

Appendix A

Notice of Preparation/ Scoping Report

APPENDIX A

NOP and Scoping Report

**NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND
NOTICE OF PUBLIC SCOPING MEETINGS**

Date of this Notice:	September 6, 2005	
Lead Agency:	San Francisco Planning Department 30 Van Ness Avenue, Suite 4150 San Francisco, CA 94103	
Agency Contact Person:	Diana Sokolove	Email: diana.sokolove@sfgov.org Telephone: (415) 558-5971
Project Title:	Water System Improvement Program (WSIP)	
Project Sponsor:	San Francisco Public Utilities Commission	Email: kcapone@sflower.org
Contact Person:	Kelley Capone	Telephone: (415) 934-5715
Project Address:	Various	Assessor's Block and Lot: Various
County:	Alameda, Santa Clara, San Francisco, San Joaquin, San Mateo, Stanislaus, and Tuolumne Counties	

Project Description: The WSIP is a program to implement the service goals and system performance objectives established by the SFPUC for the regional water system in the areas of water quality, seismic reliability, delivery reliability, and water supply through the year 2030. The key program elements include:

- Meeting or exceeding existing and anticipated federal, state, and local water quality requirements
- Providing seismic reliability in order to restore basic service (215 million gallons per day [mgd]) to the regional system within 24 hours after a major earthquake and full service within 30 days
- Providing delivery reliability (300 mgd) that allows local reservoir replenishment and adequate maintenance and repair of the system without disruption below level of service goals
- Meeting customer purchase requests through the year 2030, which increase by 35 mgd to 300 mgd over the current 265 mgd, requiring an increase in average annual water delivery of 25 mgd from the regional water system plus 10 mgd from a combination of conservation, water recycling and groundwater supply programs
- Meeting water delivery demands in normal and drought years through 2030 with a combination of Tuolumne River water, groundwater conjunctive-use programs in the Westside Basin, San Mateo County, and conservation, water recycling and groundwater supply programs
- Providing drought reliability such that rationing in any year of the design drought does not result in more than a 20 percent systemwide reduction in delivery of the 2030 purchase requests, which requires an increase in system firm yield¹ from 223 mgd to 256 mgd
- Repairing, upgrading and, in some cases, expanding the regional system facilities to meet these system goals and performance objectives.

Please see the attached for more information about the proposed WSIP, the scope of the PEIR, and the anticipated environmental issues.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT. AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance).

¹ System firm yield is defined as: the maximum annual water delivery that can be sustained by the regional water system during an extended drought. The SFPUC uses an 8.5-year design drought for planning purposes. Currently, due to recent operating restrictions imposed by the California Division of Safety of Dams on the Calaveras Dam, the system firm yield is reduced from its normal system firm yield of 223 mgd to about 219 mgd.

PUBLIC SCOPING MEETINGS will be held pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206 to receive oral comments concerning the scope of the PEIR. Five meetings will be held at different locations along the regional system between October 5 and October 19, 2005. Please see the attached for more information.

Written comments on the scope of the PEIR will be accepted until the close of business on **October 24, 2005**. Written comments should be sent to the San Francisco Planning Department, Attn: Paul Maltzer, 30 Van Ness, Suite 4150, San Francisco, CA 94103, or sent by email to diana.sokolove@sfgov.org.

Documents relating to the proposed project are available for review, by appointment, at the San Francisco Planning Department's Major Environmental Analysis office, 30 Van Ness Avenue, Suite 4150. Please call Diana Sokolove at (415) 558-5971. Documents are also available online at www.sfwater.org (click on "PEIR").

