is needed. (See Draft EIR page 3.12-19.)

   Facts in Support of Findings: Construction of facilities would generate truck and employee traffic along haul routes at project sites and temporarily increase the accident potential in these areas. However, this increased potential for accidents would result in a limited, short-term demand for additional police or fire services, and only on an as-needed and emergency basis. This short-term increase in demand could be accommodated by existing resources within the project areas. In addition, construction could result in partial or complete road closure and would impair local fire, police, or other emergency access during this period. Disruption of roadway access and increased accident potential, as well as increased demand for emergency services, could also occur in the event of a pipeline rupture or other emergency upset condition. The potential impact on the demand for police and fire services would be less than significant. To provide further protection, the District would implement Measures 3.12-1a through 3.12-1h (as well as traffic safety and access measures). There would be no long-term increases in demand for police or fire services associated with the WTTIP projects. Improved security measures at the WTPs and pumping plants, such as security fencing, alarms, and controlled access, are proposed as part of the project.

J. Cumulative Impacts

1. Less than Significant Impact C-1: The project would not have a significant cumulative effect on recreation resources during construction.

   Findings: No mitigation is needed. (See Draft EIR page 5-39.)

   Facts in Support of Findings: Numerous WTTIP projects have the potential to cause cumulative impacts to recreational facilities. These impacts temporary and result from disruption of recreational facilities as well as disruption of access to or enjoyment of recreational facilities. All of the WTTIP impacts to recreation will, however, be less than significant. The impact would be likely to be cumulatively considerable if construction schedules overlapped with WTTIP projects' schedules in the same vicinity as major recreational resources. However, the WTTIP as a whole would not result in impacts to recreational resources and WTTIP projects are not expected to overlap with other projects and cause a cumulatively considerable impact. Therefore, WTTIP impacts to recreational resources, as mitigated, would not contribute to cumulative impacts.

2. Less than Significant Impact C-2: The project would not have a significant cumulative effect on the existing visual character.

Findings: No mitigation is needed. (See Draft EIR pages 5-39 and 5-40.)

Facts in Support of Findings: Only the above-ground WTTIP facilities could contribute substantially to long-term, cumulative visual impacts, as underground facilities such as the pipelines and tunnels would not be visible and thus have no visual impacts. However, the WTTIP sites with above-ground facilities are visually separated due to distance, surrounding topography, structures, landscaping, or natural vegetation. In addition, with the exception of the Highland Reservoir site and possibly the New Leland Pressure Zone Reservoir site, implementation of Measures 3.3-1, 3.3-2a, 3.3-2b, and 3.3-2c would mitigate WTTIP visual impacts to a less-than-significant level. Thus, the implementation of WTTIP projects as a whole will not result in cumulatively considerable impacts to visual resources.

The DEIR lists other projects in Lafayette, Moraga, Orinda, and Walnut Creek that could substantially alter the visual character of areas within the WTTIP study area, potentially covering over 500 acres and over 2,000 dwelling units thereby causing cumulative impacts. These projects would, by and large, add to the urban/developed character of the region. When considered in combination with these projects, however, the WTTIP's incremental contribution to long-term visual impacts, with proposed mitigation, would not be cumulatively considerable.

3. Less than Significant Impact C-3: The project would not have a significant cumulative geologic and seismic hazards impact.

   Findings: No mitigation is needed. (See Draft EIR page 5-40.)

   Facts in Support of Findings: Some of the proposed WTTIP projects could be constructed in or create areas with unstable slopes, experience strong groundshaking in the event of an earthquake on one of the regional faults, be damaged by settlement of weak or saturated soil, or be damaged by liquefaction. However, these impacts would be less than significant or mitigated to a less-than-significant level with the implementation of Measures 3.4-1, 3.4-2, 3.4-3a, 3.4-3b, 3.4-4, and 3.4-5. Since none of the projects identified as overlapping or occurring cumulatively are located within the area of potential impact, there would be no cumulatively considerable geologic or seismic impacts.

4. Less than Significant Impact C-4: The project would not result in water quality impacts that are cumulatively significant.

   Findings: No mitigation is needed. (See Draft EIR pages 5-40 and 5-41.)

   Facts in Support of Findings: Collective water quality impacts of the WWTIP as a whole would be less than significant with compliance with standard EBMUD procedures and regulatory requirements as well as implementation of Measures 3.5-1a, 3.5-1b, 3.5-3, and 3.5-6. Potential water quality impacts associated with construction and operation of the cumulative projects would be similar to those described for the WTTIP, with the potential for cumulative water quality impacts. However, the protection of surface waters is regulated under the federal Clean Water Act and Porter Cologne Water Quality Control Act, and all existing, planned, and proposed projects are subject to federal, state, and local regulations designed to protect water quality. These include National Pollutant Discharge Elimination System permit requirements, including developing and implementing stormwater pollution prevention plans and complying with Contra Costa Clean Water Program and Alameda Countywide Clean Water Program guidelines for stormwater control; compliance with California Department of Fish and Game and U.S. Army Corps of

Engineers regulations pertaining to wetlands and streambeds; and "C.3" stormwater control requirements of the California Regional Water Quality Control Board regarding new development and redevelopment projects. Similar to the WTTIP projects, the cumulative projects identified in the DEIR would be expected to comply with applicable water quality regulations and incorporate project-specific mitigation measures. Because of these measures, when considered in combination with these projects, the WTTIP's incremental contribution to water quality impacts, with proposed mitigation, would not be cumulatively considerable.

5. Less than Significant Impact C-5: The project would not result in significant cumulative loss of habitat for special-status wildlife and plants and other biological resources.

   Findings: No mitigation is needed. (See Draft EIR pages 5-41 through 5-44.)

   Facts in Support of Findings:

   - Impacts on Biological Resources during WTTIP Construction. San Pablo Creek and other drainages that traverse WTTIP sites provide habitat for common and special-status aquatic species. DEIR Section 3.6 includes several mitigation measures to reduce potential construction impacts to these species (i.e., construction disturbance, erosion, noise, and human disturbance) to a less-than-significant level. Adoption of these measures for the WTTIP projects will ensure that the comparatively considerable impacts to species from the project is less than significant. In addition, future projects with potentially significant impacts to plant, wildlife, and fish species would be required to comply with federal, state, and local regulations and ordinances protecting biological resources through implementation of similar mitigation measures during construction. For those projects that have not already undergone review, CEQA analysis would be performed and potential impacts addressed. Therefore, the potential incremental construction impacts of the WTTIP projects in combination with the other projects identified in the DEIR would not contribute to a cumulatively significant impact on special-status plant, wildlife, and fish species.

   - Impacts on Biological Resources due to Habitat Removal. The WTTIP project region has undergone significant past conversion of natural habitats to development. Though past, present, and reasonably foreseeable projects within the geographic scope of the area analyzed on the EIR may result in cumulatively significantly adverse impacts to protected trees, habitat for plants and wildlife, and migratory wildlife corridors, in light of the nature and extent of those impacts, the incremental effects of the proposed WTTIP would not be cumulatively considerable. The WTTIP would not result in a cumulatively considerable loss of to protected tree, wetland, riparian, and other habitat within the geographic context of this analysis.

6. Less than Significant Impact C-6: The project would not result in a significant cumulative increase in archaeological, paleontological, and historic resources impacts.

   Findings: No mitigation is needed. (See Draft EIR page 5-44.)

   Facts in Support of Findings: While there is a potential to encounter previously undiscovered cultural resources, including archaeological and paleontological resources during construction of WTTIP facilities, implementation of Measures 3.7-1a, 3.7-1b, 3.7-2, and 3.7-3 would reduce impacts to a less-than-significant level. The potential to encounter cultural resources associated with the cumulative projects is unknown, but does exist.

Given the lack of information on the extent of potential impacts to archaeological resources associated with the cumulative projects, the WTTIP contribution to any such impacts would not be cumulatively considerable, and implementation of the specified measures would reduce those impacts to a less-than-significant level. The WTTIP would not have a direct impact on historic resources, and potential indirect impacts would be less than significant with mitigation. Therefore, while the cumulative projects could result in impacts to historic resources, the incremental impacts associated with the WTTIP projects would not be cumulatively considerable.

7. Less than Significant Impact C-7: The project would not result in significant cumulative traffic and roadway disruptions.

   Findings: No mitigation is needed, although additional mitigation has been adopted. (See Draft EIR page 5-45 and FEIR)

   Facts in Support of Findings: The WTTIP project would result in short-term increases in vehicle trips, reduced road width, reduced access to and parking at adjacent land uses, traffic safety issues, reduced access, disruptions to transit service, and increased wear-and-tear on designated haul routes. While the project impacts would be reduced to a less-than-significant level with implementation of Measures 3.8-1 through 3.8-7, the WTTIP could contribute to cumulative traffic and circulation impacts when considered in combination with cumulative projects identified in the DEIR. Potential cumulative impacts could occur as a result of (1) cumulative projects that generate increased traffic at the same time on the same roads as would the WTTIP facility projects, causing increased congestion and delays, and (2) infrastructure projects in roads that would be used by WTTIP construction workers and trucks, which could affect detour routes around WTTIP work zones or could delay WTTIP-generated vehicles past the work zones of those other projects. In addition to cumulative (additive) effects on traffic flow conditions, the WTTIP and other cumulative projects would extend the period of time when there would be disruptions (albeit not all disruptions would be significant) to traffic flow on area roadways.

   Given the lack of certainty about the timing of the projects identified in the DEIR, and of the WTTIP projects, it is prudent to conclude that significant cumulative traffic and circulation impacts could occur, particularly on Camino Pablo. The District will coordinate with the appropriate local government departments in Moraga, Orinda, Walnut Creek, Lafayette, Oakland, and Contra Costa County and with other utility districts and agencies regarding the timing of construction projects that would occur near WTTIP sites. Such coordination will help to minimize multiple disruptions to the same areas. The District will also submit plans related to, and comply with the requirements of, encroachment permits with local jurisdictions, which will provide further opportunity for coordination of multiple projects. Specific measures to mitigate significant impacts that could occur will be determined as part of the interagency coordination, but could include measures such as employing flagmen during key construction periods, designating alternate haul routes, and providing more outreach and community noticing. With these measures, the potential impacts would not represent a considerable contribution to this potential cumulative impact. Measure C-7 is hereby adopted to help ensure that the District will coordinate with the appropriate local government departments. The measure commits EBMUD to the following

   - 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.

- 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.

8. Less than Significant Impact C-8: The project would not result in a significant cumulative construction emissions impacts.

   Findings: No mitigation is needed. (See Draft EIR page 5-46.)

   Facts in Support of Findings: Potential air quality impacts associated with implementation of the WTTIP include increased dust and equipment emissions during construction, exposure to diesel particulates, emissions from ventilation fans, operational emissions, odors, and secondary emissions from power use. However, all potential air quality impacts associated with WTTIP facilities would be less than significant or would be mitigated to a less-than-significant level, based on criteria developed by the BAAQMD and guidelines established in the Clean Air Plan. In addition, implementation of Measures 3.9-1a, 3.9-1b, 3.9-1c, and 3.9-3 would reduce WTTIP air quality impacts to a less-than-significant level, and therefore impacts would not be cumulatively considerable. Implementation of the proposed WTTIP improvements would generally be consistent with the Bay Area's Clean Air Plan. Cumulative projects identified in the DEIR have the potential to result in the same types of air quality impacts as the WTTIP facilities, with the extent of impact depending on individual project characteristics. However, as with the WTTIP facilities, all planned and proposed projects in the region are subject to BAAQMD regulations and the Clean Air Plan guidelines. Therefore, assuming implementation of appropriate mitigation measures for all projects in the region, cumulative air quality impacts would be less than significant.

9. Less than Significant Impact C-9: The project would not result in a significant cumulative construction noise impacts.

   Findings: No mitigation is needed. (See Draft EIR pages 5-46 and 5-47.)

   Facts in Support of Findings: Noise increases associated with construction and operation of proposed WTTIP facilities would be limited to each facility's immediate vicinity. The WTTIP's site-specific noise impacts would be reduced to a less-than-significant level with implementation of Measures 3.10-1a through 3.10-1e, 3.10-2, 3.10-3a, 3.10-3b, and 3.10-4. Therefore, when considered in combination with any cumulative projects identified in the DEIR, the incremental noise impacts of the WTTIP projects, as mitigated, in combination with other projects, would not be cumulatively considerable.

   Potential cumulative impacts could occur if other proposed or approved projects generate truck traffic at the same time on the same roads as the WTTIP facility projects, causing cumulative truck noise increases. Given the lack of certainty about the timing of the identified cumulative projects, and of the WTTIP projects, it is prudent to conclude that significant cumulative truck noise increases are possible on streets that could serve as common haul routes for listed projects, particularly on Camino Pablo. The District will coordinate with the appropriate local government departments in Moraga, Orinda, Walnut Creek, Lafayette, Oakland, and Contra Costa County and with other utility districts and agencies regarding the timing of construction projects that would occur near WTTIP sites. Such coordination will help to minimize potential cumulative truck noise increases on common haul routes. The District will also submit plans related to, and comply with the requirements of, encroachment permits with local jurisdictions, which will provide further

opportunity for coordination of multiple projects. Specific measures to mitigate significant impacts that could occur will be determined as part of the interagency coordination, but could include measures such as employing flagmen during key construction periods, designating alternate haul routes, and providing more outreach and community noticing.

10. Less than Significant Impact C-10: The project would not result in a significant cumulative hazardous materials impact.

    Findings: No mitigation is needed. (See Draft EIR pages 5-47 and 5-48.)

