

Bay Division Pipeline Reliability Upgrade Project

CASE NO. 2005.0164E

1.0 OVERVIEW AND BACKGROUND

1.1 San Francisco Water System and Bay Division Pipeline

The City and County of San Francisco, through the San Francisco Public Utilities Commission (SFPUC), owns and operates a regional water supply conveyance, treatment, and distribution system that extends from the Sierra Nevada mountain range to the San Francisco Bay Area, as shown in Figure 1. The regional water system serves 2.4 million people in San Francisco, San Mateo, Santa Clara, Alameda, and Tuolumne counties. The basic network of major facilities in the regional system was built from the late 1880s through the 1930s. Expansion and improvements of the major facilities continued through the 1970s. The Bay Division Pipelines (BDPLs), located within the SFPUC right-of-way (ROW) between Irvington Portal in Fremont and the Pulgas Portal in Redwood City, is part of this regional water system.

Although the population within the SFPUC service area has steadily grown, ongoing repairs, maintenance, and upgrades have not kept pace with overall system needs to meet the increasing water purchase requests from SFPUC customers. Aging facilities within the system are currently in need of major repair, rehabilitation, upgrade, and/or replacement. In February 2005, the SFPUC developed a regional Water System Improvement Program (WSIP) (see www.sfwater.org). The basic goals of the WSIP are to increase the system's ability to withstand major seismic events and prolonged droughts, with respect to water supply and delivery, and to meet water purchase requests in the service area through 2030. A programmatic EIR is currently being prepared to address the potential environmental impacts of the WSIP on a programmatic level and evaluate regional water supply alternatives.

The goals and objectives of the WSIP provide the basis for a program of facility improvement projects that the SFPUC plans to implement throughout the regional water system to supply water during normal (non-drought) and drought years. Implementation of the Bay Division Pipeline Reliability Upgrade Project (the Project) would help meet the seismic reliability, water delivery, and drought management goals outlined in the WSIP.

1.2 Environmental Review Process

The San Francisco Planning Department's Major Environmental Analysis Division (MEA) will prepare a project-specific Environmental Impact Report (EIR) to evaluate the environmental effects of the Project proposed by the SFPUC. The EIR will be prepared in compliance with the California Environmental Quality Act (CEQA) Guidelines Section 15161 and will address the project-specific construction and operational impacts of the proposed Project.