September 6, 2005
Date



Paul E. Maltzer, Environmental Review Officer

中文資料請電：558-6282

Para sa impormasyon sa Tagalog tumawag sa: 558-6251

Para información en Español llamar al: 558-6307

SFPUC Water System Improvement Program

CASE NO. 2005.0159E

1.0 Overview

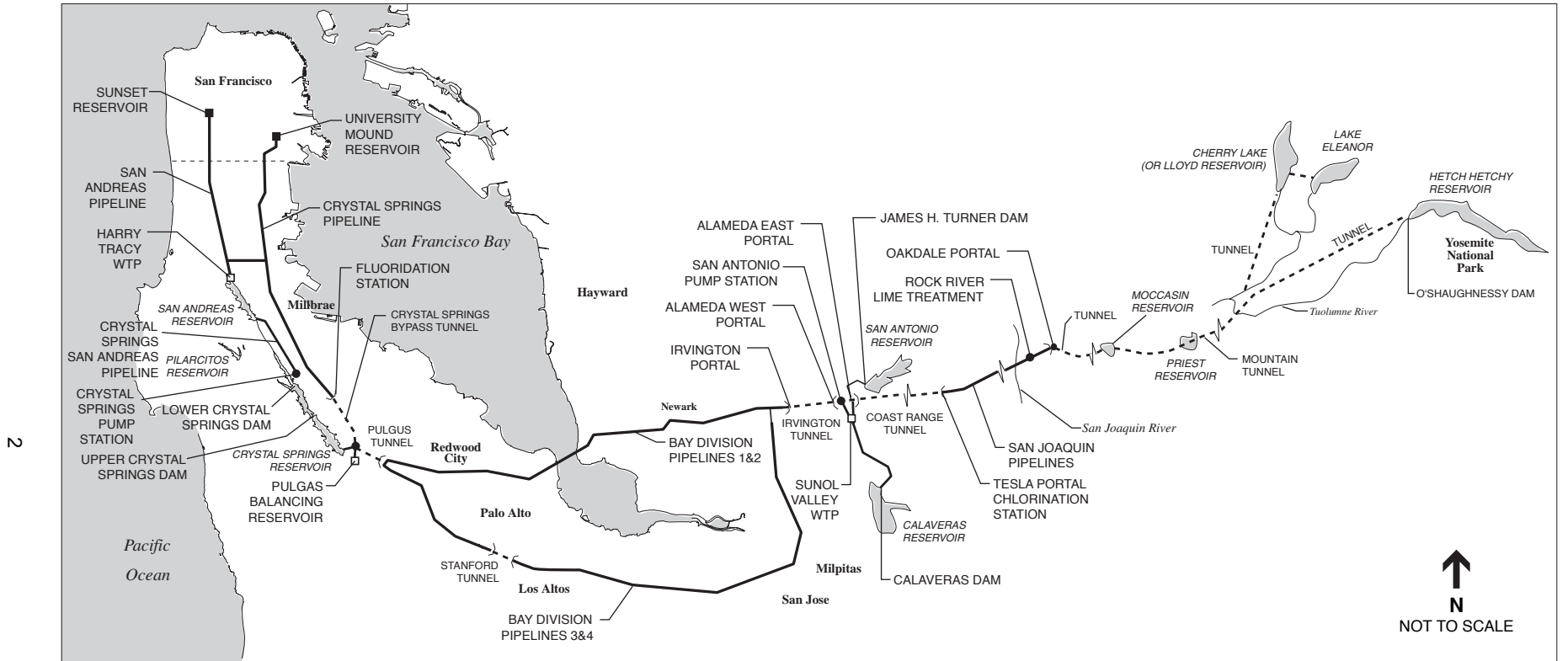
1.1 Water System Improvement Program

The City and County of San Francisco, through the San Francisco Public Utilities Commission (SFPUC), owns and operates a regional water system that extends from the Sierra Nevada to San Francisco, 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 SFPUC has developed a Water System Improvement Program (WSIP or program) in support of its mission to serve its customers with reliable, high-quality drinking water.² The basic goals of the WSIP are to increase the reliability of the system with respect to water quality, seismic response, water delivery, and water supply to meet water delivery needs in the service area through the year 2030. The WSIP is a program to implement the service goals and system performance objectives established by the SFPUC for the regional water system. These goals and objectives provide the basis for a series of facility improvement projects that the SFPUC would implement throughout the regional water system and for the implementation of water supply options to meet future annual water delivery needs during normal (nondrought) years as well as current and future needs during droughts.

1.2 Environmental Review Process

The San Francisco Planning Department will prepare an environmental impact report (EIR) to evaluate the environmental effects of the proposed WSIP. The EIR on the WSIP will be a Program EIR (PEIR), as defined in the California Environmental Quality Act (CEQA) Guidelines, Section 15168, and will thus address the broad environmental effects of the program as a whole. The PEIR will analyze the effects of improving the reliability of the system, implementing additional water recycling and conservation, augmenting existing water supplies with supplemental supplies during drought periods, and accommodating increases in customer water purchase requests through the year 2030. The PEIR will also analyze the general effects of constructing and operating the facility rehabilitation and improvement projects that are necessary to meet the goals and objectives of the program. The PEIR will address the “big picture” issues (including the program’s growth inducement potential and the associated secondary effects of growth, cumulative effects, system tradeoffs, and program alternatives) and will identify programmatic mitigation measures. To the extent that projects within the WSIP require further, project-level CEQA evaluation in the future, the PEIR also will provide the foundation for such environmental review. For some of the WSIP projects, project-level CEQA analysis will be prepared, as required by CEQA, on a parallel track with the PEIR.

² San Francisco Public Utilities Commission, 2005. *Water System Improvement Program Description*. Prepared for the Programmatic Environmental Impact Report. February 28, 2005. This report plus additional information developed subsequently by the SFPUC has been used to prepare this Notice of Preparation (NOP).



SOURCE: San Francisco Public Utilities Commission (2005)

SFPUC Water System Improvement Program . 203287

Figure 1
SFPUC Regional Water System

The WSIP encompasses a comprehensive list of regional water system and local San Francisco system projects and actions designed to implement the program. Regional projects are designed to improve the regional system to meet needs throughout the entire service area, whereas the local San Francisco system projects would serve only customers within the City and County of San Francisco. The PEIR will primarily address the regional system projects in the WSIP and will address local San Francisco system projects to the extent that they affect the operations or capacity of the regional system or contribute to cumulative environmental effects. CEQA analysis of local projects in San Francisco will be addressed separately as appropriate.

Among the regional projects, the San Francisco Planning Department has determined that CEQA review for some of the projects in the WSIP can be conducted separately and independently from the regional projects evaluated in the PEIR, either because (1) the Planning Department completed CEQA review for those projects prior to development of the WSIP or (2) the SFPUC can proceed with implementation of these projects in advance of completing the PEIR on the remaining regional system projects with no substantial changes in the environmental issues to be evaluated in the PEIR. In general, those regional projects that will undergo separate CEQA review from the PEIR have independent utility from the overall WSIP and have no effects on regional system operations or capacity. The PEIR will consider these projects to the extent that they contribute to cumulative effects associated with the WSIP actions and projects. (These projects are identified below in Section 2.6, Table 4.)

1.3 Public Scoping Meetings

The San Francisco Planning Department is holding five **PUBLIC SCOPING MEETINGS**, at the following locations, dates, and times:

- SONORA – Wednesday, October 5, 2005, 7:00 to 9:00 PM
Sonora Opera House, 250 S. Washington Street, Sonora, CA
- MODESTO – Thursday, October 6, 2005, 7:00 to 9:00 PM
Thomas Downey High School Cafeteria, 1000 Coffee Road, Modesto, CA
- FREMONT – Tuesday, October 11, 2005, 6:00 to 8:00 PM
Fremont Main Library, Fukaya Room, 2400 Stevenson Boulevard, Fremont, CA
- PALO ALTO – Tuesday, October 18, 2005, 7:00 to 9:00 PM
Palo Alto Arts Center, 1313 Newell Road, Palo Alto, CA
- SAN FRANCISCO – Wednesday, October 19, 2005, 7:00 to 9:00 PM
Tenderloin Community School, 627 Turk Street (at Van Ness), San Francisco, CA

The purpose of these meetings is to assist the San Francisco Planning Department in reviewing the proposed scope and content of the programmatic environmental impact analysis, summarized in this NOP, and the information to be contained in the PEIR for the WSIP. The public will have the opportunity to comment and offer testimony for consideration. Written comment will also be accepted at the meetings and by the San Francisco Planning Department until the close of business on **October 24, 2005**.

2.0 Program Description

2.1 Location and Service Area

The SFPUC regional water system consists of a complex network of facilities covering a geographic range of about 160 miles, from the Sierra Nevada on the east to San Francisco on the west. The regional water system crosses seven counties—Tuolumne, Stanislaus, San Joaquin, Alameda, Santa Clara, San Mateo, and San Francisco—as shown in Figure 1, above.

The SFPUC provides water delivery services to retail and wholesale customers primarily in San Francisco, San Mateo, Santa Clara, and Alameda Counties, as shown in **Figure 2**. The SFPUC serves about one-third of its water supplies directly to retail customers in San Francisco, and about two-thirds of its water supplies to 28 wholesale customers by contractual agreement. The 28 wholesale customers consist of 26 cities and water districts and 2 private utilities in San Mateo, Santa Clara, and Alameda Counties (as listed in Figure 2), which are represented by the Bay Area Water Supply and Conservation Agency (BAWSCA); some of these customers have other sources of water in addition to what they receive from the SFPUC regional system. The SFPUC also provides service to some isolated regional retail customers along the water system, including customers in Tuolumne County.