    Facts in Support of Findings: The WTTIP projects could expose workers and the public to hazardous materials that could be present in excavated soil and groundwater as well as to hazardous building materials during demolition or renovation of existing structures. However, no WTTIP projects would require the disposal of substantial volumes of hazardous materials. The potential for accidental releases of chemicals stored at the WTPs is a site-specific issue with no potential for additive effects. Due to the site-specific nature of these impacts and compliance with EBMUD contract specifications, applicable laws and regulations, and Measures 3.11-1, 3.11-2, and 3.12-1c, there would be no potential for cumulative effects.

    There would be an increased risk of wildland fires during WTTIP construction in high fire hazard areas. Potential impacts would be less than significant through compliance with the Public Resource Code provisions governing the use of construction equipment in fireprone areas; however, there could be a cumulative impact due to the proximity of these sites to the cumulative projects and the shared use of the same access and haul roads, especially if construction overlapped during the season of highest fire danger (April 1 to December 1). The potentially compounded increase in wildland fire risk could place an additional burden on local fire service providers (Contra Costa County Fire Protection District and/or the Moraga-Orinda Fire District); furthermore, construction activities could disrupt access to project sites, which could impede emergency access. The extent of cumulative impacts would depend on the actual phasing of the other projects, requiring interagency coordination. Based on the location and timing of the other projects identified in the DEIR, only the Lower Orinda Pumping Station force main project has the potential to contribute to cumulative wildland fire impacts in combination with proposed WTTIP construction. The District would coordinate with the Central Contra Costa Sanitary District, as well appropriate departments of other local jurisdictions and agencies regarding the timing of construction projects that would occur near WTTIP sites. Such coordination, particularly with respect to projects located in high fire hazard areas, along with coordination with local fire service providers, would help to minimize the incremental contribution of WTTIP projects to cumulative potential for wildland fire impacts.

11. Less than Significant Impact C-11: The project would not result in a significant cumulative utilities and public services impact.

    Findings: No mitigation is needed. (See Draft EIR page 5-48.)

    Facts in Support of Findings: Implementation of the WTTIP projects would have no long-term effects on the demand for or provision of utilities and public services, including police and fire services and solid waste disposal. Implementation of Measures 3.12-1a to 3.12-1h will reduce any potential individual impacts to a less-than-significant level. The incremental impact associated with the WTTIP projects combined with other projects also would not contribute to cumulative long-term impacts on utilities and public services. Short-term and long-term increases in electricity demand would occur, primarily associated

with the operation of WTPs and pumping plants, and preliminary study performed by PG&E in February 2006 indicates the need for additional electricity distribution facilities under Alternative 1. Nonetheless, construction of these additional facilities, and considering the relatively small amount of the WTTIP contribution, the incremental contribution of the WTTIP projects to impacts on electricity demand in Contra Costa and Alameda Counties is not cumulatively considerable.

5.0 Statement of Overriding Considerations

CEQA requires the lead agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the proposed project. The lead agency may decide to accept significant and unavoidable adverse environmental effects, if the specific economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, adverse effects. (CEQA Guidelines Section 15093.)

As set forth in Section 4.1 of these Findings, there are eight potentially significant and unavoidable adverse environmental effects of the Project: (1) alteration of the appearance of WTTIP sites (Highland Reservoir and Pipelines) (Impact 3.2-3); (2) effects on views from the surrounding area, including public roadways, public trails and open space and residential areas (Highland Reservoir and Pipelines) (Impact 3.3-3); (3) effects on a scenic vista (Highland Reservoir and Pipelines); (4) loss of or damage to protected trees (Highland Reservoir and Pipelines) (Impact 3.6-1); (5) reduction in the number of, or the available width of, travel lanes on roads where pipeline construction would occur, resulting in short-term traffic delays for vehicles traveling past the construction zones (Glen Pipeline Improvements) (Impact 3.8-2); (6) access disruption to adjacent land uses and streets for both general traffic and emergency vehicles, as well as disruption to bicycle/pedestrian access and circulation (Glen Pipeline Improvements) (Impact 3.8-5); (7) disruptions to transit service on pipeline alignment routes (Happy Valley Pumping Plant and Pipeline and Tice Pumping Plant and Pipeline) (Impact 3.8-6); and (8) secondary effects of planned growth (Impact G-1).

The Board hereby finds that the following economic, legal, social, technological, or other benefits of the Project override and outweigh the above-referenced eight potentially significant and unavoidable adverse environmental effects of the Project and makes this statement of overriding considerations to support its action to approve the Project.

EBMUD has identified a need to address existing capacity deficiencies, to meet projected increases in demand, and to address existing hydraulic constraints and remedy problems with aging infrastructure. Addressing these needs would benefit customers in the Lamorinda/Walnut Creek area by ensuring that supplies continue to meet demand. It would also allow the District to maintain or increase the amount of water available for firefighting during warm weather, and reducing pressure fluctuation problems. Implementation of the WTTIP projects would address these needs and provide the identified benefits. The WTTIP projects would facilitate local jurisdictions' ability to achieve general plan goals and policies related to providing a high-quality water supply, addressing capacity deficiencies, and improving emergency response capabilities

by improving water available for firefighting. All of the proposed improvements would also make the EBMUD system more reliable, benefiting all District customers.

Particular benefits of the proposed projects include:

1. Addressing Existing Capacity Deficiencies. The capacity of some facilities serving the Lamorinda/Walnut Creek area is already insufficient to reliably meet summer demands:

   - In addition, the Walnut Creek WTP operational capacity must be increased to meet short-term water delivery requirements for the Leland Pressure Zone. The upgrades to the Walnut Creek WTP would correct filter capacity issues and correct hydraulic problems in the pressure zone providing a benefit to customers in the area.

   - The WTTIP also includes projects to address existing capacity deficiencies in the Lamorinda/Walnut Creek distribution system area as well as anticipated future (to 2030) capacity needs. Several areas of the existing distribution system have inadequate pumping or pipeline capacity to deliver water to customers and maintain customer pressure or fire flow. These issues have developed over the last 30 to 50 years as the region has grown. The projects that address these deficiencies and inadequacies will benefit customers throughout the area and enable EBMUD to provide better service.

   - The Highland Reservoir would increase water storage levels in the southwest portion of the Colorados pressure zone, increasing water available for firefighting and stabilizing customer service pressures.

   - The Happy Valley Pumping Plant and associated pipeline will provide needed pumping capacity to sufficiently supply reservoirs in the Las Aromas pressure zone with water to provide emergency storage and maintain adequate customer service pressures.

   - The Glen pipelines will eliminate a hydraulic limitation in the Bryant pressure zone. During high demand periods, the constrained pipeline capacity limits the water that can be served in the area of the Glen Reservoir as well as the amount of water that can be conveyed to the upper Las Aromas pressure zone. The pipelines allow adequate conveyance of water to the upper zone and maintain adequate customer service pressures.

   - The Tice Pumping Plant and associated pipeline will provide needed pumping to a new Tice subzone in the Colorados pressure zone. This subzone will ensure that water storage levels in the Tice Reservoir fluctuate within a range suitable to maintain high water quality during the winter and adequate emergency storage in the summer.

2. Meeting Projected Increases in Demand (including Maintaining or Increasing Water Available for Firefighting). For the proposed project, 2030 maximum-day demand projections were developed based on the *Districtwide Update of Water Demand Projections* (EBMUD and Montgomery Watson, 2000). The projections were refined through further study in the Lamorinda area, resulting in a Districtwide WTP maximum-day demand of 363 mgd. These demands, allocated by water treatment plant service area (WTP demand capacities needed at a WTP to meet projected 2030 maximum-day demand for that plant's service area), would be met by the proposed project, enabling EBMUD to meet projected service requirements.

- The Lafayette WTP is the most critical capacity-deficient facility serving the area. The current maximum sustainable operating capacity of the plant is 25 mgd with all available functioning filters, while the current service area maximum-day demand is over 30 mgd. The demand capacity will need to increase to 34 mgd to reliably meet future demand. The Lafayette WTP upgrades would expand the WTP capacity to meet this need the future demand and would include additional operational capacity to meet short-term water delivery requirements.

3. Addressing Existing Hydraulic Constraints and Aging Infrastructure (including Reducing Pressure Fluctuation Problems). Infrastructure, both at the WTPs and in the transmission and distribution systems, must be periodically replaced and upgraded due to aged condition or to meet current safety, regulatory, and technology standards.

   - Some systems at the Lafayette WTP have not been upgraded for 45 years; examples of existing problems at the Lafayette WTP include the poor condition of the filters, which constrains plant operations when the turbidity of source water is higher than normal; numerous problems with backwash water handling facilities; recurring electrical brownouts; and problems with treated water storage facilities (clearwell and weir) that can adversely affect water quality. WTTIP improvements at the Lafayette WTP would correct these problems.

   - WTTIP projects would address aging infrastructure issues. Projects that provide this benefit include projects to replace the Fay Hill, Moraga, and Leland open-cut reservoirs with tank-style reservoirs.

   - The Ardith Reservoir would partially replace the existing Moraga Reservoir, which has a liner design that is prone to leakage. The Ardith Reservoir must be brought on line (in addition to improvements in treatment production and pumping capacity and Moraga Pipeline) to provide water to customers currently served by the Moraga Reservoir before the latter can be replaced.

   - The existing Donald Pumping Plant (at the site proposed for the Ardith Reservoir) would be relocated to a lower elevation at the same site to address pressure problems with the existing pumping plant that currently constrain its operation. The elevation of the existing pumping plant is too high and the pumping plant does not have adequate inlet pressure during summertime demand periods. Relocating the Donald Pumping Plant to a lower elevation at the site and reconfiguring its pumping operations would provide additional inlet pressure to the pumping plant.

4. Improving Water Quality. Many WTTIP projects, particularly improvements at the WTPs, are driven by new and emerging water quality issues. EBMUD is subject to numerous federal and state regulations pertaining to domestic water supplies, many of which stem from the Safe Drinking Water Act. In California, the federal government has delegated responsibility for the administration and enforcement of federal regulations to the state. Federal and state regulations impose treatment technology standards, monitoring standards, and other rules. Current major regulatory initiatives that affect the treatment of drinking water include initiatives to reduce microbial pathogens—in particular, *cryptosporidium*—and disinfection byproducts.

   - The WTTIP includes improvements to reduce microbial pathogens and to control disinfection byproducts at all of the regularly operated WTPs. This will assist in meeting regulatory requirements and also provide an added health benefit to all EBMUD treated-water customers.

- Improvements to ozonation systems at the Sobrante and Upper San Leandro WTPs would provide the District's West of Hill's customers with better tasting water.

- There are environmental benefits associated with eliminating backwash system discharges from the Orinda WTP to San Pablo Creek. The project-level improvements at the Orinda WTP would improve the recovery of the backwash water produced in the water treatment process. Treating the backwash water and returning the water to the head of the water treatment plant would eliminate discharges that are potentially harmful to aquatic species in San Pablo Creek, improving water quality in a natural stream within the City of Orinda.

- Certain improvements at the WTPs would also improve the water quality and reliability of the treated water at the plants and therefore the quality of water served to the citizens of Lamorinda area.

- Excessive water age is a concern for EBMUD. The distribution system is complex and has a large amount of treated water storage and storage reservoirs that contain waters that may not mix well. In some locations, water in the distribution system may be 30 days old or older before it reaches a consumer. Low residual chlorine levels can allow bacteria to colonize the distribution system and can reduce the protection against inadvertent contamination (due, for example, to pipe breaks) that might allow untreated water to enter the system. In certain reservoirs serving the Lamorinda/Walnut Creek area water levels do not fluctuate sufficiently to ensure a continuous mixing of fresh water. As part of the WTTIP, EBMUD is proposing changes to pumping and transmission facilities serving these and other reservoirs to correct this problem.

Each of these economic, legal, social, technological and overall service related benefits outweigh the identified potentially significant and unavoidable adverse environmental effects of WTTIP project elements.

Findings Regarding Impacts Mitigated to Less-Than-Significant Levels: Although the Board finds and determines that, with the exception of the eight potentially significant and unavoidable adverse environmental effects set forth in Section 4.1, all other potentially significant effects of the proposed Project will be mitigated to less-than-significant levels by the imposition of the various mitigation measures, the Board also finds that to the extent that any such impacts set forth in Section 4.2 of this Findings document have any residual unavoidable impacts, such impacts are acceptable in light of the benefits provided by the project.

6.0 Findings Related to Potential Growth Inducing Impacts

CEQA Guidelines section 15126.2 requires the lead agency to discuss the growth-inducing impacts of the proposed project.

Discussion: As analyzed DEIR Chapter 4, Growth-Inducement Potential and Secondary Effects of Growth, implementation of the WTTIP would support an amount of growth that is consistent with regional growth projections. Nonetheless, according to the CEQA Guidelines, the project could indirectly contribute to potentially significant secondary effects by removing a potential obstacle to projected development. Some of these secondary effects of planned growth have been

identified in CEQA documents prepared by land use agencies as significant and unavoidable, while others have been identified as significant but mitigable. (See Sections 4.1 and 5.0 of these Findings regarding significant and unavoidable growth inducing impacts.)

Potential Impacts: Identified significant unavoidable impacts that could occur as a result of planned growth include: loss of open space, traffic increases, degradation of air quality, and changes in the visual character of the region. See Section 4.1 of these Findings and Chapter 4 of the DEIR.

Findings: The implementation of the identified mitigation measure (Measure G-1) will reduce these impacts but not lessen the impacts to a less-than-significant level. See Draft EIR pages 4-21 and 4-22; and Sections 4.1 and 5.0 of these Findings.