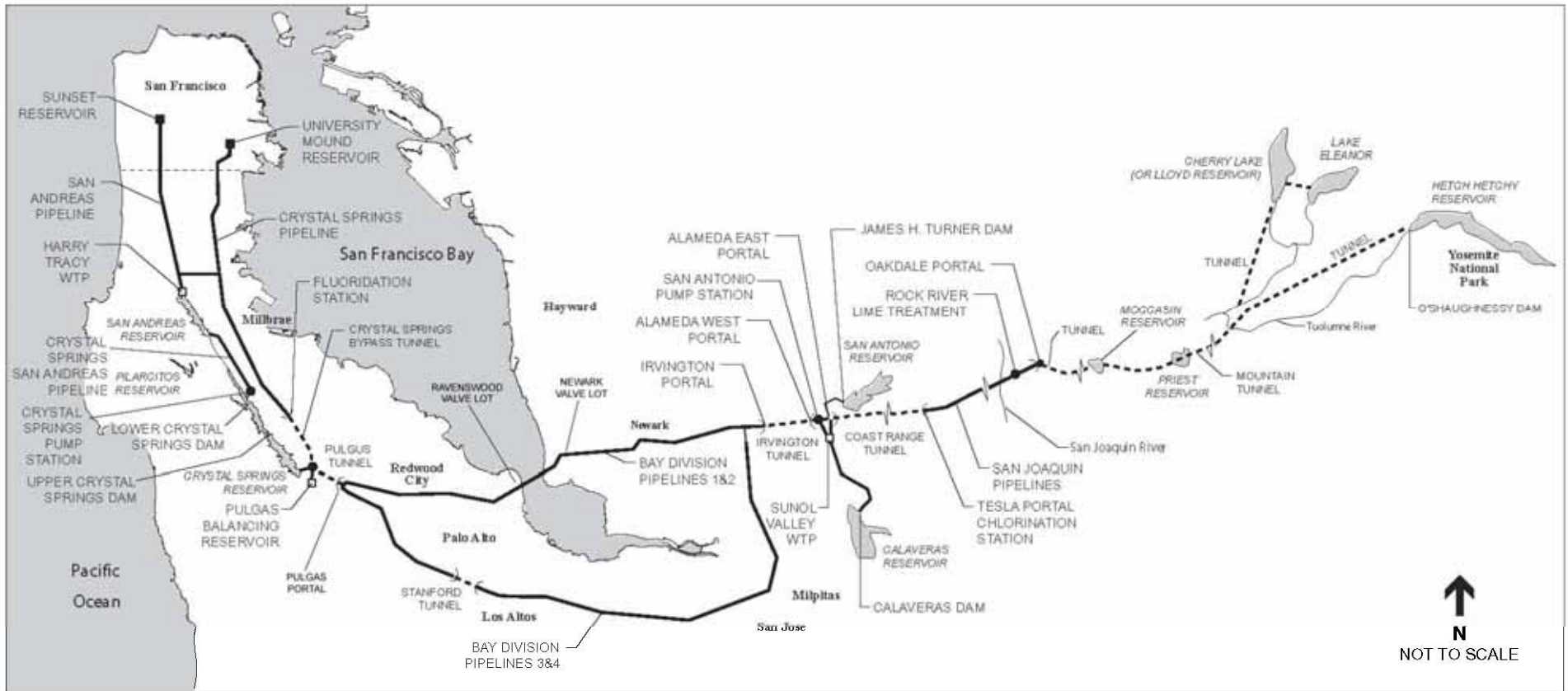


Figure 1
SFPUC Regional Water System
Bay Division Pipeline Reliability Upgrade Project

SOURCE: San Francisco Public Utilities Commission (2005)

The first step in the environmental review process is the formal public scoping process, for which this Notice of Preparation (NOP) has been prepared. Following public scoping meetings, a Draft EIR will be prepared and circulated for a 45-day public review period. Public comments on the Draft EIR will be accepted in writing during the review period or orally at formal public hearings to be held by the San Francisco Planning Commission. MEA will then prepare written responses to comments on environmental issues raised during the public review period, and a Response to Comments document will be prepared. This document will be considered by the Planning Commission, along with the Draft EIR and any revisions to the draft based on the responses to comments, for certification as a Final EIR.

1.3 Public Scoping Meetings

MEA will hold two public scoping meetings at the following locations, dates, and times:

Fremont – June 20, 2006 6:30 – 8:30 p.m.

Fremont Main Library
2400 Stevenson Boulevard
Fremont, California (near Fremont BART station)

Redwood City – June 21, 2006 6:30 – 8:30 p.m.

Veterans Memorial Senior Center
Redwood Room
1455 Madison Avenue
Redwood City, California

The purpose of these meetings is to assist MEA in reviewing the proposed scope and content of the EIR as summarized in this NOP. The public will have the opportunity to comment and offer testimony for consideration. MEA will also accept written comments at the meetings or by mail, e-mail, or fax until the close of business on July 7, 2006. Written comments should be sent to the San Francisco Planning Department, Attn: Paul Maltzer, 1660 Mission Street, Suite 500, San Francisco, CA 94103-2414, by fax to (415) 558-5991, or sent by e-mail to timothy.johnston@sfgov.org.

1.4 Project Approvals

Following completion of the environmental review, the SFPUC will hold a public hearing to consider approval of the proposed Project. Approvals will also be required from the U.S. Army Corps of Engineers, California Department of Fish and Game, U.S. Fish and Wildlife Service, State Office of Historic Preservation, San Francisco Bay Regional Water Quality Control Board, and the San Francisco Bay Area Air Quality Management District.