2.2 Existing Water Supply System

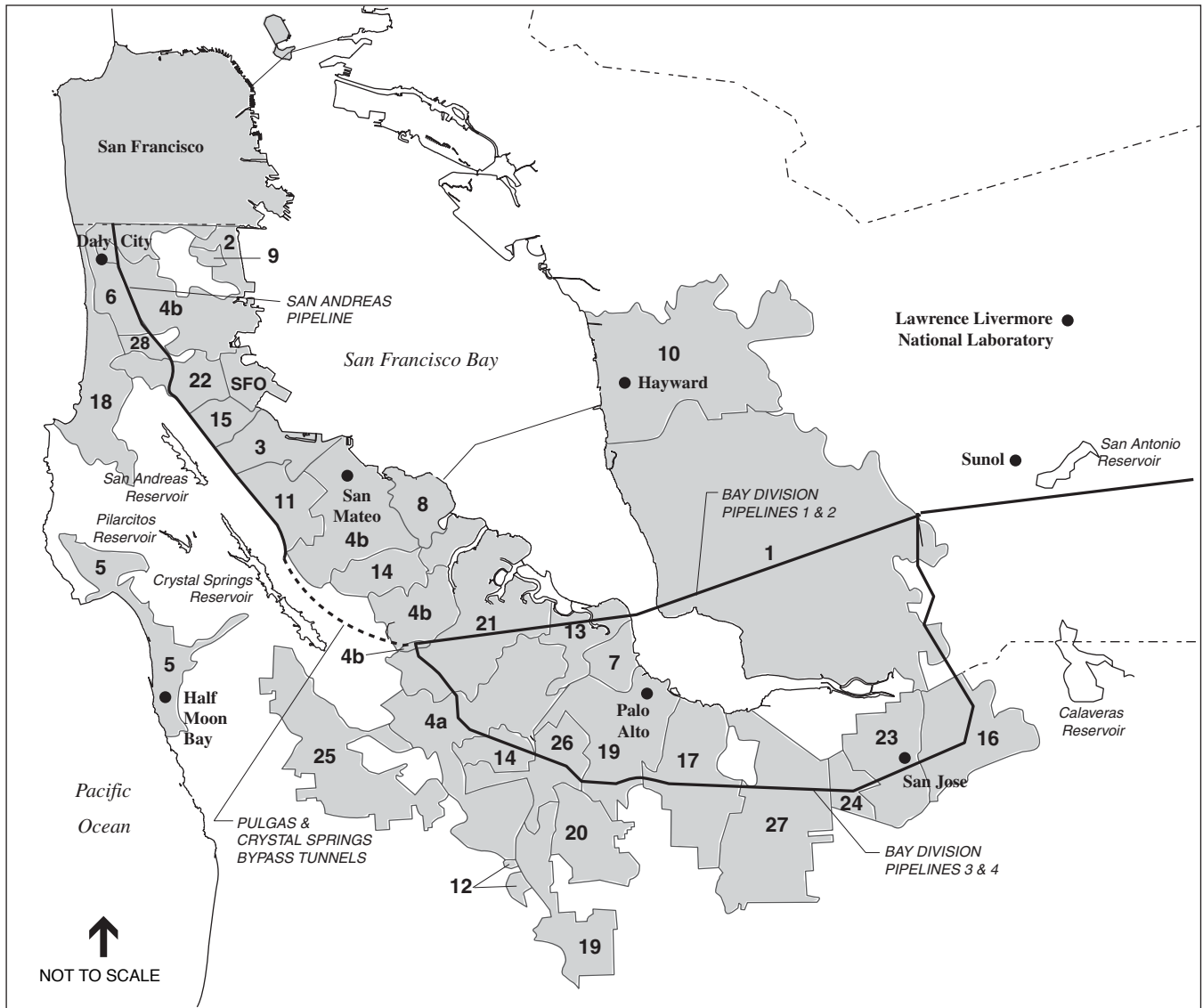
Water Supply

The regional water system currently delivers an average of about 265 million gallons per day (mgd) to about 2.4 million people. The major source of water for the regional system is the upper Tuolumne River Watershed in the Sierra Nevada, which provides about 85 percent of the total water supply. The remaining 15 percent of the water supply is provided by local creeks and runoff in the Alameda Watershed, which is generally located in Sunol Valley, and the Peninsula Watershed on the San Francisco Peninsula (referred to collectively as the “local” watersheds). In the Alameda Watershed, the creeks feeding the local reservoirs include Alameda, Arroyo Hondo, Calaveras, and San Antonio Creeks; on the Peninsula, San Mateo, Pilarcitos, and San Andreas Creeks are the major local water sources.

Water Quality

The SFPUC regional water system delivers extremely high-quality water. The majority of the water originates in the upper Tuolumne River Watershed high in the Sierra Nevada, remote from human development and pollution. This pristine water, referred to as Hetch Hetchy water, is protected in pipes and tunnels as it is conveyed to the Bay Area, requiring only primary disinfection and pH adjustment to control corrosion in the pipelines.

The U.S. Environmental Protection Agency and the California Department of Health Services have approved the use of this drinking water source without requiring filtration at a treatment plant. However, local water from the Alameda and Peninsula Watersheds does require filtration to meet drinking water quality requirements. The filtered and treated water from the local watersheds is blended with Hetch Hetchy water, and most customers receive water from a blended source. System water quality, including



- | | | |
|---|--------------------------------------|--|
| 1 Alameda County Water District | 14 Mid Peninsula Water District |  Areas served by the SFPUC Water System |
| 2 City of Brisbane | 15 City of Milbrae | |
| 3 City of Burlingame | 16 City of Milpitas | |
| 4a Cal Water Service Co. - Bear Gulch | 17 City of Mountain View | |
| 4b Cal Water Service Co. - Bayshore | 18 North Coast County Water District | |
| 5 Coastside County Water District | 19 City of Palo Alto | |
| 6 City of Daly City | 20 Purissima Hills Water District | |
| 7 East Palo Alto | 21 City of Redwood City | |
| 8 Estero Municipal Improvement District | 22 City of San Bruno | |
| 9 Guadalupe Valley Municipal Improvement District | 23 City of San Jose | |
| 10 City of Hayward | 24 City of Santa Clara | |
| 11 Town of Hillsborough | 25 Skyline County Water District | |
| 12 Los Trancos County Water District | 26 Stanford University | |
| 13 City of Menlo Park | 27 City of Sunnyvale | |
| | 28 Westborough Water District | |

SFPUC Water System Improvement Program . 203287
 SOURCE: Bay Area Water Supply and Conservation Agency
Figure 2
 SFPUC Water Service Area

both raw water and treated water, is continuously monitored and tested to assure that water delivered to customers meets or exceeds federal and state drinking water/public health requirements.

Major Regional Facilities

The SFPUC regional water system includes over 280 miles of pipelines, over 60 miles of tunnels, 11 reservoirs, 5 pump stations, and 2 water treatment plants. Major facilities in the water system generally fall into three categories based on their function: storage, transmission, and treatment facilities. **Table 1** lists the major facilities in the regional water system by their function as well as by their geographic sub-region. From east to west, the sub-regions are: Hetch Hetchy sub-region, San Joaquin sub-region, Sunol Valley sub-region, Bay Division sub-region, Peninsula sub-region, and San Francisco sub-region.