7.0 Findings Regarding Alternatives and Selecting the Project

CEQA Guidelines section 15126.6(e) requires analysis of a "No Project" alternative. Section 15126.6 also requires analysis of a reasonable range of feasible alternatives. Based on the information and analysis contained in the DEIR and the FEIR, the Board hereby makes the following findings on alternatives.

The EIR evaluated two alternatives for the WTTIP at an equal level of detail, in addition to the No Project alternative. The No Project alternative is rejected because it would fail to satisfy the project needs and would jeopardize the District's ability to meet future regulatory requirements, satisfy existing and future demands, and improve aging infrastructure.

The fundamental difference between WTTIP Alternative 1 and Alternative 2 is whether the Lafayette Water Treatment Plant (WTP) is retained and upgraded (Alternative 1) or decommissioned (Alternative 2).

Alternative 1 – Supply from Orinda and Lafayette WTPs. The Board hereby finds that this alternative which will continue service from Lafayette WTP, will result in fewer impacts and selects this alternative. Alternative 1 is considered environmentally superior to Alternative 2, because of the impacts associated with the tunnel that is essential to Alternative 2, as well as the greater number of residences closer to the Orinda WTP, the more extensive construction footprints and greater excavation requirement, the potential cumulative construction impacts to Camino Pablo, and the fewer protected trees lost under Alternative 1. This is discussed at length in the EIR and briefly below.

Alternative 2 – Supply from Orinda WTP. The Board hereby rejects this alternative because it does not provide any clear environmental, economic, social or other benefits beyond those of Alternative 1 and also will result in greater impacts in certain areas. Refer to the detailed discussion below regarding the environmentally superior alternative.

In addition to analyzing two alternatives for the WTTIP overall in detail, the DEIR analyzed a number of alternatives to particular project elements. Alternatives for many elements are necessarily limited by operational and hydraulic issues. The EIR explains in detail that reservoirs may only be sited at particular elevations and that siting will be further limited by land characteristics. Siting of pumping plants is similarly constrained by pressure zone characteristics and the necessity of proximity to existing infrastructure. The Board's specific findings regarding the alternatives analyzed in the EIR are as follows.

Membrane Filtration Alternative. While the implementation of membrane filtration at the Lafayette WTP would provide environmental benefits, it is not feasible because of technological and other issues. There are few large water treatment plants using this water treatment technology in the US today. The Board thus finds that consideration of the Membrane Filtration Alternative should be deferred until this emerging technology is more fully investigated.

Modified Orinda WTP Site Plan. The Board hereby rejects the alternative of relocating several facilities at the Orinda WTP because it does not provide any clear environmental, economic, social or other benefit beyond those of the proposed project and because impacts to views along Camino Pablo would incrementally worsen, as would noise impacts to residents west of Camino Pablo. In addition, the site plan that has been selected will provide easier truck access to the emergency generator building and the solids storage tank than this alternative. Thus, the modified site plan is rejected.

The Board also rejects any suggested alternatives to upgrading Orinda WTP, including alternatives that would relocate these operations, because these alternatives are not feasible. As discussed in the DEIR section 6, these alternatives would involve significantly higher costs and many require pipeline facilities with greater environmental impacts. During the comment period, commenters also suggested alternative treatment technologies at Orinda WTP. Some technology improvements have been analyzed at a project-level. The Board rejects these alternatives at this time because they would not provide any clear environmental or economic benefits. It is not clear that alternative treatment technologies are feasible, would meet the project objectives, or would reduce the need for additional improvements. This is discussed in further detail in the FEIR.

Alternative to the Lafayette Reclaimed Water Pipeline. The Board hereby rejects the alternative of implementing a prefabricated backwash water treatment plant in place of the Lafayette Reclaimed Water Pipeline because it does not provide any clear environmental, economic, social or other benefit beyond those of the proposed project and because this alternative would not include the benefit of adding water to the Lafayette Reservoir. In addition, the alternative would have substantially higher capital and operating costs than the Lafayette Reclaimed Water Pipeline and would be more maintenance-intensive. Further, most of the proposed pipeline would be constructed at the same time and in a joint trench with the Highland Reservoir Pipelines and thus impacts associated with the pipeline would happen regardless of whether it is implemented. Any impacts to creek crossings that are associated with the pipeline, but not with the plan, would be mitigated.

Highland Reservoir Alternative Site. The Board hereby rejects the alternative of constructing the reservoir at an alternative site north of the proposed site because it does not provide any clear environmental, economic, social or other benefit beyond those of the proposed project and because the alternative would result in greater alteration to the site's appearance because the tank would be atop the ridge (rather than on the southern slope of the ridge), and therefore visible from points north. Trees along the ridge would be removed and trees down slope of the alternative site are not tall enough to sufficiently screen the tank from viewpoints along Highway 24 and some neighborhoods north of Highway 24. The degree of visibility cannot be fully ascertained without computer modeling and preparation of visual simulations, but based on the designation of this ridge as scenic resource, and designation of Highway 24 as a scenic route, significant and unavoidable visual impacts associated with the alternative site are considered more adverse than with the site as proposed in the DEIR and the site is rejected for this reason. Other alternative sites identified in the DEIR or suggested by commenters have also been rejected because they are infeasible. While some alternatives may result in less take of protected trees, they are located in areas prone to landslides and some sites could result in greater visual impacts and impacts to neighboring residences. EBMUD also eliminated from consideration any alternatives that were infeasible because they did not meet the hydraulic requirements for the project.

EBMUD has revised the site plan for the Highland Reservoir in response to public comment received on the DEIR, which primarily addressed the loss of mature oak trees and potential effects on views. These findings incorporate those revisions which are set forth in the FEIR. Construction of the tank at the revised site would require removal of fewer heritage oak trees than at the DEIR Proposed site. The revised site is approximately 120 feet north and 20 feet west of the DEIR Proposed Highland Reservoir site. 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. 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.

Overall, none of the impacts identified in the DEIR would become more severe as a result of the revisions to the project site plan, and some would become less severe, most notably impacts to protected trees. The Board hereby finds that these revisions will be included as part of the proposed project (see 7.2, Project Selection, below).

Moraga Road Pipeline Alternative. The Board hereby rejects the alternative construction method and alignment for the Moraga Road Pipeline because it does not provide any clear environmental, economic, social or other benefit beyond those of the proposed project. Tunneling operations would cause some significant impacts related to geology and soils that would not be caused by the project as proposed. In addition, some traffic and noise impacts would be incrementally greater with the tunneling alternative.

Happy Valley Pumping Plant Alternative Site. The Board hereby selects the alternative to be included as part of the proposed project (see 7.2, Project Selection, below). The DEIR Proposed Happy Valley Pumping Plant site on Lombardy Lane (DEIR p. 2-74 *et seq*) is rejected because it is no longer feasible due to landowner opposition and because impacts would not be significantly

reduced at this site. The Happy Valley Pumping Plant Alternative site hereby selected is on Miner Road near Camino Sobrante (DEIR p. 6-33 *et seq*). The DEIR proposed site is no longer feasible because the owners of the Lombardy Lane parcel are not willing to sell their property to EBMUD. The owner of the alternative site for the pumping plant is receptive to discussing the sale of a portion of his property. These Findings include approval of 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, and (b) 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 prepared additional design information and supplemental environmental analyses presented in the FEIR Responses to Comments document to support selection of the alternative site. This additional information does not materially affect the conclusions regarding impacts 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.

As noted in Section 4.1, the City of Orinda has suggested that employing alternative technologies (e.g., jack-and-bore or horizontal directional drilling) would reduce traffic impacts, particularly impacts to bus routes, associated with construction of the Happy Valley Pipeline. Jack-and-bore construction can be sued only for short segments of pipeline (e.g., a few hundred feet) and is infeasible for the 5,800-foot-long pipeline alignment. The District determined that horizontal directional drilling would be infeasible based on the number, type and location of existing utilities in Miner Road and Lombardy Lane, and the construction and maintenance issues that this would create. In addition, proposals for road widening would cause additional impacts, are not within the jurisdiction of the District, and would likely increase the identified issues associated with the project.

Tice Pumping Plant Alternative Site. The Board hereby rejects the alternative site north of Olympic Boulevard because it does not provide any clear environmental, economic, social or other benefit beyond those of the proposed project and construction- and operation-phase noise impacts are considered incrementally worse with the alternative site than under the proposed project. The alternative site also is not feasible. Development of the site as a pumping plant could conflict with development plans for the site that have been further revealed during the comment period. If the property owner proceeds with development of the parcel as residences, the site would no longer be a suitable location for a pumping plant. In addition, modifications have been made to the layout and design of the pumping plant at the location that the Board plans for construction so that impacts will be further reduced. Any environmental advantages of selection of the alternative have thus been reduced. Any other site alternatives also are not feasible.

In developing the EIR, the District rejected from further study alternatives for the Fay Hill Reservoir, Sunnyside Pumping Plant, and Withers Pumping Plant, as well as the Glen Pipeline Improvement and Reservoir Decommission. These were rejected due to infeasibility, because of concerns regarding the condition and issues surrounding the sites. Additional measures, including further set backs and other project configurations, are not feasible. Set backs are incorporated to the extent possible.

7.1 Environmentally Superior Alternative

The Board hereby finds that WTTIP Alternative 1 is considered environmentally superior to Alternative 2. Many of the same significant impacts would occur under Alternative 1 or Alternative 2 because those impacts are associated with projects common to both alternatives and there are no feasible alternatives to these projects that would mitigate those impacts. All of the impacts determined to be unavoidable would occur under either alternative because those impacts are associated with the Highland Reservoir project (impacts to visual quality and biological resources); and Tice, Happy Valley, and Glen pipelines (temporary, construction-phase impacts related to available width of traffic lanes, vehicular access, and transit service).

There are several important differences between the potential impacts and extent of required mitigation measures associated with the two alternatives. The differences are primarily the result of the Orinda-Lafayette Aqueduct project which would only be associated with Alternative 2. The impacts associated with Alternative 2 over a one- to two-year period would be avoided under Alternative 1 these include impacts resulting. Although the tunneling proposed as part of the Orinda-Lafayette Aqueduct project would avoid surface-disturbance impacts associated with open-trench construction, it would concentrate impacts at the tunnel entry shaft (and, to a lesser extent, the exit shaft), and there are some impacts unique to tunneling, including noise associated with 24-hour construction and groundborne vibration. The total areal extent of construction also would be greater under Alternative 2 than under Alternative 1 because of the Orinda-Lafayette Aqueduct.

Other differences between the alternatives relate to the impacts to, and sensitivities of, the areas immediately surrounding the Orinda WTP and Lafayette WTP sites. There are a greater number of residences closer to the Orinda WTP than is the case at the Lafayette WTP. Overall, there are about twice as many residences within 1,000 feet of the Orinda WTP as there are within 1,000 feet of the Lafayette WTP. The Lafayette WTP backs up to Highway 24, and the open space of the Lafayette Reservoir Recreation Area lies to the south, across Mt. Diablo Boulevard. Mt. Diablo Boulevard itself, because of its breadth near the Lafayette WTP, provides something of a buffer from other nearby residential areas, although this is also partially the case along the west side of the Orinda WTP, adjacent to Camino Pablo.

The more extensive construction footprints and greater excavation and grading requirements associated with Alternative 2 -- about 680,000 cubic yards of excavation, compared to about 445,000 cubic yards of excavation for Alternative 1 -- would result in incrementally greater construction-phase air emissions (e.g. approximately 139 lbs/day of PM10 emissions under Alternative 2 versus about 105 lbs/day under Alternative 1 occurring close to a greater number of sensitive receptors). In both cases, these emissions can be mitigated to a less-than-significant level.

Potential cumulative construction traffic added to Camino Pablo (two-lane section north of Miner Road) would be incrementally greater under Alternative 2 than Alternative 1 (about three percent above existing traffic volumes under Alternative 2 and one percent above existing traffic volumes under Alternative 1). In both cases the increases would fall within the typical

daily traffic volume fluctuations. Conversely, potential cumulative construction traffic added to Acalanes Road (El Nido Ranch Road to Mt. Diablo Boulevard) would represent about a five percent increase above existing traffic volumes and would only occur under Alternative 1. Cumulative truck traffic resulting from potentially overlapping WTTIP projects, and associated diesel particulate emissions, would also be incrementally greater under Alternative 2 than under Alternative 1, although the analytic threshold (600 truck trips per day) would not likely be exceeded along any particular haul route under either alternative.

There would be fewer (15-20) protected trees potentially removed under Alternative 1 than under Alternative 2, primarily because more protected trees would be removed to upgrade and expand the Lafayette WTP than would be required to upgrade and expand the Orinda WTP. There would be somewhat more (20-30) protected trees potentially damaged under Alternative 2, owing primarily to the Orinda-Lafayette Aqueduct project, although the degree of damage is unknown and may be quite limited in many cases (e.g. tree limb loss).

The No Project Alternative would neither meet the needs addressed by the WTTIP nor satisfy the project objectives. In the short term, the No Project Alternative would be environmentally superior to either "action" alternative because none of the impacts associated with those alternatives would occur. However, as described in Section 6.2, a continuation of existing conditions would become untenable, and the District would eventually have to implement projects to address the purpose and need identified for the WTTIP. This situation could, in turn, result in environmental effects that could be worse than those of either Alternative 1 or 2 in the long term.