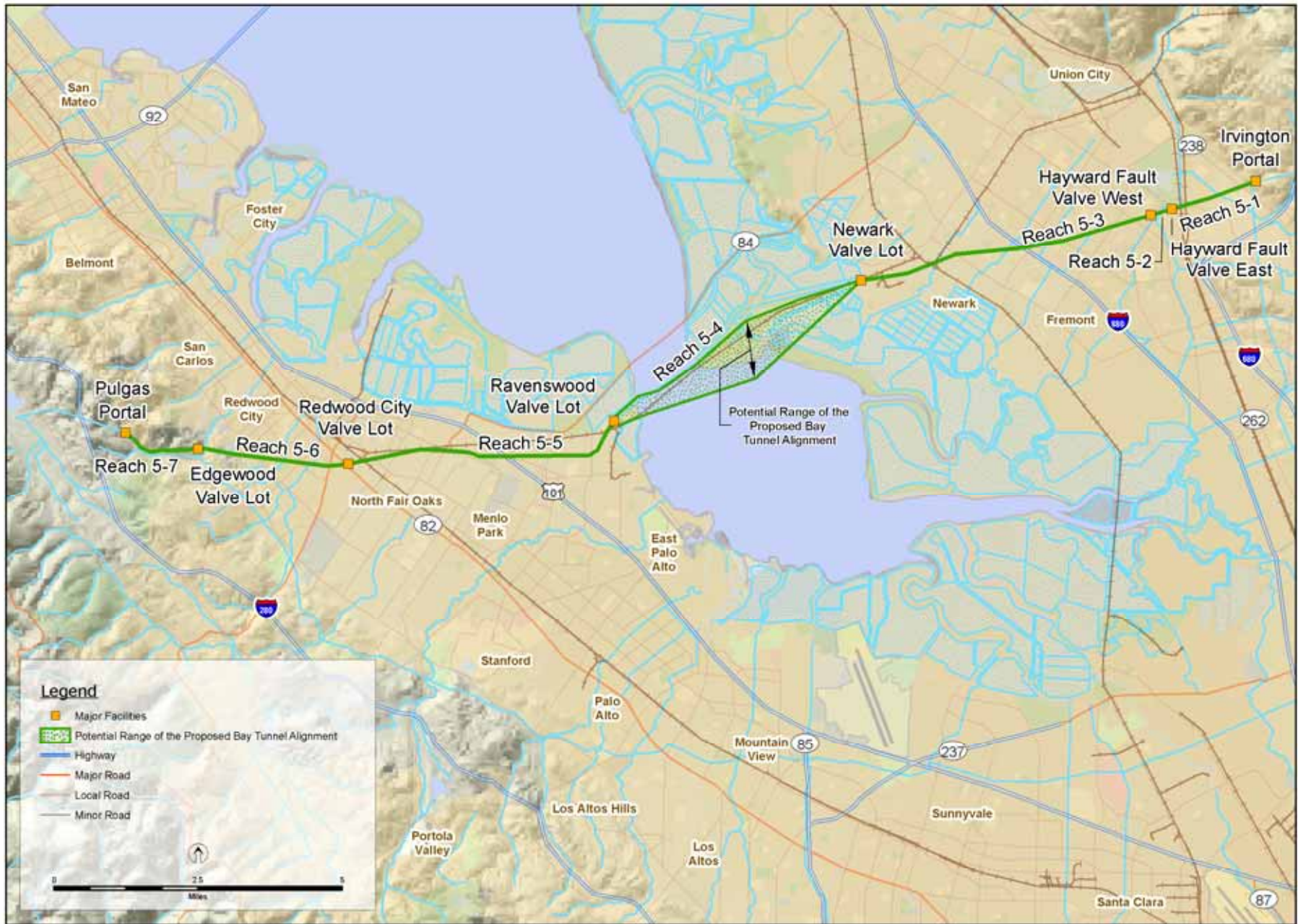
2.0 PROJECT DESCRIPTION

2.1 Existing Facilities and Project Components

The existing BDPLs transport water from the Irvington Portal in Fremont, California, to customers in the East Bay, South Bay, and Peninsula areas. They also replenish Crystal Springs and San Andreas reservoirs in San Mateo County (see regional system on Figure 1). The pipelines include BDPL No. 1, built in 1925; BDPL No. 2, built in 1936; BDPL No. 3, built in 1952; and BDPL No. 4, built in 1973. BDPLs Nos. 1 and 2 traverse San Francisco Bay as submarine pipelines located south of the Dumbarton Bridge, whereas BDPLs Nos. 3 and 4 extend around the southern end of the Bay. Figure 2 shows the location of the proposed Project and its major facilities.