System Operations

The regional water system is basically a linear system transporting water from the Sierra Nevada to the Bay Area. The water system starts with the Hetch Hetchy Reservoir and O'Shaughnessy Dam, located on the main stem of the Tuolumne River in Yosemite National Park. From the Hetch Hetchy Reservoir, water flows west through a series of tunnels and hydropower facilities in the Sierra foothills and then to the San Joaquin Valley. Water is conveyed 47 miles in three San Joaquin Pipelines across the San Joaquin Valley and is disinfected at the Tesla Disinfection Facility near Tracy. The water is then transported 25 miles through the Coast Range Tunnel to the three Alameda Siphons in the Sunol Valley, where it is blended with treated sources of local water in the Alameda Watershed.

In the Alameda Watershed, local water from creeks and runoff is captured and stored in the Calaveras and San Antonio Reservoirs. San Antonio Reservoir is also used to store water from the Hetch Hetchy system. Water from the Calaveras and San Antonio Reservoirs is filtered and chloraminated at the Sunol Valley Water Treatment Plant (WTP) before it is blended with Hetch Hetchy water at the Alameda Siphons. The Alameda Siphons carry Hetch Hetchy water, blended with treated Alameda Watershed water, about one-half mile across the Sunol Valley to the Irvington Tunnel. Water flows about 3.5 miles through the Irvington Tunnel to the city of Fremont in the East Bay.

From the west end of the Irvington Tunnel in Fremont, the regional water supply is distributed through four Bay Division Pipelines, two of which cross San Francisco Bay and two of which go around the South Bay; the four pipelines then meet in Redwood City on the Peninsula at the Pulgas Tunnel. Up to this point, the water from Hetch Hetchy Reservoir flows entirely by gravity for over 120 miles. Part of the regional water supply from the Pulgas Tunnel continues to flow by gravity north up the Peninsula, ending at University Mound Reservoir in San Francisco. The remaining water from the Pulgas Tunnel flows into Crystal Springs Reservoir and blends with local water sources on the Peninsula Watershed. Water from Crystal Springs Reservoir is pumped to the adjacent San Andreas Reservoir, which is then pumped to the Harry Tracy WTP where it is filtered and disinfected. Treated water from Harry Tracy WTP is then piped to the Sunset Reservoir in San Francisco. The regional water is distributed to wholesale and a few retail customers through turnouts all along the system.

System operations and the amount of water delivered to customers vary throughout the year based on seasonal demand and the availability of water. The water available to deliver to customers is affected by

TABLE 1

MAJOR FACILITIES IN THE REGIONAL WATER SYSTEM BY SUB-REGION

Type of Facility	Hetch Hetchy Facilities <i>(from Sierra Nevada to the east side of the San Joaquin Valley)</i>	San Joaquin Facilities <i>(from the San Joaquin Valley to the west side of the Coast Range)</i>	Sunol Valley Facilities <i>(from the Sunol Valley to the west side of the East Bay Hills)</i>	Bay Division Facilities <i>(from Fremont to Redwood City)</i>	Peninsula Facilities <i>(from Redwood City to San Francisco)</i>	San Francisco Regional Facilities <i>(San Francisco and northern Peninsula)</i>
<i>Storage</i>	Hetch Hetchy Reservoir and O'Shaughnessy Dam Lake Eleanor and Eleanor Dam Lake Lloyd (also called Cherry Reservoir) and Cherry Valley Dam	None	Calaveras Reservoir and Calaveras Dam San Antonio Reservoir and James H. Turner Dam	None	Crystal Springs Reservoir and Upper and Lower Crystal Springs Dams San Andreas Reservoir and San Andreas Dam Pilarcitos Reservoir and Pilarcitos Dam and Stone Dam	University Mound Reservoir Sunset Reservoir Merced Manor Reservoir
<i>Transmission</i>	Canyon Power Tunnel Mountain Tunnel Foothill Tunnel	San Joaquin Pipelines 1, 2, 3 Coast Range Tunnel	Alameda Siphons Alameda Creek Diversion Dam and Tunnel Calaveras Pipeline San Antonio Pipeline San Antonio Pump Station Irvington Tunnel	Bay Division Pipelines 1, 2, 3, 4	Pulgas Tunnel Crystal Springs Bypass Crystal Springs / San Andreas Pump Station	San Andreas Pipelines Crystal Springs Pipeline Sunset Supply Pipeline
<i>Treatment</i>	Rock River Lime Plant	Tesla Disinfection Facility Thomas Shaft Disinfection Station	Alameda Disinfection Facility Sunol Valley Water Treatment Plant	None	Pulgas Dechloramination Facility Harry Tracy Water Treatment Plant	None

numerous factors, including meteorological and hydrologic conditions; the capacity and operating condition of physical facilities and infrastructure; and institutional parameters that regulate and allocate the distribution of water from the various sources. The system is highly dependent on storage, both in the Sierra and locally in the Bay Area, to be able to serve water under a wide variety of meteorological/hydrologic and operating conditions.

2.3 Need for Program

Planning for the existing water system began over a century ago, and the basic network of major facilities in the regional system was built from the late 1800s through the 1930s. Expansion and improvements of the major facilities continued through the 1970s. Although the population within the SFPUC service area has steadily grown, ongoing repairs, maintenance, and upgrades have not kept pace with the overall system needs to meet increasing water demand from customers. Aging facilities within the system, some of which made use of now outdated construction methods and materials, are currently in need of major repair, rehabilitation, upgrade, or replacement, and it has become difficult to balance the need for long-term maintenance and upgrades with the day-to-day operational demands of the system. Exacerbating the need for long-term maintenance and upgrade is the fact that the regional system crosses five active earthquake faults. Thus, portions of the existing system are vulnerable to extensive damage from a major earthquake and are at risk of interruption or failure during normal operations. In addition, the California Division of Safety of Dams has imposed operating restrictions on Calaveras and Crystal Springs Dams due to seismic concerns, reducing the local storage capacity and impairing normal system operations; this storage capacity needs to be restored. Existing and future water quality regulations also require further facility modifications as well as ongoing watershed management actions. The SFPUC has also determined that the current regional system cannot provide adequate reliable water delivery to its existing customers during a prolonged drought or meet expected increases in customer water purchases through the planning year of 2030.

The SFPUC began planning for major system improvements over 10 years ago, and public awareness of the need for major capital improvements became evident in 2002 with the passage of three related legislative actions. Propositions A and E, passed in November 2002 by San Francisco voters, approved financing for San Francisco's portion of the multi-billion-dollar water system improvements. Also approved in 2002, Assembly Bill No. 1823 (AB 1823), the Wholesale Regional Water System Security and Reliability Act, requires the City and County of San Francisco to adopt a capital improvement program designed to restore and improve the regional water system and to review and update the program as necessary. The WSIP addresses these needs.

2.4 Program Goals And Objectives

The WSIP is designed to further the SFPUC's overall mission as a water service agency, which is to serve San Francisco and its Bay Area customers with reliable, high-quality, and affordable water while maximizing the benefits from power operations and responsibly managing the resources entrusted to its care. The SFPUC based the goals and system performance objectives on two fundamental principles: maintaining a clean, unfiltered water source from the Hetch Hetchy system, and maintaining a gravity-driven system.