7.2 Project Selection

Based upon the DEIR, the FEIR, and the Findings contained herein, the Board hereby finds and declares that the following Project components are approved (referred to as Alternative 1 in the DEIR):

- Lafayette WTP upgrade
- Orinda WTP upgrade
- Walnut Creek WTP upgrade
- Sobrante WTP upgrade
- Upper San Leandro WTP upgrade
- Ardith Reservoir/Donald Pumping Plant
- Fay Hill Pumping Plant and Pipeline Improvements
- Fay Hill Reservoir
- Glen Pipeline Improvements
- Glen Reservoir Decommission
- Happy Valley Pumping Plant and Pipeline (alternative project location)
- Highland Reservoir and Pipelines (revised FEIR project location)
- Lafayette Reclaimed Water Pipeline
- Leland Pressure Zone Isolation Bypass Valves
- Leland Isolation Pipeline
- Moraga Reservoir
- Moraga Road Pipeline
- Sunnyside Pumping Plant and Pipeline

- Tice Pumping Plant and Pipeline
- Withers Pumping Plant

In addition, EBMUD will consider the Membrane Filtration Alternative at Lafayette WTP in the future as appropriate, but this will be deferred until the emerging technology is more fully investigated.

EXHIBIT B

Adopted Mitigation Measures and Mitigation Monitoring and Reporting Program for the EBMUD Water Treatment and Transmission Improvements Program

Introduction

This exhibit lists and provides a brief description of the significant and potentially significant impacts of EBMUD's Water Treatment and Transmission Improvements Program Project that were identified in the Final Environmental Impact Report (EIR) certified on December 12, 2006, and presents the mitigation measures adopted by EBMUD to reduce these impacts to a less than significant level. This exhibit also constitutes the Mitigation Monitoring and Reporting Program (MMRP) for the project.

The MMRP is presented in a table. The table lists all impacts identified in the EIR as significant or potentially significant along with the adopted mitigation measures. The impacts are briefly summarized in the table. The full text of the impact discussion and analysis is presented in the EIR. The mitigation measures are described here in full and a list of projects to which they apply is provided.

Impacts and mitigation are presented in the same order as they occurred in the DEIR. For each mitigation measure a table format is used to present mitigation monitoring and reporting information. The columns in the table provide the following information:

- **Responsibility for Implementation:** This column provides additional information on how the mitigation measures will be implemented to help clarify how compliance can be monitored. The column is blank if no elaboration on the mitigation is necessary.
- **Responsibility for Monitoring:** This column contains an assignment of responsibility for the monitoring and reporting tasks.
- The remaining columns show the Impact(s) to be Mitigated, Applicable Projects, and boxes to check off upon completion of the measures.

MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Land Use, Planning, and Recreation							
No mitigation(s) required.							
Visual Quality							
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.	EBMUD's construction contractor	EBMUD	**Impact 3.3-1:** Short-term visual effects experienced from nearby areas during project construction.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP ARDPP FHPPPI FHR HVPPP HRP LIPBV MR SPP TPPP WPP			
Measure 3.3-2a: ■ The District will implement landscaping plans prepared for the following WTTIP projects: Lafayette WTP (Alternative 1), Orinda WTP (Alternative 1 or 2), Walnut Creek WTP (Alternative 1 or 2), Sobrante WTP (Alternative 1or 2), Ardith Reservoir and Donald Pumping Plant, Happy Valley Pumping Plant, Highland Reservoir, Sunnyside Pumping Plant, Tice Pumping Plant, and Withers Pumping Plant. ■ For each project (with the exception of the Fay Hill Pumping Plant), the District will plant native vegetation and/or construct earth berms around all proposed above-ground facilities to provide screening, consistent with the requirements set forth in Measure 3.6-1. Landscaping will include revegetation of disturbed areas to minimize textural contrasts with the surrounding vegetation. ■ The District will replace any landscaping at the WTTIP project sites that is removed or destroyed during construction consistent with landscape plans. New plants would include grasses, shrubs, and trees typical of the surrounding area. The District will consult with the appropriate jurisdiction when developing final landscaping plans. For disturbance of natural, non-landscaped areas, se Measure 3.6-3c in Section 3.6, Biological Resources. ■ The District will also install additional landscaping: (1) north of Manzanita Drive at the Orinda WTP to provide additional screening of existing ponds or new above-ground facilities, and (2) along Mt. Diablo Boulevard at the southeastern edge of the Lafayette WTP under Alternative 2 near the exit drive. ■ Implement Measure 3.6-1b in Section 3.6 regarding pruning. ■ For each project listed in the first bullet (with the exception of Highland Reservoir), the District will coordinate with and involve neighborhood representatives during the development of final landscaping plans. ■ The contractor will be required to warrant landscape plantings for one year after project completion. ■ The District will landscape areas that will not be disturbed by construction *before construction begins* in order to assist in preservation of views at the Walnut Creek WTP and proposed Ardith Reservoir site.	EBMUD and EBMUD's construction contractor	EBMUD	**Impact 3.3-2:** Alteration of the appearance of WTTIP sites.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP ARDPP HVPPP HRP SPP TPPP WPP			

LWTP Alt 1 = Lafayette WTP Alternative 1
LWTP Alt 2 = Lafayette WTP Alternative 2
OWTP Alt 1 = Orinda WTP Alternative 1
OWTP Alt 2 = Orinda WTP Alternative 2
WCWTP = Walnut Creek WTP
SWTP = Sobrante WTP
USLWTP = Upper San Leandro WTP
OLA = Orinda-Lafayette Aqueduct
ARDPP = Ardith Reservoir and Donald Pumping Plant
FHPPPI = Fay Hill Pumping Plant and Pipeline Improvements
FHR = Fay Hill Reservoir
GPI = Glen Pipeline Improvements
HVPPP = Happy Valley Pumping Plant and Pipeline
HRP = Highland Reservoir and Pipelines
LRWP = Lafayette Reclaimed Water Pipeline
LIPBV = Leland Isolation Pipeline and Bypass Valves
MR = Moraga Reservoir
MRP = Moraga Road Pipeline
SPP = Sunnyside Pumping Plant
TPPP = Tice Pumping Plant and Pipeline
WPP = Withers Pumping Plant

MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Visual Quality (cont.)							
Measure 3.3-2b: For each project (with the exception of the Fay Hill Pumping Plant and pipelines in roadways), the District will ensure that its contractors restore disturbed, graded areas to a natural-appearing landform.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP ARDPP HVPPP HRP LRWP LIPBV MRP SPP TPPP WPP			
Measure 3.3-2c: The District will use design elements to enhance the aesthetic appearance of proposed facilities and to integrate them with the existing visual environment. Proposed facilities will be painted or include appropriate concrete admixtures to achieve low-glare, earth-tone colors that blend with the surrounding terrain and visual setting. For each project, colors will be selected based on site-specific conditions with the goal of (1) reducing the visual contrast between new facilities and the surrounding natural landscape setting and/or (2) integrating the facility appearance with the neighboring built environment. Concrete structures need not be painted; however, integral coloring should be employed, as noted above, where structures are seen from sensitive community viewpoints. ▪ At the Lafayette WTP, landscaped berms may be incorporated into the final site and landscape plans at proposed clearwell sites in order to screen views from the Walter Costa Trail. ▪ At the Orinda WTP backwash water facility use textures, colors and materials that will blend with existing filter plant buildings. ▪ For the Tice, Withers, Happy Valley, and Sunnyside Pumping Plants, new pump structures and buildings will include architectural treatment and design elements (such as pitched roofs, roof overhangs, or ornamental window or trim detail) to enhance the appearance of new facilities. ▪ For the Lafayette WTP, Orinda WTP, Happy Valley and Tice Pumping Plants, the design of new walls, gates, and fencing will include aesthetic architectural treatment where facilities are located near public trails, residences, or scenic roadways. ▪ 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.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP ARDPP HVPPP HRP SPP TPPP WPP			
Measure 3.3-3: Implement Measures 3.3-2a through 3.3-2c, as detailed above.	See above	See above	**Impact 3.3-3:** Effects on views from the surrounding area, including public roadways, public trails, and open space and residential areas.	See above			
Measure 3.3-4: Implement Measures 3.3-2a through 3.3-2c, above, for Highland Reservoir.	See above	See above	**Impact 3.3-4:** Effects on a scenic vista.	See above			
Measure 3.3-5a (Applies to the Orinda-Lafayette Aqueduct and pipeline crossing at the recreation area entrance road): To the extent possible, the District will ensure that lighting used during nighttime construction is directed downward and oriented such that no light source is directly visible from neighboring residential areas.	EBMUD and EBMUD's construction contractor	EBMUD	**Impact 3.3-5:** New sources of light and glare.	OLA HRP LRWP			

LWTP Alt 1 = Lafayette WTP Alternative 1
LWTP Alt 2 = Lafayette WTP Alternative 2
OWTP Alt 1 = Orinda WTP Alternative 1
OWTP Alt 2 = Orinda WTP Alternative 2
WCWTP = Walnut Creek WTP
SWTP = Sobrante WTP
USLWTP = Upper San Leandro WTP
OLA = Orinda-Lafayette Aqueduct
ARDPP = Ardith Reservoir and Donald Pumping Plant
FHPPPI = Fay Hill Pumping Plant and Pipeline Improvements
FHR = Fay Hill Reservoir
GPI = Glen Pipeline Improvements
HVPPP = Happy Valley Pumping Plant and Pipeline
HRP = Highland Reservoir and Pipelines
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MR = Moraga Reservoir
MRP = Moraga Road Pipeline
SPP = Sunnyside Pumping Plant
TPPP = Tice Pumping Plant and Pipeline
WPP = Withers Pumping Plant

MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Visual Quality (cont.)							
Measure 3.3-5b (Applies to all facilities where permanent exterior lighting will be installed): The District will ensure that new lighting utilizes cutoff shields and nonglare fixture design.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 OWTP Alt 2 OWTP Alt 2 WCWTP SWTP USLWTP FHR ARDPP SPP TPPP WPP			
Measure 3.3-5c (Applies to all facilities where permanent exterior lighting will be installed): To the extent possible, the District will ensure that all permanent exterior lighting is directed onsite and downward. In addition, new lighting will be oriented to ensure that no light source is directly visible from neighboring residential areas and will be installed with motion-sensor activation. In addition, highly reflective building materials and/or finishes will not be used in the designs for proposed structures, including fencing and light poles. In accordance with Measure 3.2□1b, above, landscaping will be provided around proposed facilities. This vegetation will be selected, placed, and maintained to minimize offsite light and glare in surrounding areas.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 OWTP Alt 2 OWTP Alt 2 WCWTP SWTP USLWTP FHR ARDPP SPP TPPP WPP			
Geology, Soils, and Seismicity							
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. Slope stabilization measures 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.	EBMUD's engineering geologist and construction contractor	EBMUD	**Impact 3.4-1:** Potential injury and/or damage resulting from unstable slopes.	WCWTP SWTP ARDPP FHR HVPPP HRP LRWP MR MRP SPP TPPP WPP			

LWTP Alt 1 = Lafayette WTP Alternative 1
LWTP Alt 2 = Lafayette WTP Alternative 2
OWTP Alt 1 = Orinda WTP Alternative 1
OWTP Alt 2 = Orinda WTP Alternative 2
WCWTP = Walnut Creek WTP
SWTP = Sobrante WTP
USLWTP = Upper San Leandro WTP
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ARDPP = Ardith Reservoir and Donald Pumping Plant
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TPPP = Tice Pumping Plant and Pipeline
WPP = Withers Pumping Plant

MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Geology, Soils, and Seismicity (cont.)							
Measure 3.4-2: 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 potential secondary ground failure hazards (i.e., seismically-induced settlement) associated with the expected level of seismic ground shaking. The geotechnical analysis would provide recommendations to mitigate those hazards in the final design and, if necessary during construction. The site-specific design-level geotechnical evaluations, based on the site conditions and location and professional opinion of the geotechnical engineer, could include subsurface drilling, soil testing, and analysis of site seismic response. The geotechnical engineer would review the seismic design criteria of facilities to ensure that facilities are designed to withstand the highest expected peak acceleration, set forth by the CBC for each site. Recommendations resulting from findings of the geotechnical study will be incorporated into the design and construction of proposed facilities. Design and construction for buildings will be performed in accordance with the District's seismic design standards, which meet and/or exceed design standards for Seismic Zone 4 of the Uniform Building Code.	EBMUD's engineering geologist and construction contractor	EBMUD	**Impact 3.4-2:** Facility damage or service interruptions resulting from strong groundshaking.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
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 topsoil ▪ 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.	EBMUD's construction contractor	EBMUD	**Impact 3.4-3:** Facility damage resulting from settlement or uplift caused by expansive or compressible soils.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