The proposed Project includes construction of a new 21-mile BDPL No. 5 from Irvington Portal in Fremont to Pulgas Portal in Redwood City. The five-mile portion of the proposed Project that passes under San Francisco Bay and adjacent marshlands is referred to as the “Bay Tunnel.” The new Bay Tunnel would replace BDPLs Nos. 1 and 2 between Newark and Ravenswood Valve Lots. The proposed Project would improve the seismic and water-delivery reliability of the BDPLs by allowing existing BDPL facilities to be taken out of service for maintenance while continuing to meet the water supply purchase requests of SFPUC customers through 2030. Key features of the proposed Project include:

- A welded-steel pipeline, approximately 72 inches in diameter, extending seven miles from Irvington Portal to Newark Valve Lot, located within the existing SFPUC ROW of BDPLs Nos. 1 and 2.
- A “Bay Tunnel” segment of BDPL No. 5, approximately 120 inches in diameter, extending five miles from Newark Valve Lot to Ravenswood Valve Lot, crossing under San Francisco Bay and adjacent marshlands. BDPLs Nos. 1 and 2 would tie into the tunnel at both ends and would be decommissioned between Newark and Ravenswood Valve Lots.
- A welded-steel pipeline, approximately 60 inches in diameter extending nine miles from Ravenswood Valve Lot to Pulgas Portal, located within the existing SFPUC ROW of BDPLs Nos. 1 and 2.
- Ten new valve vaults at existing valve lots that would house isolation valves and metering valves for connecting BDPL No. 5 to the existing BDPLs Nos. 1, 2, 3, and 4. (Isolation valves are used to cut off the flow of water to sections of a pipeline for inspection and maintenance activities. Metering valves are used to measure the flow of water.)
- Isolation valves and piping for connecting BDPL No. 5 to Irvington and Pulgas portals (Figure 1).



Source: ENTRIX, Inc., 2005

Bay Division Pipeline Reliability Upgrade Project EIR

Figure 2

Project Location and Major Facilities and Reaches

Bay Division Pipeline
Reliability Upgrade Project

The new BDPL No. 5 would replace portions of BDPLs Nos. 1 and 2 and their supporting facilities. Installation of the new pipeline could require removal of buried portions of either BDPL No. 1 or No. 2 and enlarging BDPL No. 5 in certain segments in order to make room for the new pipeline and/or to avoid crossing over the existing pipelines. This approach would be taken where site conditions prevent three pipes from being laid side-by-side. Where the ROW provides sufficient space to construct the new pipeline parallel to the existing pipelines, those sections of the existing pipelines would be left in place.

2.2 Project Goals and Objectives

The existing BDPLs Nos. 1, 2, 3, and 4 serve three critical functions: (1) delivery of water to customers along the pipelines; (2) transmission of water to customers downstream of the BDPLs located on the Peninsula and in San Francisco; and (3) transmission of water from the regional water system to local storage reservoirs. The primary purpose of the proposed Project is to improve the seismic reliability of the regional water system by supplementing and, in some cases, replacing the two oldest pipelines (BDPLs Nos. 1 and 2) that transport water across San Francisco Bay. These sections of the pipeline, if damaged in an earthquake, would be very difficult to repair. The proposed Project also would improve the reliability of water delivery by allowing existing facilities to be taken out of service for maintenance while continuing to meet the water supply purchase requests of SFPUC customers and replenishing the Crystal Springs and San Andreas reservoirs.

The proposed BDPL No. 5 must be designed with sufficient redundancy and capacity to ensure adequate service over time and resist damage from earthquakes. Therefore, the proposed Project objectives include:

- Meeting projected water supply purchase requests through 2030;
- Resisting damage during earthquakes;
- Providing system redundancy to improve SFPUC's ability to maintain the regional water system; and
- Improving the ability to replenish Bay Area storage reservoirs during maintenance or drought, or following earthquakes.

2.3 Proposed BDPL No. 5 Alignment

The proposed alignment of the new BDPL No. 5 would be within the existing SFPUC ROW of BDPLs Nos. 1 and 2. The width of the alignment and working area would vary from 60 to 100 feet, with some wider zones at the east and west ends of the ROW and near the shafts of the proposed new tunnel under the Bay. BDPL No. 5 would typically be located 15 feet from either BDPLs Nos. 1 or 2. The distance of 15 feet is intended to leave sufficient space between the new pipeline and structures adjacent to the ROW

and sufficient space to isolate the existing and new pipelines. The pipeline alignment is described below according to the reaches depicted on Figure 2, from east to west. However, construction could proceed in either direction.

Reach 5-1

The proposed alignment in this reach would begin at the Irvington Portal located in the Mission Valley neighborhood in east Fremont. The first segment would measure approximately 1.5 miles between the Irvington Portal and the Hayward Fault Valve East. Within Fremont, land uses along the alignment vicinity are predominantly residential and vacant lots. The pipeline would cross the northern edge of Mission San Jose Community Park and William Hopkins Junior High School. The alignment would continue west across Driscoll Road and pass through the rear parking lot of the First Church of Christ. The pipeline would then cross under two railroad tracks, the Western Pacific and Union Pacific, and a flood control channel. The Hayward Fault crossing is located west of the tracks.