The overall goals of the WSIP for the regional water system are to:

- Maintain high-quality water
- Reduce vulnerability to earthquakes
- Increase delivery reliability
- Meet customer water supply needs
- Enhance sustainability
- Achieve a cost-effective, fully operational system

To further these program goals, the WSIP includes objectives that address system performance. **Table 2** presents these objectives as they relate to the WSIP goals. The system performance objectives describe and, in many cases, more specifically quantify what the regional water system is to achieve, and thereby guide the water supply actions, facility improvements, and maintenance requirements included in the WSIP. Although Table 2 lists certain sustainability objectives for the WSIP, enhancing sustainability is part of the SFPUC's ongoing watershed management and operational efforts and is not specifically or exclusively an element of the WSIP.

To meet the SFPUC's system goals and service performance objectives, the SFPUC would undertake a series of actions and projects under the WSIP. The following sections describe the proposed changes in system operations and level of service, including proposed water supply options, as well as the proposed facility projects to be implemented under this program.

2.5 Proposed System Operations and Levels of Service

As described above, the regional water system operations are affected by numerous factors, including meteorological and hydrologic conditions; physical facilities and infrastructure; and institutional parameters. The WSIP addresses the condition of the physical facilities and infrastructure while planning for and taking into account both the meteorological/hydrologic conditions and institutional parameters. Under the WSIP, the regional water system would continue to comply with the conditions of all applicable institutional and planning requirements, including:

- Complying with all water quality and public safety regulations
- Maximizing use of water from local watersheds
- Assigning a higher priority to water delivery over hydropower generation
- Meeting all downstream flow requirements

Table 3 summarizes the proposed changes in levels of service with implementation of the WSIP compared to existing conditions.

Water Quality

With implementation of the WSIP, the regional system would continue to meet all local, state, and federal drinking water quality requirements, but would also comply with anticipated future regulations. Changes to system operations are being proposed in order to comply with the proposed Long Term-2 Enhanced Surface Water Treatment Rule and provide secondary disinfection for the Hetch Hetchy water. Projects are proposed to upgrade both regional treatment plants. In addition, to support the objective of maintaining the filtration exemption status for Hetch Hetchy water, ongoing system operations would

TABLE 2
WSIP GOALS AND OBJECTIVES

Program Goal	System Performance Objective
<i>Water Quality – maintain high water quality</i>	<ul style="list-style-type: none"> • Design improvements to meet current and foreseeable future federal and state water quality requirements. • Provide clean, unfiltered water originating from Hetch Hetchy Reservoir and filtered water from local watersheds. • Continue to implement watershed protection measures.
<i>Seismic Reliability – reduce vulnerability to earthquakes</i>	<ul style="list-style-type: none"> • Design improvements to meet current seismic standards. • Deliver basic service to the three regions in the service area (East/ South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. Basic service is defined as average winter-month usage, and the performance objective for the regional system is 215 mgd. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 96, 37, and 82 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively. • Restore facilities to meet average-day demand within 30 days after a major earthquake.
<i>Delivery Reliability – increase delivery reliability and improve ability to maintain the system</i>	<ul style="list-style-type: none"> • Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service. • Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages. • Provide operational flexibility and system capacity to replenish local reservoirs as needed. • Meet the estimated average annual demand of 300 mgd for 2030 under the conditions of one planned shutdown of a major facility for maintenance concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset.
<i>Water Supply – meet customer water needs in nondrought and drought periods</i>	<ul style="list-style-type: none"> • Meet average annual water purchase requirements of 300 mgd from retail and wholesale customers during nondrought years for system demands through 2030. • Meet dry-year delivery needs through 2030 while limiting rationing to a maximum 20 percent systemwide reduction in water service during extended droughts. • Diversify water supply options during nondrought and drought periods. • Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers.
<i>Sustainability – enhance sustainability in all system activities</i>	<ul style="list-style-type: none"> • Manage natural resources and physical systems to protect watershed ecosystems. • Meet, at a minimum, all current and anticipated legal requirements for protection of fish and wildlife habitat. • Manage natural resources and physical systems to protect public health and safety.
<i>Cost-effectiveness – achieve a cost-effective, fully operational system</i>	<ul style="list-style-type: none"> • Ensure cost-effective use of funds. • Maintain gravity-driven system. • Implement regular inspection and maintenance program for all facilities.

TABLE 3
EXISTING AND PROPOSED REGIONAL SYSTEM LEVELS OF SERVICE ^a

Operating Parameter	Existing Level of Service	Proposed Level of Service with WSIP (2030)
Water Quality	Meet all local, state, and federal water quality requirements in 2005	Meet all local, state, and federal water quality requirements in 2030
Seismic Response After Major Earthquake	Not defined	Provide basic service ^b of 215 mgd within 24 hours; average-day service of 300 mgd within 30 days
Average Annual Delivery	265 mgd	300 mgd ^c
Regional System Firm Yield ^d	223 mgd	256 mgd
Drought-Year Rationing	No maximum limit to rationing	Up to 20 percent systemwide rationing

^a Level of service flow rates are defined on a systemwide basis and are not specific to any customer turnout (i.e., water diversion point).

^b Basic service is defined as winter month demand (215 mgd).

^c Includes 10 mgd from conservation, recycled water and groundwater supply programs.

^d System firm yield is defined as: the maximum annual water delivery that can be sustained by the regional water system during an extended drought. The SFPUC uses an 8.5-year design drought for planning purposes. Currently, due to recent operating restrictions imposed by the California Division of Safety of Dams on the Calaveras Dam, the system firm yield is reduced from its normal system firm yield of 223 mgd to about 219 mgd.

include continued implementation of source water protection and systemwide watershed management and protection.

Delivery Reliability

The WSIP goal for water delivery reliability is to increase the reliability of the regional system to meet customer demand under a range of operating conditions. While current system operating strategies would generally remain unchanged, implementation of the WSIP would rehabilitate and upgrade existing facilities as well as provide a wider range of operational flexibility, thereby increasing the reliability of the system to deliver water to all customers.

The WSIP includes an improved maintenance program to increase day-to-day reliability that establishes a schedule and allows for the planned shutdown of facilities for inspection and maintenance while continuing to meet customer demands. Currently, some critical facilities cannot be taken out of service for inspection and maintenance, but the WSIP would provide adequate redundancy of critical facilities to enable inspection and maintenance on a regular schedule. Redundant facilities would also increase the operational flexibility and thus the reliability of water service to customers in the event of an unplanned facility failure or system upset, natural disaster, or other emergency situation. As summarized in Table 2, the SFPUC has set performance objectives to maintain water delivery services during planned facility maintenance activities and unplanned outages of key facilities.