LWTP Alt 1 = Lafayette WTP Alternative 1
LWTP Alt 2 = Lafayette WTP Alternative 2
OWTP Alt 1 = Orinda WTP Alternative 1
OWTP Alt 2 = Orinda WTP Alternative 2
WCWTP = Walnut Creek WTP
SWTP = Sobrante WTP
USLWTP = Upper San Leandro WTP
OLA = Orinda-Lafayette Aqueduct
ARDPP = Ardith Reservoir and Donald Pumping Plant
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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Geology, Soils, and Seismicity (cont.)							
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.	EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP			
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. Measures to minimize significant liquefaction hazards could include the following: ▪ 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.	EBMUD's engineering geologist and construction contractor	EBMUD	**Impact 3.4-4:** Potential facility damage resulting from a major earthquake in areas susceptible to liquefaction.	LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 OLA GPI HVPPP HRP LIPBV MRP TPPP			
Measure 3.4-5: The contractor will monitor for squeezing ground through the use of tunnel convergence reference points. The tunnel excavation will be reinforced throughout by either steel rib-type supports and blocking or a precast concrete segmental lining system. For a steel rib-type support system, support spacing will decrease in less competent materials. Immediate face, roof, and sidewall support will likely be required for stability in squeezing ground. The need for immediate support will require the application of active support elements and/or the use of pre-excavation support, especially at the crown (top) of the tunnel. Shotcrete will be used to strengthen sidewalls and faces when the tunnel excavation is not advanced within about a day.	EBMUD's construction contractor	EBMUD	**Impact 3.4-5:** The effects of squeezing ground during tunnel construction, which could damage interior supports.	OLA			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Hydrology and Water Quality							
Measure 3.5-1a: EBMUD will incorporate into contract specifications the requirement for the grading of construction staging areas to contain surface runoff so that contaminants such as oil, grease, and fuel products do not drain towards receiving waters. If heavy-duty construction equipment is stored overnight at the construction staging areas, drip pans will be placed beneath the machinery engine block and hydraulic systems to prevent any leakage from entering runoff or receiving waters.	EBMUD's construction contractor	EBMUD	**Impact 3.5-1:** Potential degradation of water quality from construction in or adjacent to creeks.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.5-1b: For construction adjacent to or crossing any creeks or drainage channels, EBMUD or the contractor will obtain an encroachment permit from the Contra Costa County Flood Control and Water Conservation District. Construction activities by EBMUD and its contractor(s) will comply with CDFG and the U.S. Army Corps of Engineers requirements pertaining to wetlands or streambeds, including associated water quality protection requirements of the RWQCB.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 OLA GPI HVPPP HRP LRWP MRP TPPP			
			Impact 3.5-2 is less than significant for all projects, no mitigation required				
Measure 3.5-3: EBMUD will require in their construction contract specifications that the contractor(s) include a measure in their erosion control plan or SWPPP prepared for the project prohibiting the stockpiling of soil, storage of hazardous materials, and stockpiling of construction materials in flood zones during the rainy season, typically between October 1 and May 1.	EBMUD's construction contractor	EBMUD	**Impact 3.5-3:** Construction in 100-year flood zones.	OLA HVPPP LIPBV MRP TPPP			
			Impact 3.5-4 is less than significant for all projects, no mitigation required				
			Impact 3.5-5 is less than significant for all projects, no mitigation required				
			Impact 3.5-6 is less than significant for all projects, no mitigation required				

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources							
Measure 3.6-1a: For each project site (except for the Walnut Creek WTP and the Lafayette WTP under Alternative 2), EBMUD will prepare a map indicating the trees to be removed and retained (preserved). Prior to the start of any clearing, stockpiling, excavation, grading, compaction, paving, change in ground elevation, or construction, retained trees that are adjacent to or within project construction areas will be identified and clearly delineated by protective fencing (e.g., short post and plank walls), which will be installed at the dripline of each tree to hold back fill. The delineation markers will remain in place for the duration of all construction work. Where proposed development or other site work must encroach upon the dripline of a preserved tree, special construction techniques will be required to allow the roots of remaining trees within the project site to breathe and obtain water (examples include, but are not limited to, using hand equipment for trenching and/or allowing only one pass through a tree's dripline). Tree wells or other techniques may be used where advisable by a certified arborist. Excavation adjacent to any trees will be performed in a manner that causes only minimal root damage. The following will not occur within the dripline of any retained tree: parking; storage of vehicles, equipment, machinery, stockpiles of excavated soils, or construction materials; or dumping of oils or chemicals.	EBMUD's certified arborist and construction contractor	EBMUD's biologist	**Impact 3.6-1:** Loss of or damage to protected trees.	LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
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. 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. 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 it on a 3:1 basis with native trees of the same species as those removed. ▪ All 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 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.	EBMUD and EBMUD's certified arborist	EBMUD		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
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.	EBMUD	EBMUD		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
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. 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.	EBMUD's biologist	EBMUD's biologist		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
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.	EBMUD and EBMUD's construction contractor	EBMUD		HRP MRP			
Measure 3.6-2a: The District will avoid or minimize effects on streams and riparian habitat by confining construction activities to areas above or below the stream crossing, or by using jack-and-bore construction where feasible as determined by EBMUD and where no other sensitive habitat (e.g., stream, riparian habitat, or protected trees) or sensitive receptors would be affected by this construction technique.	EBMUD, EBMUD's biologist, and EBMUD's construction contractor	EBMUD's biologist	**Impact 3.6-2:** Degradation to streams, wetlands, and riparian habitats potentially subject to state and federal protection during construction.	LWTP Alt 1 OLA GPI HVPPP HRP LRWP MRP TPPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-2b: In coordination with a qualified biologist, the District will, to the extent feasible, establish a minimum 25-foot construction exclusion zone (from the edge of wetland, riparian habitat, or the creek banks, whichever is greater), using protective fencing, where features will be avoided by direct impacts.	EBMUD, EBMUD's biologist, and EBMUD's construction contractor	EBMUD's biologist		LWTP Alt 1 OWTP Alt 2 WCWTP SWTP OLA GPI HVPPP HRP LRWP LIPBV MRP TPPP			
Measure 3.6-2c: If impacts to potentially jurisdictional features and associated riparian vegetation cannot be avoided or minimized, then the District will obtain a qualified biologist to complete a wetland delineation in accordance with Corps guidelines and will obtain the appropriate permits/agreements, including a Section 401 water quality certification from the RWQCB, a Section 404 wetland permit from the Corps, and/or a Section 1602 Streambed Alteration Agreement from the CDFG. The District will implement all conditions contained in these permits. The District will recontour and revegetate temporarily disturbed portions of the creek at a ratio of 1:1 (or at a ratio agreed on by the wetland permitting agencies). The District will compensate for permanent wetland and stream impacts onsite at a ratio of 2:1 (or at a ratio agreed on by the wetland permitting agencies) with the same type of feature as the feature affected. If the District determines that onsite restoration is not feasible, the District will compensate for permanent impacts at a 3:1 ratio (or at a ratio agreed on by the permitting agencies). The District will develop and implement a five-year wetland mitigation and monitoring program. Appropriate performance standards may include, but are not limited to: a 75 percent survival rate or plant cover of restoration plantings; absence of non-native, invasive plant species; and a functioning, self-sustaining creek or wetland system at the end of five years. As warranted following construction, the District will recontour and revegetate temporarily disturbed portions of creeks. Creek banks will be recontoured to a more stable condition if necessary. Revegetation will include a palette of species native to the watershed area. Following removal, woody trees would be replanted at a 1:1 ratio at minimum, or as determined and agreed on by the appropriate wetland permitting agencies. Interim measures to protect the unvegetated creek from erosion may be required. Interim measures may include replanting banks using native or sterile non-native seeds or seedlings following construction within the creek, removing non-native vegetation from stream banks, and employing biotechnical bank stabilization methods, such as willow wattles and biodegradable erosion control mats, where appropriate.	EBMUD and EBMUD's biologist	EBMUD's biologist		LWTP Alt 1 OWTP Alt 2 WCWTP SWTP OLA GPI HVPPP HRP LRWP LIPBV MRP TPPP			
Measure 3.6-2d: Where applicable, for overflow discharges into a creek or reservoir, the District will install energy diffusers, such as riprap, to minimize erosion and water quality effects. Such diffusers 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.	EBMUD and EBMUD's construction contractor	EBMUD's biologist		LWTP Alt 1 OWTP Alt 2 HRP LIPBV			
Measure 3.6-2e: Where construction activities occur adjacent to or within the dripline of riparian habitat, the District will implement special construction techniques to allow the roots of riparian trees to breathe and obtain water (examples include, but are not limited to, using hand equipment for tunnels and trenching, and allowing only one pass through a riparian tree's dripline). Excavation adjacent to or within the dripline of any riparian tree will occur in a manner that causes only minimal root damage.	EBMUD and EBMUD's construction contractor	EBMUD's biologist		LWTP Alt 1 OWTP Alt 2 SWTP OLA GPI HVPPP HRP LRWP LIPBV MRP TPPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-2f: The District will implement the following measures: ▪ Ensure that work activities at creeks are completed during the low-flow period (between April 1 and October 15), unless otherwise approved by appropriate regulatory agencies (e.g., RWQCB, Corps, CDFG). ▪ Store equipment and materials away from waterways to the extent feasible as determined by the District. No debris will be deposited within 60 feet of creeks for most WTTIP projects. ▪ Provide proper and timely maintenance for vehicles and equipment used during construction to reduce the potential for mechanical breakdowns leading to a spill of materials into or around creeks. Maintenance and fueling will be conducted away from the creek. ▪ To control erosion, install silt fencing material at the edge of established buffer zones for riparian habitat, or at the edge of the creek where no riparian habitat is present (see Measure 3.6-2b). ▪ Minimize the removal of riparian and wetland vegetation	EBMUD and EBMUD's construction contractor	EBMUD's botanist		LWTP Alt 1 OWTP Alt 2 WCWTP SWTP OLA GPI HVPPP HRP LRWP LIPBV MRP TPPP			
Measure 3.6-3a: The District will require that a presence/absence survey for special-status plant species be conducted within the limits of construction by a qualified botanist during the year prior to construction. Surveys will be conducted using CDFG or USFWS survey guidelines. All surveys will be conducted during the period when the species are identifiable and will be repeated seasonally, as needed, to provide a complete species list. The results of the surveys will be filed as part of the project administrative record; if the presence of any of these species is confirmed, a copy of the survey results will be forwarded to the CDFG and/or USFWS. In the event that special-status species are proven absent, then no additional mitigation is necessary. In addition, the sensitive plant communities that are located within the project site footprints will be mapped and quantified prior to construction to aid in later avoidance, revegetation, and replacement efforts.	EBMUD's botanist	EBMUD	**Impact 3.6-3:** Loss or damage to special-status plants and sensitive natural communities.	LWTP Alt 1 GPI HVPPP HRP LRWP MRP TPPP			
Measure 3.6-3b: In the event that nonlisted special-status plant species or sensitive plant communities are present or assumed present within or immediately adjacent to the limits of construction, the District will avoid these species or sensitive plant communities and establish a visible buffer zone (25 feet at minimum) prior to construction, in coordination with a qualified biologist, or will redesign or relocate the proposed structure and/or staging area. If the District determines that it is not feasible to avoid disturbance or mortality, then special-status plant habitat and/or sensitive plant communities will be restored at a 1:1 ratio. If feasible, special-status plants will be salvaged. A five-year restoration mitigation and monitoring program will be developed and implemented. Appropriate performance standards may include, but are not limited to: a 75 percent survival rate of restoration plantings or plant cover; absence of invasive plant species; and a functioning, self-sustainable plant community at the end of five years.	EBMUD's botanist and EBMUD's construction contractor	EBMUD's botanist		LWTP Alt 1 GPI HVPPP HRP LRWP MRP TPPP			
Measure 3.6-3c: At all WTTIP project sites, the District will revegetate all natural areas temporarily disturbed due to project activities. Areas supporting sensitive plant communities will be restored using locally collected plant materials specific to that community. For all sites, revegetation criteria will include general restoration concepts and methods, including use of locally native plant material, protection and restoration of soil conditions, irrigation, and control of aggressive non-native species. The planting effort will commence in the fall following construction at the project site. Sites disturbed prior to the planting effort will be treated immediately with a (1) seed mixture and mulch using broadcast methods, or (2) hydroseed. The plant palette will include native plants found locally, such as coffeeberry, sticky monkeyflower, miniature lupine, California poppy, purple needlegrass, California brome, and blue wild rye. All revegetated sites will be monitored for five years. Success criteria to be met at the end of five years may include: at least 80 percent survival of plantings, 75 percent vegetative cover by desirable species, and a viable, self-sustaining plant community.	EBMUD's botanist and EBMUD	EBMUD's botanist		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-4a: At all WTTIP project sites, EBMUD will avoid disturbing active nests of raptors and other special-status nesting birds by performing preconstruction surveys and creating no-disturbance buffers. If construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) are scheduled to occur during the nonbreeding season (September 1 through January 31), no mitigation is required. If construction activities are scheduled to occur during the breeding season (February 1 through August 31), EBMUD will implement the following measures to avoid potential adverse effects on nesting raptors and other special-status birds: ▪ EBMUD will retain a qualified wildlife biologist to conduct preconstruction surveys of all potential nesting habitat within 500 feet of construction activities where access is available. ▪ If active nests are found during preconstruction surveys, EBMUD will create a no-disturbance buffer (acceptable in size to the CDFG) around active raptor nests and nests of other special-status birds during the breeding season, or until it is determined that all young have fledged. Typical buffers include 500 feet for raptors and 250 feet for other nesting birds. The size of these buffer zones and types of construction activities restricted in these areas may be further modified during construction with the CDFG and will be based on existing noise and human disturbance levels at each WTTIP project site. Nests initiated during construction are presumed to be unaffected, and no buffer would be necessary. However, the "take" of any individuals will be prohibited. ▪ If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees and shrubs within the construction footprint that have been determined to be unoccupied by special-status birds or that are located outside the no-disturbance buffer for active nests may be removed.	EBMUD's construction contractor and EBMUD's biologist	EBMUD's biologist	**Impact 3.6-4:** Disturbance to nesting raptors, other special-status nesting birds, or bald eagle.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.6-4b: For the Fay Hill Reservoir and Moraga Road Pipeline projects, EBMUD will retain a qualified wildlife biologist to conduct preconstruction burrowing owl surveys in all areas that may provide suitable habitat for this species. EBMUD will avoid disturbing active burrowing owl nests during the breeding season and implement standard CDFG guidelines during the nonbreeding season. No more than two weeks before construction, EBMUD will retain a qualified biologist to survey for burrows and burrowing owls within 500 feet of the construction corridor where access is available. The survey will conform to the protocol described by the California Burrowing Owl Consortium (1997), which includes up to four surveys on different dates if there are suitable burrows present. If occupied owl burrows are found during preconstruction surveys, a qualified burrowing owl biologist will make a determination as to whether or not construction activities would affect the occupied burrows or disrupt reproductive behavior. If the biologist determines that construction would not adversely affect occupied burrows or disrupt breeding behavior, construction may proceed without restriction or mitigation measures. If the biologist determines that construction could adversely affect occupied burrows during the nonbreeding season (August 31 through February 1), EBMUD may passively relocate the subject owls from the occupied burrow(s) using one-way doors. There must be at least two unoccupied burrows suitable for burrowing owls within 300 feet of the occupied burrow before one-way doors are installed. The unoccupied burrows must be located 160 feet from construction activities and can be natural burrows or artificial burrows constructed according to current design specifications. Artificial burrows must be in place at least one-week before one-way doors are installed on occupied burrows. One-way doors must be in place for a minimum of 48 hours before burrows are excavated. If the biologist determines that construction would physically affect occupied burrows or disrupt reproductive behavior during the nesting season (February 1 through August 31), then avoidance is the only mitigation available (California Burrowing Owl Consortium, 1997; CDFG, 1995). Construction would be delayed within 250 feet of occupied burrows until it is determined that the subject owls are not nesting or until a qualified biologist determines that juvenile owls are self-sufficient or are no longer using the natal burrow as their primary source of shelter.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist		FHR MRP			