Reach 5-2

The proposed alignment in this reach is 0.4 miles long, beginning at the Hayward Fault Valve East and ending at the Hayward Fault Valve West. It would cross the Hayward Fault along Paseo Padre Parkway, north of the roadway. West of the railroad tracks, the alignment would cross the southern edge of Fremont Central Park in the vicinity of the Nature Science Center. Along Paseo Padre Parkway, multi-family, low- and medium-density apartments are clustered north and south of the alignment between Paseo Padre Parkway and Fremont Boulevard. The apartments are interspersed with single-family homes. West of Grimmer Boulevard, land uses include single-family residential, open space (Noll Park), and the Conrad Noll School on Logan Drive.

Reach 5-3

The proposed alignment in this reach is 5.2 miles long, beginning at the Hayward Fault Valve West and ending at the Newark Valve Lot. The alignment in this reach would abut Joseph L. Azevada Elementary School on Sundale Drive and Azevada Park, west of Blacow Road. Near the City of Fremont boundary, the alignment crosses the parking lot of the Mowry East Shopping Center at Farewell Drive and Mowry Avenue. Land uses include single-family residential.

Within the City of Newark, the proposed alignment would run east of Mowry Avenue opposite the NewPark Mall. It would cross the Nimitz Freeway (I-880) and highway landscaping. Land uses in this area are primarily single-family homes. West of Cherry Street, land uses are light industrial, manufacturing, and vacant lots. West of the Southern Pacific Railroad tracks, land uses transition to

low-rise apartments on the north and manufacturing and light industrial on the south. East of Willow Street, there are light industrial business parks and open-space land uses near San Francisco Bay. The site of the Newark Valve Vault and the proposed Bay Tunnel shaft is located in an industrial area of Newark, just west of Willow Street.

Reach 5-4

Reach 5-4 consists of the proposed Bay Tunnel, which would measure approximately 4.9 miles in length. The ends of the tunnel (i.e., the tunnel shafts) would be located at the Newark Valve Lot in the City of Newark on the east side and at Ravenswood Valve Lot in the City of Menlo Park on the west side. The tunnel would be located approximately 100 to 150 below the surface, and part of the alignment would be located under the Don Edwards San Francisco Wildlife Refuge. The tunnel would be constructed from a work shaft using a tunnel-boring machine (TBM) at one end, and the machine would be taken out through the retrieval shaft at the other end. The work shaft could be located at either the Newark Valve Lot or the Ravenswood Valve Lot. Dewatering of the Bay Tunnel during normal operations would occur at the Ravenswood Valve Lot.

Reach 5-5

Reach 5-5 is 5.0 miles long and extends from the Ravenswood Valve Lot to the Redwood City Valve Lot. Progressing westward from Ravenswood, the ROW extends into the City of East Palo Alto at the Southern Pacific Railroad crossing, proceeding in a south-southwest direction. Adjacent land uses are low-density, single-family homes and multi-family units and commercial establishments along University Avenue. The proposed alignment would traverse University Village, a neighborhood consisting primarily of single-family residences in north-central East Palo Alto, and would cross the grounds of the Costaño Elementary School located on Fordham Street near Purdue Avenue. The East Palo Alto segment of the pipeline would terminate near University Avenue where the pipeline then would re-enter the City of Menlo Park.

From University Avenue westward, land uses adjacent to the alignment include light industrial, single-family homes, and open space. Beginning at University Avenue, the pipeline alignment would traverse parking lots, landscaped areas, and a flood channel at O'Brien Drive in the Menlo Park Business Park. At Willow Road and O'Brien Drive, the alignment would continue westward along the landscaped median of Ivy Drive, past Belle Haven Elementary School, Belle Haven Community Center, and Belle Haven Park. At Pierce Road, the ROW crosses under State Highway 101 and extends to Flood County Park. The ROW passes through the park grounds, including a baseball field and parking lot. The alignment would continue along the northern side of Bay Road, mostly through existing roadside landscaping. Between Marsh Road

and the western end of Reach 5-5 at El Camino Real (Hwy 82), the alignment would pass among single- and multi-family residences, and commercial and light industrial properties. The ROW also crosses railroad tracks used by Southern Pacific Railroad and CalTrain.