The proposed system upgrades would optimize water storage to provide Bay Area customers with a local supply in the event of an emergency. At present, depending on hydrologic conditions and the transmission capacity of pipelines, replenishment of local reservoirs can take more than one year to complete. The WSIP includes an increase in the transmission capacity of pipelines such that the Alameda and Peninsula Reservoirs can be replenished while continuing to meet customer demands. Implementation of the WSIP

would increase the SFPUC's ability to replenish local reservoirs more quickly, which is required both during normal and wet years after an unplanned outage that requires significant drawdown of the local reservoirs to keep water flowing to customers (see Seismic Reliability, below).

Seismic Reliability

To improve seismic reliability for the regional system, critical facilities would be upgraded to meet current seismic standards, thereby improving their ability to withstand seismic damage. In addition, the increased level of operational flexibility would improve the ability to respond and restore service following an earthquake.

In addition, to increase seismic reliability for the system (as described above for water delivery reliability), water storage in the Bay Area and the ability to replenish depleted water storage would be improved under the WSIP so that water service could be restored more rapidly and reliably following a seismic event.

Water Supply

The SFPUC's chief service objectives for water supply are (1) to fully meet customer purchase requests in nondrought years through the planning year 2030, and (2) to provide drought-year delivery with a maximum systemwide cutback of 20 percent in any one year of a drought. The SFPUC, in conjunction with its wholesale customers, has conducted extensive studies to determine water demand projections, conservation and recycled water potential, and water purchase estimates from the regional system. The current estimated total water demand within the entire SFPUC service area is 374 mgd. Of this current total demand, about 265 mgd is purchased annually from the SFPUC. SFPUC customers meet the balance of their supply needs with supplies from other sources. To develop their 2030 purchase requests to the SFPUC, customers have considered conservation and recycled water potential as well as other supply source options available to them. The total projected 2030 water demand within the service area is 417 mgd while the 2030 customer purchase requests to the SFPUC total 300 mgd.³ The remaining 117 mgd of the 417 mgd total 2030 demand would be met through the other customer sources, primarily water purchases from other agencies, water recycling and conservation.

The 2030 customer purchase request of 300 mgd from the SFPUC is 35 mgd more than the current 265 mgd average annual delivery from the regional system. The SFPUC's proposed water supply option meets this 2030 request by increasing, on average, the SFPUC's annual diversion from the Tuolumne River by 25 mgd and implementing additional conservation, water recycling, and groundwater supply programs to achieve the other 10 mgd needed. SFPUC studies indicate that the SFPUC's existing water sources (i.e., local watersheds and the Tuolumne River) are sufficient to meet current and future water purchases in most years (assuming restored storage capacity in Bay Area reservoirs). Although the SFPUC can meet projected 2030 water purchases of 300 mgd from local supplies and Tuolumne River diversions in most years, those supplies alone have not allowed for full water deliveries during past droughts and cannot be relied upon alone in the future for water deliveries during potential future droughts.

³ San Francisco Public Utilities Commission, *2030 Purchase Estimates*, Technical Memorandum, December 2004.

With respect to drought-year supply, the system firm yield is defined as the maximum annual water delivery that can be sustained during an extended drought; the SFPUC uses an 8.5-year design drought for planning purposes. The current firm yield of the system is 223 mgd.⁴ By 2030, with customer purchase requests of 300 mgd and assuming 10 mgd of this request is met by a combination of water recycling, conservation and groundwater supply programs as proposed, the system firm yield is estimated to be 256 mgd. The equivalent of an additional 33 mgd of firm yield is required to provide adequate water delivery in drought years by 2030. The SFPUC proposes to meet this 2030 system firm yield need with a combination of water transfers, groundwater conjunctive-use programs and rationing.

To address existing and future water delivery needs for customers under both average annual and drought conditions, the SFPUC has identified the following proposed water supply option as well as alternatives to be evaluated in the PEIR in comparison to the proposed option.

Proposed Water Supply Option

The SFPUC proposed water supply option to meet the projected 35 mgd increase in average annual delivery through 2030 includes increased use of Tuolumne River water coupled with increased conservation, water recycling and groundwater supply programs. Under this proposed option, the SFPUC would implement additional conservation, water recycling and groundwater supply programs to achieve the equivalent of 10 mgd of supply every year (in all year types: nondrought and drought). In nondrought years, the SFPUC would meet the remaining increase in average annual demand through 2030 (25 mgd) with increased use of Tuolumne River water under its existing water rights.

In drought years, the SFPUC would implement a multistep drought response program to:

- Acquire up to 25 mgd⁵ of supplemental dry-year Tuolumne River water through water transfer agreements with Modesto Irrigation District and/or Turlock Irrigation District
- Implement a groundwater conjunctive-use program in the Westside Basin, in San Mateo County, to store water through in-lieu recharge in nondrought years and provide approximately 6 mgd⁵ of water in a drought year
- Implement up to 20 percent systemwide rationing in any year of a drought

The facilities and facility improvements required to implement this water supply option are described in greater detail in the following section. Key regional system facility improvements needed include: increasing SFPUC regional system transmission capacity and redundancy in San Joaquin Pipelines and Bay Division Pipelines; restoring full storage capacity in the existing Crystal Springs Reservoir and Calaveras Reservoir; and developing additional wells to implement the regional groundwater conjunctive-use program. Additional facility improvements, described in the following section, are also needed to

⁴ Currently, due to recent operating restrictions imposed by the California Division of Safety of Dams on the Calaveras Dam, the system firm yield is reduced from its normal system firm yield of 223 mgd to about 219 mgd.

⁵ The contribution to system firm yield from individual projects represents the system firm yield of the projects when evaluated independently by the simulation model. Restoration of Crystal Springs Reservoir storage capacity accounts for 1 mgd. When the projects (District transfers, Westside Basin and Crystal Springs Reservoir restoration) are combined and evaluated as one scenario in modeling, the system firm yield is slightly higher at 33 mgd. The small difference in combined system yield is due to changes in net evaporation over the design drought sequence.

meet the water quality, seismic reliability and delivery reliability performance objectives the SFPUC has established for the regional system in nondrought and drought years.

Other Supply Options

At the SFPUC's request the PEIR will provide a programmatic analysis and comparative evaluation of three other water supply options: (1) increased Tuolumne River diversions without additional recycling, conservation, and groundwater supply programs; (2) additional non-Tuolumne River surface water supplies that may include Delta water transfers and desalination, as well as recycling, conservation, and groundwater supply programs, but no additional Tuolumne River diversions; and (3) a combination of aggressive conservation / water recycling and naturally renewable groundwater supply, with no additional Tuolumne River diversions and no acquisition or use of other additional surface water supplies. Option 1 is a variation of the proposed water supply option described above and has similar facility requirements. Options 2 and 3 would involve repair and improvement of the SFPUC regional system as well as additional facility projects, such as additional transmission pipelines, additional storage facilities, new and/or modified treatment facilities (for example, desalination plant(s), additional recycled water treatment capacity and/or new plants, modifications at SFPUC water treatment plants in order to treat other supply sources), new wells, and additional distribution system pipelines. The feasibility of Options 2 and 3 is currently under study. The PEIR will investigate and compare the nature and magnitude of environmental impacts associated with these water supply options to the SFPUC's proposed water supply option.