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MR = Moraga Reservoir
MRP = Moraga Road Pipeline
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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-4c: For the Highland Reservoir and Pipelines, the Lafayette Reclaimed Water Pipeline, and Moraga Road Pipeline projects, EBMUD will avoid disturbing winter roosts of bald eagles by performing preconstruction surveys, avoiding known wintering habitat, and creating no-disturbance buffers. EBMUD will design construction activities to avoid disturbance or removal of trees and habitat areas known to support wintering bald eagles. If construction activities are scheduled to occur during the wintering season (October 15 through March 15), EBMUD will implement the following measures, and any additional measures determined during informal consultation with the USFWS, to avoid potential adverse effects on bald eagles near the project alignment: ▪ EBMUD will retain a qualified wildlife biologist to conduct preconstruction surveys of all potential roosting habitat within one-quarter mile of construction activities where access is available. ▪ If active roosts are found during preconstruction surveys, EBMUD will establish a no-disturbance buffer (acceptable in size to the USFWS and CDFG) around active roosts until the end of the wintering season, or until it is determined that the roosts are no longer occupied. The size of these buffer zones and types of construction activities restricted in these areas may be further modified during coordination with the USFWS and CDFG and will be based on existing noise and human disturbance levels at each WTTIP project site. ▪ If preconstruction surveys indicate that roosts are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. However, habitat within known bald eagle roosting areas will not be removed.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist		HRP LRWP MRP			
Measure 3.6-5: EBMUD will avoid disturbance of the roosts of special-status bats by performing preconstruction surveys and creating no-disturbance buffers. Prior to construction activities (i.e., ground clearing and grading, including removal of trees or shrubs) within 200 feet of trees that potential 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. If evidence of bats is observed, EBMUD will carry out the following measures to avoid potential adverse effects special-status bats: ▪ EBMUD will create a no-disturbance buffer (acceptable in size to the CDFG) around active bat roosts during the breeding season (April 15 through August 15). Bat roosts initiated during construction are presumed to be unaffected, and no buffer would be necessary. However, the take of individuals will be prohibited. ▪ Removal of trees showing evidence of bat activity will occur during the period least likely to affect bats, as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula, and between August 15 and April 15 for maternity roosts). If exclusion is necessary to prevent indirect impacts to bats due to construction noise and human activity adjacent to trees showing evidence of bat activity, these activities will also be conducted during these periods.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist	**Impact 3.6-5:** Disturbance to special-status bat species.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 2 WCWTP SWTP OLA FHR GPI HVPPP HRP LRWP MRP SPP TPPP			
Measure 3.6-6: EBMUD will avoid disturbance to San Francisco dusky-footed woodrat by performing preconstruction surveys and by avoiding or relocating nests at the following project sites: Lafayette WTP (Alternative 1), Orinda WTP (Alternative 2), Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Happy Valley Pipeline, Highland Reservoir and Pipelines, Lafayette Reclaimed Water Pipeline, and Moraga Road Pipeline. Not more than two weeks prior to construction, a qualified wildlife biologist will conduct a preconstruction survey to identify woodrat nests within 10 feet of proposed ground disturbance. A qualified wildlife biologist will conduct additional surveys periodically throughout the duration of construction activities to identify newly constructed woodrat nests. If woodrat nests can be avoided by project activities, the qualified biologist would demarcate suitable buffer areas for avoidance. If woodrat nests are located within areas proposed for construction, nest relocation would be implemented.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist	**Impact 3.6-6:** Disturbance to San Francisco dusky-footed woodrat.	LWTP Alt 1 OWTP Alt 2 OLA GPI HVPPP HRP LRWP MRP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-6 (cont.) Active woodrat nests found within 10 feet of proposed disturbance areas that cannot be avoided will be relocated offsite to adjacent suitable woodland habitat under the supervision of a qualified wildlife biologist. Understory vegetation would first be cleared from around the nest. Next, the wildlife biologist would disturb the nest and allow all woodrats to leave the nest. Finally, the biologist would remove the nest sticks offsite to the base of an adjacent suitable oak, bay, or other tree. Sticks would be placed at a suitable distance determined by the qualified wildlife biologist.							
Measure 3.6-7a: EBMUD will avoid disturbing central California coast steelhead, other aquatic species, and associated habitats. Implementation of Measures 3.5-1a and b, 3.5-3, and 3.5-6 (see Section 3.5, Hydrology and Water Quality), as well as best management practices (BMPs) for construction activities, would reduce potential impacts to steelhead and other aquatic species and habitat resulting from sedimentation, turbidity, and hazardous materials. Specific measures aimed at protecting steelhead and other aquatic species include: ▪ Construction activities within and adjacent to aquatic and riparian habitats will be monitored by a qualified biologist. The biologist will survey the work area for sensitive resources prior to the start of construction each day and monitor identified biological resources during construction activities, such as initial clearing and grading, installation of silt fencing, pipeline trench excavation, and backfilling and compaction. ▪ Water from around the section of the worksite that is within the actively flowing channel of Lafayette Creek will be diverted past the construction site. This diversion will reduce the potential for sediment or other pollutants to enter the waterways and affect downstream resources. The diversion will be installed so as to capture water from the existing outlet structure and release the diverted water downstream of the construction site. ▪ Sediment curtains will be placed downstream of the construction or maintenance zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone. ▪ If groundwater is encountered, or if water remains within the worksite after flows are diverted, it will be pumped out of the construction area and into a retention basin constructed of hay bales lined with filter fabric. The pump(s) will be screened to avoid entrapment of aquatic species. ▪ Silt fencing will be installed in all areas where construction occurs within 100 feet of actively flowing water. ▪ A spill prevention plan for potentially hazardous materials will be prepared and implemented. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting any spills. If necessary, containment berms will be constructed to prevent spilled materials from reaching the creek channels. ▪ Equipment and materials will be stored at least 50 feet from waterways. No debris (such as trash and spoils) will be deposited within 100 feet of wetlands. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents will be located outside of the stream channel and banks and be limited to the smallest size feasible as determined by EBMUD. Stationary equipment such as motors, pumps, generators, compressors, and welders located within or adjacent to the stream will be positioned over drip pans. Any equipment or vehicles driven and/or operated within or adjacent to the stream will be checked and maintained daily to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life. Vehicles will be moved away from the stream prior to refueling and lubrication. ▪ Proper and timely maintenance of vehicles and equipment will be performed to reduce the potential for mechanical breakdowns that could lead to a spill of materials into or around creeks. Maintenance and fueling will be conducted at least 75 feet from riparian or aquatic habitats. ▪ WTTIP project sites will be revegetated with an appropriate assemblage of native upland vegetation and, if necessary, riparian and wetland vegetation suitable for the area. A plan describing pre-project conditions, invasive species control measures, and restoration and monitoring success criteria will be prepared prior to construction.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist	**Impact 3.6-7:** Degradation of special-status aquatic species habitat.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 2 SWTP OLA GPI HVPPP HRP LRWP MRP TPPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-7b: EBMUD will avoid disturbing California red-legged frog and its habitat. Project activities will avoid potential habitat for California red-legged frog through the use of bore-and-jack or other trenchless construction techniques; creek crossings will be constructed above or below the culverts within paved roads at Lauterwasser Creek and its tributaries, Las Trampas Creek, and at unnamed drainages along Moraga Road. California red-legged frog habitat within San Pablo Creek near the Sobrante WTP will be avoided by constructing outside the riparian corridor. To prevent impacts to California red-legged frog during and after construction adjacent to these and other areas that provide potential habitat for this species, reasonable and prudent measures for protection of California red-legged frog from the USFWS Biological Opinion for this species (USFWS, 1999), as well as any additional protection measures developed through informal consultation with the USFWS, will be implemented. These measures include environmental training, construction equipment and materials storage guidelines, silt fencing, and revegetation, as described in Measure 3.6-7a, as well as the following measures: ▪ The name and credentials of a biologist qualified to act as a project biologist/construction monitor will be submitted to USFWS for approval at least 15 days prior to the commencement of work. ▪ A USFWS-approved biologist will survey the worksites two weeks before the onset of construction activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist will contact the USFWS to determine if moving any of these life-stages is appropriate. If the USFWS approves moving the animals, the biologist will be allowed sufficient time to move frogs from the worksites before work activities begin. If California red-legged frogs are not identified, construction may proceed at these sites. ▪ Exclusion fencing will be installed around WTTIP project sites, as directed by the USFWS, to prevent California red-legged frogs in adjacent areas from moving into project work areas. ▪ A USFWS-approved biologist will be present at the active worksites until such time that the removal of California red-legged frogs, instruction of workers, and habitat disturbance have been completed. After this time, the contractor or permittee will designate a person to monitor onsite compliance with minimization measures. The biologist will ensure that this individual receives training outlined in the programmatic Biological Opinion. ▪ During work activities, trash that may attract predators will be properly contained, removed from the worksite, and disposed of regularly. Following construction, trash and construction debris will be removed from work areas. ▪ Work activities within or adjacent to potential California red-legged frog aquatic habitat will be completed between April 1 and November 1. ▪ The USFWS-approved biologist will remove exotic species, such as crayfish and centarchid fish, from the project area. Should the USFWS determine through informal consultation that formal consultation is necessary, EBMUD will prepare a biological assessment and initiate formal consultation with the USFWS under Section 7 of FESA. Any additional California red-legged frog protection measures and additional habitat compensation required for program-level project impacts included in the USFWS Biological Opinion will be implemented during and after construction, as applicable.	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist		LWTP Alt 1 SWTP OLA HVPPP HRP LRWP MRP TPPP			
Measure 3.6-7c: EBMUD will avoid disturbing western pond turtle, foothill yellow-legged frog, and their habitats. No more than two weeks prior to the commencement of ground-disturbing activities, a qualified biologist retained by EBMUD will perform surveys for foothill yellow-legged frog and western pond turtle within suitable habitat on the WTTIP project sites. Surveys will include western pond turtle nests as well as individuals. The biologist (with the appropriate agency permits) will temporarily relocate any identified western pond turtles or foothill yellow frogs upstream of the construction site, and temporary barriers will be placed around the construction site to prevent ingress. Construction will not proceed until the work area is determined to be free of foothill yellow-legged frogs, as well as western pond turtles and their nests. The biologist will be responsible for relocating adult turtles and frogs that	EBMUD's biologist and EBMUD's construction contractor	EBMUD biologist		LWTP Alt 1 SWTP OLA HVPPP HRP LRWP MRP TPPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Biological Resources (cont.)							
Measure 3.6-7c (cont.)							
move into the construction zone after construction has begun. If a nest is located within a work area, the biologist (with the appropriate permits from the CDFG) may move the eggs to a suitable facility for incubation, and release hatchlings into the creek system in late fall. The biologist will be present on the WTTIP project sites during initial ground clearing and grading, culvert replacement and/or installation over drainages, and during all other construction activities within or adjacent to drainages with the potential to support foothill yellow-legged frog or western pond turtle.							
			Impact 3.6-8 is less than significant for all projects, no mitigation required				
Cultural Resources							
Measure 3.7-1a: EBMUD will include the following in WTTIP contract specifications for ground-disturbing activities, including excavation and grading. In the event of accidental discovery of cultural resources, such as structural features, bone, shell, artifacts, human remains, architectural remains (such as bricks or other foundation elements), or historic archaeological artifacts (such as antique glass bottles, ceramics, horseshoes, etc.), work will be suspended and EBMUD staff will be contacted. A qualified cultural resource specialist will be retained and will perform any necessary investigations to determine the significance of the find. EBMUD will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code, in the event of the discovery of human remains, all work will be halted and the county coroner will be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission will be adhered to in the treatment and disposition of the remains.	EBMUD's archaeologist and EBMUD's biologist	EBMUD's archaeologist / EBMUD's biologist	**Impact 3.7-1:** Potential disturbance to archaeological resources, including unrecorded cultural resources.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.7-1b: EBMUD will retain the services of a qualified archaeological consultant that has expertise in California prehistory to monitor ground-disturbing or vegetation removal activity within 500 feet of a known archaeological site. If an intact archaeological deposit is encountered, all soil-disturbing activities in the vicinity of the deposit will cease. The archaeological monitor will be empowered to temporarily redirect crews and heavy equipment until the deposit is evaluated. The monitor will immediately notify EBMUD of the encountered archaeological deposit. The monitor will, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, present the findings of this assessment to EBMUD. If the archaeological monitor determines that the area being excavated does not contain archaeological materials, the monitor will modify the level of monitoring as needed. If EBMUD, in consultation with the archaeological monitor, determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, EBMUD will: If the District in consultation with the archaeological monitor, determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, EBMUD will: ▪ Redesign the project to avoid any adverse effects on the significant archaeological resource; or	EBMUD's archaeologist	EBMUD's archaeologist		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Cultural Resources (cont.)							
Measure 3.7-1b (cont.) ▪ Implement an archaeological data recovery program (ADRP) (unless the archaeologist determines that the resource is of greater interpretive than research significance, and that interpretive use of the resource is feasible). If the circumstances warrant, an ADRP will be conducted. The project archaeologist and EBMUD will meet and consult to determine the scope of the ADRP. The archaeologist will prepare a draft ADRP that will be submitted to EBMUD for review and approval. The ADRP will identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain (i.e., the ADRP will identify the scientific/historical research questions that are applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions). Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods will not be applied to portions of the archaeological resources if nondestructive methods are practical.							
Measure 3.7-2: EBMUD or an appointed representative will notify a qualified paleontologist of any discoveries, document the discovery as needed, evaluate the potential resource, and assess the significance of the find under the criteria set forth in Section 15064.5 of the CEQA Guidelines. In the event a fossil is discovered during construction, excavations within 50 feet of the find will be temporarily halted or diverted until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards (SVP, 1995). The paleontologist will notify EBMUD to determine procedures to be followed before construction is allowed to resume at the location of the find. If EBMUD determines that avoidance is not feasible, the paleontologist will prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and the plan will be implemented. The plan will be submitted to EBMUD for review and approval.	EBMUD and EBMUD's paleontologist	EBMUD and EBMUD's paleontologist	**Impact 3.7-2:** Potential disturbance to paleontological resources.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.7-3: To reduce potential indirect effects to the historic setting of the Orinda WTP, EBMUD will provide additional landscaping around the proposed emergency generator building, solids pumping plant, sludge storage tank, and (if implemented) high-rate sedimentation unit to screen these industrial elements from view and soften their visual appearance. This measure is in addition to the landscape treatments already proposed for the immediate area as part of the project and will be included in an amended landscape plan for the Orinda WTP project.	EBMUD's archaeologist	EBMUD's archaeologist	**Impact 3.7-3:** Disturbance or alteration to historic resources.	OWTP Alt 1 OWTP Alt 2			
Traffic and Circulation							
Measure 3.8-1: The 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 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: – Develop circulation and detour plans to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible. Use flaggers and/or signage to guide vehicles through and/or around the construction zone. – Control and monitor construction vehicle movements through the enforcement of standard construction specifications by periodic onsite inspections.	EBMUD and EBMUD's Construction Contractor	EBMUD	**Impact 3.8-1:** Short-term increases in vehicle trips by construction workers and construction vehicles.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Traffic and Circulation (cont.)							
Measure 3.8-1 (cont.)				HRP LRWP LIPBV MR MRP SPP TPPP WPP			
– To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.							
– Limit lane closures during peak hours to the extent possible (and unless otherwise approved by the local agency). Restore roads and streets to normal operation by covering trenches with steel plates outside of allowed working hours or when work is not in progress.							
– 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. Parking may be prohibited if necessary to facilitate construction activities or traffic movement. If the work zone width will not allow a 10-foot-wide paved travel lane, then the road will be closed to through-traffic (except emergency vehicles) and detour signing on alternative access streets will be used.							
– As approved by the local agency, include signage to direct pedestrians and bicyclists around construction work zones that displace sidewalks 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 to and from the worksite provided.							
– Comply with roadside safety protocols. Provide "Road Work Ahead" warning signs and speed control (including signs informing drivers of state-legislated double fines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone.							
– Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities and the locations of detours and lane closures.							
– 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.							
– Coordinate with the County Connection so the transit provider can temporarily relocate bus routes or bus stops in work zones as it deems necessary.							
– To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule construction of project elements to avoid overlapping maximum trip-generation construction phases.							
– 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 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.							
– 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.							
Implementation of Measure 3.8-1 would ensure that effects on traffic flow conditions in the project vicinity would be less than significant.							