Reach 5-6

Reach 5-6 is 2.6 miles long and extends from the Redwood City Valve Lot at El Camino Real to the Edgewood Valve Lot at Edgewood Road. Westward from El Camino Real, the ROW enters Redwood City. The ROW passes predominantly among single- and multi-family residences. The alignment would cross a parking lot and a ballpark of Red Morton Community Park, as well as vacant lots. At Bennett Road, the ROW follows a landscaped median strip before crossing Cordilleras Creek and Edgewood Road.

Reach 5-7

Reach 5-7 is 1.4 miles long and extends from the Edgewood Valve Lot to the Pulgas Portal. This entire section of the alignment crosses undeveloped lands on a south-facing slope supporting native oak woodland and non-native annual grassland. The alignment would cross several ephemeral and intermittent drainage courses. It would also pass in proximity to several isolated single-family residences. On the east side of Crestview Drive, the alignment would pass behind the back fences of a residential neighborhood. Across Edmonds Road, the ROW passes near the Redwood Center, a substance abuse treatment facility. The ROW passes through lands of the Pulgas Ridge Open Space Preserve, managed by the Midpeninsula Open Space District, before reaching its terminus at the Pulgas Portal.

2.4 Valve Vaults

This section provides information on the 10 proposed new valve vaults, including isolation valves and metering valves. The vaults would be constructed of concrete and would be accessed via a hatch cover. Power would be provided by PG&E and backup power would be provided either by a propane generator, hydraulic power, batteries, or a portable generator when needed. Where required, fences would surround generators and fuel tanks. All vaults would be constructed underground except that approximately 30 inches would remain above ground. All control buildings would be above ground and 15 feet high at the ridge of the roof. The vaults as well as the supporting facilities and their dimensions are described below and in the summary table at the end of this subsection. All the dimensions provided are based on preliminary design information and may be adjusted during final design.

Irvington Portal Vault

The Irvington Portal is the valve lot for the crossover pipelines from BDPLs Nos. 3 and 4 to BDPLs Nos. 1, 2, and the proposed BDPL No. 5. BDPL No. 5 would require a new isolation valve at Irvington Portal to isolate all BDPLs from the Irvington Tunnel. Facilities would consist of a valve vault, control building, concrete pad, generator, and fuel tank.

Mission Boulevard Venturi Meter Vault

A new Venturi (flow) meter vault would be located adjacent to an existing concrete vault. The new vault would be located west of Irvington Portal near Mission Boulevard (near an existing vault containing a Venturi meter).

East Hayward Fault Crossing Vault

An isolation valve would be constructed at the Hayward Fault approximately 100 feet east of the existing east valve vault for BDPLs Nos. 1 and 2. A crossover valve to BDPL No. 2 would also be constructed immediately to the east, enabling water flow to be diverted to the other pipeline in the event that either pipeline is damaged during an earthquake. Facilities would consist of a vault and a control building.

West Hayward Fault Crossing Vault

An isolation valve would be installed on BDPL No. 5 at the Hayward Fault in a residential area approximately 200 feet west of the existing west valve vault for BDPLs Nos. 1 and 2. A crossover valve would be constructed immediately to the west. The combination of the east and west valves at the Hayward Fault crossing would allow full isolation of water flowing from these segments of BDPLs Nos. 1, 2, and 5. Facilities would consist of a vault and a control building. Because single-family homes are located nearby, batteries housed in above-grade structures would be used as a standby power source.

Newark Valve Vault

A new valve vault would be constructed adjacent to the proposed Bay Tunnel shaft, east of the existing Newark Valve Vault. These pipes and valves would provide continued service to customers west of the tunnel shaft that are currently served by BDPLs Nos. 1 and 2. This configuration would also allow isolation of the Bay Tunnel and segments of BDPLs Nos. 1, 2, and 5 for inspection and maintenance. Facilities would consist of the valve vault, control building, concrete pad, generator, and fuel tank.

Ravenswood Valve Vault

A new valve vault would be constructed adjacent to the proposed Bay Tunnel west shaft, west of the existing Ravenswood Valve Vault. These pipes and valve would allow isolation of the Bay Tunnel and

segments of BDPLs Nos. 1, 2, and 5 for inspection and maintenance. Facilities would consist of the new valve vault, control building, concrete pad, generator, and fuel tank.