At the request of the SFPUC, the PEIR will also provide a programmatic analysis and comparative evaluation of two other drought rationing scenarios: a maximum reduction of 10 percent and a maximum reduction of 30 percent of the 2030 customer purchase requests. These two rationing scenarios will be reviewed to see what effect they might have on the proposed WSIP facility projects. It is expected that all of the proposed WSIP facility projects would still be needed under these two rationing scenarios, but that the size requirements of certain facilities could be affected. In general, it is expected that the 10 percent maximum systemwide rationing scenario would require more supplemental dry-year water, more storage capacity, and possibly more transmission capacity than the SFPUC's proposed option (which includes a maximum of 20 percent systemwide rationing). By contrast, the maximum 30 percent systemwide rationing scenario is expected to require less supplemental dry-year supply than the proposed option. For this scenario, storage and transmission capacity sizing is expected to remain the same as described for the proposed water supply option in order to meet other regional system goals for day-to-day delivery reliability and seismic reliability as well as drought reliability. The SFPUC will confirm the appropriate facilities and sizing for each of these scenarios and this information will be presented in the PEIR.

2.6 WSIP Facility Improvement Projects

To achieve the system performance objectives of the WSIP, the SFPUC has proposed projects to repair, improve and, in some cases, expand the physical facilities in the regional system. **Table 4** lists and briefly describes the individual projects that have been identified in the WSIP, and **Figure 3** shows the locations of these projects. Project descriptions in Table 4 present information pertinent only to that individual facility as an isolated project and do not include how each project relates to the overall system in terms of operations and capacity; that information will be provided in the PEIR.

TABLE 4
SUMMARY OF WSIP FACILITY IMPROVEMENT PROJECTS

No.	Project Title	Type of Facility ^a	CEQA Review Approach ^b	Project Description
San Joaquin Sub-region				
SJ-1	Hetch Hetchy Advanced Disinfection	Treat	PEIR, possible separate CEQA	This project would construct a facility for secondary disinfection for the Hetch Hetchy water supply to comply with the proposed federal drinking water regulations contained in the Long Term-2 Enhanced Surface Water Treatment Rule to remove target organisms such as cryptosporidium.
SJ-2	Lawrence Livermore Filtration	Treat	PEIR	This project would construct treatment upgrades for potable water that the SFPUC provides to the Lawrence Livermore Laboratory. The project would install package membrane technology to ensure that this customer receives consistently high-quality water and would also meet the proposed federal drinking water regulations contained in the Long Term-2 Enhanced Surface Water Treatment Rule.
SJ-3	San Joaquin Pipeline System	Trans	PEIR	This project includes an alternative to construct a fourth 47-mile-long pipeline across the San Joaquin Valley adjacent to the existing three San Joaquin Pipelines and construct two new crossover facilities between all the pipelines. This project is designed to provide redundant system hydraulic capacity sufficient to allow long-term repairs on the existing pipelines while maintaining water supply service to the Bay Area; however, it will also increase the transmission capacity of the San Joaquin Pipelines.
SJ-4	Tesla Portal Disinfection Facility	Treat	Separate CEQA	This project would rehabilitate and upgrade the system's existing primary disinfection for the Hetch Hetchy supply to meet current seismic, safety/fire, and building code standards. The project would replace the existing facilities at the Tesla Portal.
Sunol Valley Sub-region				
SV-1	(project moved)			The project initially labeled as SV-1, Alameda Creek Fishery Enhancement, has been incorporated into SV-2, Calaveras Dam Replacement Project.
SV-2	Calaveras Dam Replacement and Alameda Creek Fishery Enhancement	Storage	PEIR	<p>This project would replace the existing dam at the Calaveras Reservoir to meet seismic safety requirements and would be located just downstream from the existing site. Currently, the capacity of Calaveras Reservoir is restricted to 37,800 acre-feet by the California Department of Water Resources, Division of Safety of Dams due to potential seismic failure of the dam. The proposed dam would be designed to provide a reservoir with the same storage capacity as Calaveras Reservoir was originally designed to accommodate (96,850 acre-feet) to withstand the Maximum Credible Earthquake originating on the Calaveras fault, as well as to withstand the Probable Maximum Flood. The replacement dam would include a new intake tower. Upgrades to the Calaveras Pipeline, San Antonio Pipeline, San Antonio Pump Station, and San Antonio Cone Valve are being considered to provide reliability of water delivery in the event of interruption or outage of Hetch Hetchy water.</p> <p>As part of this project, Calaveras Reservoir would be operated to release up to 6,300 afy (5.5 mgd) of water to Alameda Creek for fish flow enhancement. New facilities would be installed downstream of the dam to recapture the released water and return it back to the regional system for use.</p>
SV-3	Additional 40 mgd Treated Water Supply	Treat	PEIR	This project would construct new or additional water treatment facilities to provide an additional 40 mgd of treatment capacity at either the Sunol Valley (preferred location) or the Harry Tracy WTP.