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Traffic and Circulation (cont.)							
Measure 3.8-2: Implement Measure 3.8-1, which stipulates actions required of contractor(s) to reduce traffic flow impacts to a less-than-significant level. Access impacts on roads for which no detour routing is available would be significant and unavoidable.	See above	See above	**Impact 3.8-2:** Reduction in the number of, or the available width of, travel lanes on roads where pipeline construction would occur, resulting in short-term traffic delays for vehicles traveling past the construction zones.	See above			
Measure 3.8-3: Implement Measure 3.8-1, which stipulates actions required of contractor(s) to reduce parking impacts to a less-than-significant level.	See above	See above	**Impact 3.8-3:** Demand for parking spaces to accommodate construction worker vehicles; temporary displacement of on-street parking along pipeline alignment routes.	See above			
Measure 3.8-4: Implement Measure 3.8-1, which stipulates actions required of contractor(s) to reduce potential traffic safety impacts to a less-than-significant level.	See above	See above	**Impact 3.8-4:** Potential traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways.	See above			
Measure 3.8-5: Implement Measure 3.8-1, which stipulates actions required of contractor(s) to reduce access impacts to a less-than-significant level. Access impacts on roads for which no detour routing is available would be significant and unavoidable.	See above	See above	**Impact 3.8-5:** Access disruption to adjacent land uses and streets for both general traffic and emergency vehicles, as well as disruption to bicycle/pedestrian access and circulation.	See above			
Measure 3.8-6: Implement Measure 3.8-1, which stipulates actions required of contractor(s) to reduce impacts to transit service to a less-than-significant level. Transit impacts on roads for which adequate replacement routing for bus lines is not available would be significant and unavoidable.	See above	See above	**Impact 3.8-6:** Disruptions to transit service on pipeline alignment routes.	See above			
Measure 3.8-7: Prior to project construction, road conditions will be documented for all routes that will be used by project-related vehicles. Road conditions will also be documented after project construction is completed. Roads damaged by construction will be repaired to a structural condition equal to that which existed prior to construction activity.	EBMUD's Construction Contractor	EBMUD	**Impact 3.8-7:** Increased wear-and-tear on the designated haul routes used by construction vehicles.	WCWTP USLWTP ARDPP GPI HVPPP MR TPPP			
Air Quality							
Measure 3.9-1a: The District will incorporate into the contract specifications the following requirements: *BAAQMD Basic Control Measures* ▪ Maintain dust control within the site and provide adequate measures to prevent a dust problem for neighbors. Use water sprinkling, temporary enclosures, and other suitable methods to limit the rising of dust and dirt. Dust control will be adequate to ensure that no visible dust clouds extend beyond the project boundaries or extend more than 50 feet from the source of any onsite project construction activities. ▪ Load trucks in a manner that will prevent materials or debris from dropping on streets. Trim loads and remove all material from shelf areas of vehicles to prevent spillage. Take precautions when necessary to avoid cresting dust and littering by watering the load after trimming and by promptly sweeping the pavement to remove dirt and dust. ▪ Cover all trucks hauling soil, sand, and other loose materials. ▪ Pave, apply water, or apply nontoxic soil stabilizers or rock on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Sweep daily with water sweepers all paved access roads, parking areas, and staging areas at construction sites. ▪ Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets.	EBMUD's construction contractor	EBMUD	**Impact 3.9-1:** Short-term increases in fugitive dust (including inhalable particulates) and equipment exhaust emissions during construction activities.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Air Quality (cont.)							
Measure 3.9-1b: The District will incorporate into the contract specifications the following requirements: *BAAQMD Enhanced Control Measures* ▪ Hydroseed or apply nontoxic soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more). ▪ Enclose, cover, water, or apply nontoxic soil binders to exposed stockpiles (dirt, sand, etc.) ▪ Limit traffic speeds on unpaved roads to 15 miles per hour. ▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways. ▪ Replant vegetation in disturbed areas as quickly as possible.	EBMUD's construction contractor	EBMUD		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHR HVPPP HRP LRWP MRP SPP TPPP WPP			
Measure 3.9-1c: To limit exhaust emissions, the District will incorporate into the contract specifications the following requirements: BAAQMD Exhaust Controls ▪ Use line power instead of diesel generators at all construction sites where line power is available. Line power will be used at the tunnel entry and exit shafts for the Orinda-Lafayette Aqueduct project. ▪ As specified in EBMUD Policy 7.05, limit the idling of all mobile and stationary construction equipment to five minutes; as specified in Sections 2480 and 2485, Title 13, California Code of Regulations, limit the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds, both California- or non-California-based trucks) to 30 seconds at a school or five minutes at any location. In addition, limit the use of diesel auxiliary power systems and main engines to five minutes when within 100 feet of homes or schools while driver is resting. ▪ For operation of any stationary, diesel-fueled, compression-ignition engines as part of construction of WTTIP facilities, comply with Section 93115, Title 17, California Code of Regulations, Airborne Toxic Control Measure for Stationary Compression Ignition Engines, which specifies fuel and fuel additive requirements as well as emission standards. ▪ If stationary equipment (such as generators for ventilation fans) must be operated continuously, locate such equipment at least 100 feet from homes or schools where possible. ▪ Require low-emissions tuneups and perform such tuneups regularly for all equipment, particularly for haul and delivery trucks. Submit a log of required tuneups to EBMUD on a quarterly basis for review.	EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 2 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
			Impact 3.9-2 is less than significant for all projects, no mitigation required				
Measure 3.9-3: For any projects that would require a tunnel ventilation system, if hydrogen sulfide gas or any other odorous gases are encountered during tunnel excavation and become a nuisance odor problem (including diesel exhaust), water scrubbers will be added to the ventilation system and appropriate chemicals will be added to remove the nuisance odors.	EBMUD's construction contractor	EBMUD	**Impact 3.9-3:** Air pollutant emissions from ventilation fans.	OLA			
			Impact 3.9-4 is less than significant for all projects, no mitigation required				
			Impact 3.9-5 is less than significant for all projects, no mitigation required				
			Impact 3.9-6 is less than significant for all projects, no mitigation required				