Redwood City Valve Vault

A new valve vault containing isolation valves would be constructed on the west side of El Camino Real, west of the existing Redwood City Valve Vault. The new vault would also house crossover valves to BDPL No. 2 immediately east and west of the isolation valve. This vault, in combination with the existing valve vault, would allow isolation of BDPLs Nos. 1, 2, and 5 immediately east and west of the Redwood City Vault. Facilities would include a concrete vault and a control building. A portable generator would be used during any emergencies for backup power.

Edgewood Valve Vaults 1 and 2

These new valve vaults would be constructed approximately 300 feet west of the pipeline crossing of Edgewood Road. BDPLs Nos. 1 and 5 would merge at this location. Edgewood Valve Vault 1 would house an isolation valve on BDPL No. 5 and a crossover valve to BDPL No. 2. Edgewood Valve Vault 2 would be constructed to the south and would house an isolation valve on BDPL No. 1 and a crossover valve between BDPLs Nos. 1 and 2. This configuration would allow isolation of pipeline segments for inspection and maintenance as well as operational flexibility during an outage. Facilities would consist of two vaults and two control buildings. A portable generator would be used during any emergencies for backup power.

Pulgas Portal Venturi Meter Vault

A new Venturi Meter Vault would be installed at the Pulgas Portal. The vault would be buried and constructed of concrete.

Pulgas Portal Vault

At Pulgas Portal, an isolation valve and throttling valve would be constructed near the isolation valves of the existing BDPLs. A throttling valve maintains pressure and flow in the pipeline. Facilities would consist of the vault, control building, concrete pad, generator, and fuel tank.

Vault	Preliminary Dimensions of Proposed New Facilities (ft)		
	Vault	Control Building (Including Generator or Battery Room)	Concrete Pad for Propane Fuel Tank
Irvington Portal Vault	31 x 31	56 x 21	7 x 11
Mission Blvd Venturi Meter Vault	21 x 16	None	None
E. Hayward Fault Crossing Vault	42 x 44	42 x 21	None
W. Hayward Fault Crossing Vault	42 x 44	42 x 21	None
Newark Valve Vault	56 x 32	56 x 21	7 x 11
Ravenswood Valve Vault	56 x 32	56 x 21	7 x 11
Redwood City Valve Vault	48 x 53	42 x 21	None
Edgewood Valve Vaults 1, 2	31 x 31	42 x 21	None
Pulgas Portal Venturi Meter Vault	21 x 16	None	None
Pulgas Portal Vault	31 x 31	56 x 21	7 x 11

2.5 Schedule

Construction of the proposed Project could begin as early as April 2009 and would be completed around November 2013. Pipeline construction is expected to progress at a rate of approximately 120 to 160 feet per day, thus no single area would typically be subject to pipeline construction activity for more than two weeks. Construction at the shaft and vault locations would require longer periods.

3.0 ENVIRONMENTAL ANALYSIS

3.1 Key Environmental Issues to be Addressed in the EIR

The following paragraphs describe the key environmental issues that the EIR will address. The EIR will address both construction and operation activities and will propose mitigation measures for impacts considered to be potentially significant adverse impacts.

Aesthetics

Construction of the new pipeline could result in short-term visual impacts, as well as permanent impacts due to new aboveground structures (such as valve vaults and control buildings). The EIR will address the short- and long-term impacts of the proposed Project on the aesthetic values of the proposed Project area.

Biological Resources

Construction of the pipeline and associated facilities could impact sensitive biological resources, including sensitive habitat types and special status species, including the California tiger salamander (*Ambystoma californiense*), vernal pool tadpole shrimp (*Lepidurus packardii*), and Mission blue butterfly

(*Icaricia icarioides misionensis*). The EIR will address potential impacts on sensitive resources, such as the temporary and permanent disturbance or loss of aquatic habitats.

Cultural Resources

Sensitive cultural resources that could be affected by the proposed Project include historical and prehistoric features. Several resources, including archaeological sites and historical structures, have been documented in the proposed Project area and impacts on these resources will be addressed in the EIR.

Geology and Soils

The proposed Project crosses active and potentially active faults at four different locations that have the potential to rupture the pipeline. Other potential geologic hazards to which the proposed Project could be exposed include settlement, liquefaction, and landslides. Geologic hazards that the proposed Project could potentially cause will be evaluated in the EIR, and include landslides and disturbance of paleontological (or 'fossil') resources.