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Noise and Vibration							
Measure 3.10-1a: The District will incorporate into contract specifications a requirement that construction activities at the construction site not cause daytime noise levels to exceed the 70-dBA speech interference criterion at the closest affected sensitive receptors, as well as that noise levels are consistent with local ordinances (see Table 3.10-1). Measures that would be implemented to reduce noise levels (as demonstrated in Table 3.10-5) to meet this criterion include the following: ▪ Truck operations (haul trucks and concrete delivery trucks) will be limited to the daytime hours, as described in Measure 3.10-1b. ▪ Best available noise control techniques (including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds) will be used for all equipment and trucks as necessary. ▪ If impact equipment (e.g., jackhammers, pavement breakers, and rock drills) is used during project construction, hydraulically or electric-powered equipment will be used wherever possible to avoid the noise associated with compressed-air exhaust from pneumatically powered tools. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed-air exhaust will be used (a muffler can lower noise levels from the exhaust by up to about 10 dB). External jackets on the tools themselves will be used, where feasible, which could achieve a reduction of 5 dB. Quieter procedures, such as drilling rather than impact equipment, will be used whenever feasible. ▪ Wherever pile driving is required (possibly at tunnel shafts, jack-and-bore pit shafts, Moraga Reservoir, and Tice Pumping Plant), pile holes will be predrilled to minimize the duration of pile driving. ▪ Stationary noise sources will be located as far from sensitive receptors as possible. If they must be located near receptors, adequate muffling (with enclosures) will be used to ensure local noise ordinance limits are met. Enclosure opening or venting will face away from sensitive receptors. Enclosures will be designed by a registered engineer regularly involved in noise control analysis and design. Operation of any stationary equipment beyond the time limits specified will meet applicable noise ordinance noise limits (see Measure 3.10-1b). ▪ Material stockpiles as well as maintenance/equipment staging and parking areas will be located as far as practicable from residential and school receptors. ▪ If any pipeline construction zones are located within 50 feet of school classrooms or childcare facilities, pipeline construction activities (or at least the noisier phases of construction) will be scheduled on weekend or school vacation days to the extent feasible, avoiding weekday hours when schools are in session. If construction must occur when school is in session, construction noise will comply with applicable noise ordinance noise limits (e.g., 83 dBA at 50 feet in Lafayette, etc.). ▪ An EBMUD contact person will be designated 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.	EBMUD and EBMUD's construction contractor	EBMUD	**Impact 3.10-1:** Intermittent and temporary noise above existing ambient levels during construction.	LWTP Alt 1 LWPT Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
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 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.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWPT Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP MR SPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Noise and Vibration (cont.)							
Measure 3.10-1c: At the Upper San Leandro WTP, EBMUD will make a reasonable effort to limit operation of impact construction equipment to less than 10 days to be consistent with Oakland Noise Ordinance construction noise limits. However, if this limit cannot be achieved, construction at this site will occur in a manner consistent with the Oakland City Council Adopted Construction Noise Mitigation Measures to the extent feasible (included as Appendix G).	EBMUD and EBMUD's construction contractor	EBMUD		USLWTP			
Measure 3.10-1d: The District will incorporate into the contract specifications the following requirements to reduce construction-related noise levels associated with the Orinda-Lafayette Aqueduct and any other WTTIP projects that involve construction of tunnel shafts (including any jack-and-bore pits where equipment would operate 24 hours per day): ▪ The construction contractor will be required to retain an acoustical engineer to design sound abatement measures that will meet the local ordinance limits. Among other things, the acoustical engineer will provide design specifications for the sound barrier design and the specific ventilation fan to be used (based on type, size, orientation, location, exhaust, etc.) at tunnel portals. ▪ Quiet tunnel ventilation fans will be used and will be directed away from sensitive receptors. Since they would operate 24 hours per day, the fans must meet the noise ordinance limits listed in Table 3.10-1. Additional measures that could be employed to reduce fan noise, if necessary, include enclosing fans, treating the interior surface of the enclosure for acoustical absorption, or using silencers or acoustically lined inlet plena to control the inlet noise. ▪ Prior to construction, baseline noise measurements will be taken at the entry and exit shafts. If baseline ambient noise levels already exceed applicable noise ordinance limits 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. ▪ Loader operations at the surface (the area outside the tunnel shaft) in the tunnel portal vicinities will cease at 6 p.m. on weekdays and not operate on weekends in accordance with the Orinda Noise Ordinance, except during critical water service outages or other emergencies and special situations. ▪ Other measures will be implemented wherever possible to reduce impact noise. For example, bins used to transport spoils, including rocks and debris, will be constructed of nonmetallic material or have a nonmetallic liner (such as cardboard), if feasible, to reduce impact noise. Much box tipping/dumping at the surface will be performed in a manner that minimizes clanging, banging, or booming noises (metal to metal contact) during the evening and nighttime hours (6 p.m. to 8:00 a.m. on weekdays). ▪ Underground controlled detonation in the tunnel shaft areas will be restricted to the hours of 8:00 a.m. to 6:00 p.m. (in accordance with the Orinda Noise Ordinance). In addition, the amount of explosive and the delay times of any explosive charges used will be limited so as to produce a maximum noise level at the closest adjacent receptor of 60 dBA (Ldn). ▪ Backup alarms on any equipment will not be operated during nighttime hours (10:00 p.m. to 7:00 a.m.). ▪ Sound barriers will be erected around the tunnel entry and exit shafts to minimize noise impacts on adjacent receptors, as specified in Measure 3.10-1e. ▪ Proposed jack-and-bore pits will be located as far from sensitive receptors as technically feasible.	EBMUD's construction contractor	EBMUD		OWTP Alt 2 OLA MR			
Measure 3.10-1e: Wherever a sensitive receptor is located within 150 feet of a construction site at a treatment plant, reservoir, or pumping plant, and at both tunnel shafts, temporary sound barriers will be provided between the construction site and the closest receptors to reduce noise levels to below the speech interference criterion at the closest receptor. The applicable ordinance nighttime noise standard will also be applied at tunnel portals where nighttime activities are proposed. As a rule, the elevation of the barrier should be sufficient to interrupt the line-of-sight between the residential receptors and the tops of stacks (exhaust pipes) of construction equipment by about 5 to 10 feet. Sound-absorbing blankets can also be used at appropriate locations as necessary to protect nearby residents.	EBMUD's construction contractor	EBMUD		OWTP Alt 2 OLA ARDPP FHPPPI FHR HVPPP HRP LRWP MR			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Noise and Vibration (cont.)							
Measure 3.10-1e (cont.) Any openings in sound barriers that are provided for truck/vehicle access will be located away from sensitive receptors. For example, sound barriers could be constructed around the entrance tunnel shaft, and the opening to the tunnel staging area could be located on the south side so that tunnel-related noise would be oriented to the south, toward the existing WTP rather than toward residential receptors to the west and east and school receptors to the north. It should be noted that although mitigation measures would reduce construction noise levels to meet local ordinance criteria (as indicated in Tables 3.10-5 and 3.10-6), mitigated construction noise could still cause occasional disturbance at the closest noise-sensitive receptors.							
			Impact 3.10-2 is less than significant for all projects, no mitigation required				
Measure 3.10-3a: To prevent cosmetic or structural damage to adjacent or nearby structures, EBMUD will incorporate into contract specifications restrictions on construction for those facilities that will or may require sheetpile driving, pile driving, or tunnel construction, whereby surface vibration will be limited to no more than 0.5 in/sec PPV, measured at the nearest residential or other sensitive structure.	EBMUD's construction contractor	EBMUD	**Impact 3.10-3:** Construction of WTTIP facilities could cause vibration that could disturb local residents and cause cosmetic damage to buildings and structures.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA MR MRP TPP			
Measure 3.10-3b: Contract specifications will include the following in the event that controlled detonation is required: ▪ Prior to controlled detonations, the contractor will be required to perform tests to determine the rock properties so that vibrations from the blast remain within the required PPV limit of 0.5 in/sec at the nearest structure. Such tests may include small test blasts in sealed borings to measure vibration attenuation (i.e., reduction). The charges used will be as small as possible to fracture the rock to be excavated. Vibration monitoring will be employed to ensure that the 0.5 in/sec PPV performance standard at the nearest structure is not exceeded. ▪ 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.	EBMUD and EBMUD's construction contractor	EBMUD		OLA			
Measure 3.10-4: Equipment used in WTTIP facilities will not cause ambient noise levels to exceed the nighttime noise limits specified in Table 3.10-8). Measures that could be incorporated into the design of proposed facilities to ensure that noise levels meet this criterion (as demonstrated in Table 3.10-8) include the following: ▪ Pumping and emergency generator facilities will be fully enclosed, and vents will be located on the building facades facing away from adjacent residential receptors, particularly at the Happy Valley Pumping Plant site where pumping plant noise must be reduced by 8 dB to meet Orinda's 45-dBA noise limit for mechanical equipment. ▪ Building enclosures will provide at least 40 dB of attenuation on solid walls (i.e., a 40-dB difference between interior vs. exterior noise) and a 20-dB reduction no the louvered side of the enclosure, when measured at 6 feet from the wall, directly in front of the louvers. ▪ Masonry sound barriers will be constructed around transformers, and substations will be of sufficient height to provide at least 10 dB or more of noise attenuation.	EBMUD's construction contractor	EBMUD	**Impact 3.10-4:** Noise increases during facility operations.	LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP ARDPP FHPPPI HVPPP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Hazards and Hazardous Materials							
Measure 3.11-1: For construction of all facilities requiring excavation of more than 50 cubic yards of soil, the District or contractor will use a qualified professional to conduct a Phase I environmental site assessment in conformance with standards adopted by ASTM International. If the Phase I environmental site assessment indicates that a release of hazardous materials could have affected soil or groundwater quality at the site, the District will retain a qualified environmental professional to conduct a Phase II environmental site assessment to evaluate the presence and extent of contamination at the site, in conformance with state and local guidelines and regulations. If the results of the subsurface investigation(s) indicate the presence of hazardous materials, alteration of facility design or site remediation may be required by the applicable state or local regulatory agencies, and the contractors will be required to comply with all regulatory requirements for facility design or site remediation. The Phase I environmental site assessment will be completed within twelve months prior to construction to accurately estimate the conditions that could be expected during construction. For pipeline projects, the District or contractor will conduct an environmental database review to identify environmental cases, permitted hazardous materials uses, and spill sites within one-quarter mile of the pipeline alignment. Regulatory agency files will be reviewed for those sites that could potentially affect soil and groundwater quality within the pipeline alignment. The environmental database review will be completed within six months prior to construction to accurately estimate the conditions that could be expected during construction.	EBMUD and EBMUD's construction contractor	EBMUD	**Impact 3.11-1:** Exposure of workers and the public to hazardous materials that could be present in excavated soil, tunnel muck, or groundwater.	LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.11-2: The District will perform or incorporate into contract specifications for all WTTIP project components involving demolition or renovation of existing facilities the requirement that the contractor(s) have a hazardous building materials survey completed for each of the structures by a registered environmental assessor or a registered engineer prior to demolition or renovation activities. If any friable asbestos-containing materials, lead-containing materials, or hazardous components of reservoir liner materials are identified, adequate abatement practices, such as containment and/or removal, will be implemented prior to demolition or renovation.	EBMUD's construction contractor	EBMUD	**Impact 3.11-2:** Exposure of workers and the public to hazardous building materials during demolition or renovation of existing structures.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 2 SWTP USLWTP ARDPP FHPPPI FHR MR			
			Impact 3.11-3 is less than significant for all projects, no mitigation required				
Implement Measure 3.12-1c, as described in Section 3.12, Public Services and Utilities.			**Impact 3.11-4:** Rupture of a high-pressure gas line.	OLA HVPPP HRP LRWP LIPBV MRP SPP TPPP			
			Impact 3.11-5 is less than significant for all projects, no mitigation required				
			Impact 3.11-6 is less than significant for all projects, no mitigation required				
			Impact 3.11-7 is less than significant for all projects, no mitigation required				

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Public Services and Utilities							
Measure 3.12-1a: Prior to excavation, the District or its contractors will locate overhead and underground utility lines, such as natural gas, electricity, sewage, telephone, fuel, and water lines, that may reasonably be expected to be encountered during excavation work.	EBMUD and EBMUD's construction contractor	EBMUD	**Impact 3.12-1:** Potential damage to or interference with existing public utilities.	LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.12-1b: The District or its contractors will find the exact location of underground utilities by safe and acceptable means, including the use of hand and modern techniques as well as customary types of equipment. Information regarding the size, color, and location of existing utilities must be confirmed before construction activities begin.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Public Services and Utilities (cont.)							
Measure 3.12-1c: The District or its contractors will confirm the specific location of all high priority utilities (i.e. pipelines carrying petroleum products, oxygen, chlorine, toxic or flammable gases; natural gas in pipelines greater than 6 inches in diameter, or with normal operating measures, greater than 60 pounds per square inch gauge; and underground electric supply lines, conductors, or cables that have a potential to ground more than 300 volts that do not have effectively grounded sheaths) and such locations will be highlighted on all constructions drawings. In the contract specifications, the District will require that the contractor provide weekly updates on planned excavation for the upcoming week and identify when construction will occur near a high priority utility. On days when this work will occur, District construction managers will attend tailgate meetings with contractor staff to review all measures—those identified in the Mitigation Monitoring and Reporting Program and in the construction specifications—regarding such excavations. The contractor's designated health and safety officer will specify a safe distance to work near high-pressure gas lines, and excavation closer to the pipeline will not be authorized until the designated health and safety officer confirms and documents in the construction records that: (1) the line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device, and (2) the location was verified by hand by the construction contractor. The designated health and safety officer will provide written confirmation to the District that the line has been adequately located, and excavation will not start until this confirmation has been received by the District.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.12-1d: While any excavation is open, the District or its contractors will protect, support, or remove underground utilities as necessary to safeguard employees.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Public Services and Utilities (cont.)							
Measure 3.12-1e: The District or its contractors will notify local fire departments any time damage to a gas utility results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.12-1f: The District or its contractors will contact utility owner if any damage occurs as a result of the project and promptly reconnect disconnected cables and lines with approval of owner.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Public Services and Utilities (cont.)							
Measure 3.12-1g: The District will observe Department of Health Services (DHS) standards, which require: (1) a 10-foot horizontal separation between parallel sewage and water mains (gravity or force mains); (2) a 1-foot vertical separation between perpendicular water and sewage line crossings; and (3) encasement of sewage mains in protective sleeves where a new water line crosses under or over an existing wastewater main.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
Measure 3.12-1h: The District or its contractors will coordinate final construction plans and specifications with affected utilities, such as PG&E.	EBMUD and EBMUD's construction contractor	EBMUD		LWTP Alt 1 LWTP Alt 2 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP SPP TPPP WPP			
			Impact 3.12-2 is less than significant for all projects, no mitigation required				
Measure 3.12-3: The District will implement Measures 3.12-1a through 3.12-1h.			**Impact 3.12-3:** Potential short-term increase in demand for police and fire services.	See above			

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MITIGATION MONITORING AND REPORTING PLAN FOR THE WTTIP (Continued)

Mitigation Measures	Responsibility for Implementation	Responsibility for Monitoring	Impact(s) Being Mitigated	Applicable Projects	Check Box (Date)	Check Box (Date)	Check Box (Date)
Public Services and Utilities (cont.)							
Measure 3.12-4a: The District will require project facility design and construction methods that produce less waste, or that produce waste that could more readily be recycled or reused.	EBMUD	EBMUD	**Impact 3.12-4:** Potential adverse effects on solid waste landfill capacity.	LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP TPPP WPP			
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 through construction, demolition, and excavation activities.	EBMUD's construction contractor	EBMUD		LWTP Alt 1 OWTP Alt 1 OWTP Alt 2 WCWTP SWTP USLWTP OLA ARDPP FHPPPI FHR GPI HVPPP HRP LRWP LIPBV MR MRP TPPP WPP			
Measure 3.12-5: The District will implement Measures 3.12-4a and 3.12-4b.	See above	See above	**Impact 3.12-5:** Potential failure to achieve state-mandated solid waste diversion rates.	See above			
Growth-Inducement Potential and Secondary Effects of Growth							
Measure G-1: The EBMUD Board of Directors will work with other jurisdictions in the Lamorinda/Walnut Creek area to assist in mitigating the impacts of growth by: ▪ Participating in efforts to improve regional planning in the Bay Area ▪ Encouraging local land use planning agencies to coordinate land use planning functions and the provision of utility services ▪ Encouraging cities and counties to adopt general plans and zoning ordinances that favor high-density development and urban in-filling (which tends to minimize per-capita water use and minimize the costs and environmental impacts of water delivery systems); to provide incentives for more housing near public transit; and to adopt ordinances that conserve open spaces, protect wildlife habitat, and conserve energy and water resources	EBMUD Board of Directors	EBMUD Board of Directors	**Impact G-1:** Secondary effects of planned growth.	All			

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