Hydrology and Water Quality

Construction of the proposed pipeline could affect surface water and groundwater resources. Dewatering of tunnel muck excavated during construction may be required, and the water would be treated and discharged. The EIR will evaluate the potential effects of erosion and any direct discharges into waterways during construction.

Hazards and Hazardous Materials

Contaminated soils or groundwater could be encountered during construction. The proposed alignment passes through residential, commercial, and industrial areas. Sites with documented soil or groundwater contamination have been identified within ¼ mile of the alignment on both sides of the Bay; these sites are primarily leaking underground storage tank sites or sites with identified groundwater contamination. Six sites with groundwater contamination from dissolved petroleum products or solvents and two sites undergoing corrective action under the Resource Conservation and Recovery Act are located within ½ mile of the proposed east tunnel portal. On the west side of the Bay, the proposed west tunnel portal and Ravenswood Valve Lot are located at the site of the former Peninsula Sportsmen's Club. Soil at this site and sediment in the adjacent Cargill Salt Pond and levee have been contaminated by lead shot and clay pigeon debris from skeet shooting activities at the former gun club. Remediation of the site is ongoing, and complete cleanup is expected before 2009.

The Hazardous Waste and Substances Sites (Cortese) List is an environmental database historically maintained by the California Environmental Protection Agency Office of Emergency Information. Sites

on this list were designated by the State Water Resource Control Board (LUST database), the Integrated Waste Board (SWF/LS database), and the Department of Toxic Substances Control (Cal-Sites database). Nine sites in Newark identified on the Cortese List are located within the pipeline ROW including:

- L&D Auto at 3744 Sycamore Street
- Steffensen Property at 8040 Wells Avenue
- An unidentified facility at 8130 Enterprise Drive
- Viviano Trucking at 8175 Wells Avenue
- An unidentified facility at 8240 Enterprise Drive
- Baron Blakeslee, Inc. Division of Allied Signal at 8333 Enterprise Drive
- An unidentified facility at 8400 Enterprise Drive
- Ashland Chemical Company at 8600 Enterprise Drive
- FMC Newark at 8787 Enterprise Drive

Flood Park on Bay Road in Menlo Park is within the pipeline ROW on the west side of the Bay and was also identified in the Cortese List database.

The EIR will address potential environmental impacts from the potential presence of soil or groundwater contamination, including exposure of workers and the public to hazardous materials, and will also address the potential to interfere with ongoing site remediation, or to enhance plume migration. The analysis will also identify the potential for impacts associated with hazardous building materials in any structures that would be demolished during construction of the proposed pipeline; wildland fires; the potential to encounter gassy conditions during tunnel construction; and the use of hazardous materials during operation.

Land Use and Zoning

The EIR will address potential effects, such as noise and restrictions on access during construction, on land use. The EIR analysis will address existing land uses by category (e.g., residential, commercial/business, industrial, recreation, and public facilities). Land-use plan designations and zoning ordinances and their associated allowable uses will be analyzed. The EIR will also address the issue of illegal encroachment onto the SFPUC ROW.

Noise and Vibration

Construction of the pipeline and associated facilities would result in noise impacts in nearby areas. It is anticipated that most of the pipeline construction activities would occur during daytime, weekday hours. However, construction of jack-and-bore pits for pipeline crossings of railroads, freeways, and streets that

are more than four lanes wide could result in additional noise exposure from ventilation fans, dewatering pumps, and generators. Such activities may not be consistent with ordinance time or noise limits, and noise controls would be required. In addition, ground-borne noise and vibration from tunnel and shaft construction may occur near the tunnel entrance and exit shafts. The EIR will address potential noise and vibration impacts in the proposed Project area.

Other Environmental Issues

The EIR will address other environmental issues, including potential growth-inducing and cumulative effects. The proposed Project would not expand the SFPUC service area but would increase the capacity to deliver water to meet the water purchase requests in the existing service area. The EIR will address the potential of the proposed Project to remove an obstacle to growth, and if growth is projected, the EIR will evaluate any secondary impacts of growth. The EIR will also address whether the proposed Project could result in impacts that are significant when combined with the impacts of other SFPUC projects or other non-SFPUC projects occurring in the area at the same time.

3.2 Alternatives

The EIR will describe and evaluate a reasonable range of alternatives to the proposed Project, as required by CEQA. The alternatives would feasibly attain most of the proposed Project's basic objectives while simultaneously avoiding or substantially lessening any significant effects of the proposed Project. CEQA also requires evaluation of the 'No Project' alternative.