TABLE 4
SUMMARY OF WSIP FACILITY IMPROVEMENT PROJECTS

No.	Project Title	Type of Facility ^a	CEQA Review Approach ^b	Project Description
SV-4	Irvington Tunnel / Alameda Siphons	Trans	PEIR	Irvington Tunnel – A second tunnel would be constructed to convey water from the Sunol Valley to Fremont in the East Bay. The second tunnel would be a redundant water transmission facility to the existing Irvington Tunnel. Alameda Siphons – A fourth Alameda Siphon would be constructed across the Sunol Valley. The fourth Alameda Siphon would be the seismic backbone and a redundant pipeline to the existing three Alameda Siphons.
SV-5	San Antonio Pump Station Upgrade	Trans	PEIR	This project would upgrade and rehabilitate facilities at the San Antonio Pump Station, which pumps water from San Antonio Reservoir to the Sunol Valley WTP and pumps Hetch Hetchy water to the Sunol Valley WTP, San Antonio Reservoir, or San Antonio Creek. This project provides seismic retrofit of structural deficiencies in the facility, replacement of three electric pumps, backup power for those three pumps, and an electrical substation. This project would allow the facility to sustain existing pumping capacity of 160mgd.
SV-6	Sunol Valley WTP – New Treated Water Reservoir	Treat	PEIR, possible separate CEQA	This project would construct a new 22.5-million-gallon storage reservoir for treated water at the Sunol Valley WTP plus miscellaneous pumping appurtenances to increase treatment efficiency of the WTP during periods of peak demand. The proposed project site is just north of the Sunol Valley WTP.
SV-7	Pipeline Repair Plan and Readiness Improvements	Trans	Separate CEQA	This project consists of developing a plan and purchasing materials for emergency repair and operation of the regional pipelines following an earthquake.
SV-8	Standby Power Facilities (various locations)	Other	Separate CEQA	This project would provide for standby backup power at various facilities to ensure continued operation during power outages. Project locations include the San Pedro and Capuchino Valve Lots, Millbrae Facility, San Antonio and Calaveras Reservoirs, Alameda West Portal, and Harry Tracy WTP.
Bay Division Sub-region				
BD-1	Bay Division Pipeline Hydraulic Capacity Upgrade	Trans	PEIR	This project would construct a new Bay Division Pipeline from Fremont to Redwood City, consisting of 16 miles of pipeline and 5 miles of tunnel running under San Francisco Bay between Newark and East Palo Alto. The new facility would replace the deteriorated existing submarine sections of Bay Division Pipelines 1 & 2. With the pipeline hydraulic upgrade and decommissioning of Bay Division Pipelines 1 & 2 sections, the transmission capacity of the pipeline system would increase.
BD-2	Bay Division Pipelines 3 & 4 Crossovers	Trans	PEIR	This project would construct three additional crossover facilities along Bay Division Pipelines 3 & 4 to provide operational flexibility for maintenance or during emergencies.
BD-3	Slipline Bay Division Pipeline 4 PCCP Sections	Trans	PEIR	This project would rehabilitate sections of the Bay Division Pipeline 4 where vulnerable prestressed concrete cylinder pipe (PCCP) currently exists.
BD-4	Seismic Upgrade of Bay Division Pipelines at Hayward Fault	Trans	Separate CEQA	This project would construct shutoff valves in underground vaults at two locations along Bay Division Pipelines 3 & 4 on either side where they cross the trace of the Hayward fault and upgrade the pipelines between the new shutoff valves. The project would not affect the transmission capacity of the pipelines.
BD-5	SFPUC/EBMUD Intertie	Trans	Separate CEQA	This project will provide a connection between the SFPUC and East Bay Municipal Utility District (EBMUD) water systems such that 30 mgd can be transferred in either direction in the event of an emergency. CEQA review on this project is complete and the project is currently under construction.

**TABLE 4
SUMMARY OF WSIP FACILITY IMPROVEMENT PROJECTS**

No.	Project Title	Type of Facility ^a	CEQA Review Approach ^b	Project Description
BD-6	Installation of SCADA System – Phase II	Other	Separate CEQA	The Supervisory Control and Data Acquisition (SCADA) project would install monitoring and control equipment at approximately 50 sites to allow collection of water quality and flow data throughout the regional system.
Peninsula Sub-region				
PN-1	Adit Leak Repair, Lower Crystal Springs & Calaveras Reservoirs	Trans	Separate CEQA	This project would repair leaking adits (outlet structures) used to control withdrawal of water from Lower Crystal Springs and Calaveras Reservoirs. The project includes Lower Crystal Springs Outlet Tower No. 1 and Calaveras Outlet Tower.
PN-2	Baden and San Pedro Valve Lots Improvements	Trans	PEIR	This project would upgrade valves, vaults, and piping at the Baden Valve Lot and the San Pedro Valve Lot to meet current seismic standards. The project would include a new pressure-reducing valve to allow transfer of water between high- and low-pressure zones, facilitating backfeed of water from Harry Tracy WTP to Peninsula customers to the south in an emergency.
PN-3	Capuchino Valve Lot Capacity Improvements	Trans	PEIR	This project would seismically upgrade the existing vault and relocate isolation valves to improve reliability of the Capuchino Valve Lot, which allows transfer of water from the high-pressure regional system to low-pressure zones in San Francisco.
PN-4	Cross Connection Controls (various locations)	Trans	Separate CEQA	This project would upgrade the existing valves and piping at 291 locations to eliminate and prevent cross connections and backflow from unapproved sources into the water system in compliance with California water quality regulations.
PN-5	New Crystal Springs Bypass Tunnel	Trans	PEIR, possible separate CEQA	This project would construct a 4,200-foot-long tunnel to replace an existing pipeline that is vulnerable to seismic and landslide hazards. Although the new tunnel would be a replacement facility, the existing pipeline would remain in place and be kept in service as a redundant facility to allow tunnel maintenance.
PN-6	Crystal Springs / San Andreas Transmission Upgrade	Trans	PEIR	This project would consist of hydraulic and seismic upgrades of facilities that convey water from Crystal Springs Reservoir to the Harry Tracy WTP, including the Crystal Springs Outlet facilities, Crystal Springs Pump Station, Crystal Springs–San Andreas Pipeline, and the San Andreas Outlet facilities. The project includes pipeline repair and replacement, a chemical system upgrade, and general structural repairs. This project would increase the transmission capacity of raw water from Crystal Springs Reservoir to San Andreas Reservoir for treatment at the Harry Tracy WTP to sustain delivery to Peninsula customers.
PN-7	Harry Tracy WTP Short-Term Improvements	Treat	PEIR, possible separate CEQA	This project would replace and upgrade the filtration system at the Harry Tracy WTP to increase the reliability and efficiency of the treatment process to deal with challenging raw water conditions. The project would improve the WTP’s filtration and coagulation/flocculation process. With these improvements, the plant would reliably maintain its current sustainable capacity of 120 mgd for 60 days.
PN-8	Harry Tracy WTP Long-Term Improvements	Treat	PEIR	This project would be a seismic retrofit and rehabilitation of the existing building and facility, including raw water pumping and transmission improvements, and hydraulic and piping upgrades. The project would increase the sustained treatment capacity of the plant from 120 mgd to 140 mgd, sustainable for 60 days.
PN-9	Lower Crystal Springs Dam Improvements	Storage	PEIR	This project would consist of major repairs and improvements to Lower Crystal Springs Dam to provide adequate protection from the Probable Maximum Flood as well as the Maximum Credible Earthquake. Currently, California Division of Safety of Dams has placed operational restrictions on the dam, and the capacity of the reservoir is limited to 58,400 acre-feet. The project would restore the historic reservoir capacity of 69,300 acre-feet.

TABLE 4
SUMMARY OF WSIP FACILITY IMPROVEMENT PROJECTS

No.	Project Title	Type of Facility ^a	CEQA Review Approach ^b	Project Description
PN-10	Pulgas Balancing Reservoir Rehabilitation	Trans	PEIR	This project would install new inlet/outlet piping to improve mixing in the reservoir, replace the eroding Pulgas Channel to accommodate current maximum flows of 250 mgd, and replace the reservoir roof to meet current seismic standards.
San Francisco Regional Projects				
SF-1	Crystal Springs Pipeline 2 Replacement	Trans	Separate CEQA	This project would repair and replace aging and seismically vulnerable sections of the existing 19-mile-long Crystal Springs Pipeline 2. Transmission capacity of the pipeline would not change.
SF-2	San Andreas Pipeline 3 Installation	Trans	PEIR	This project would construct a new 3.9-mile pipeline extension between Daly City and San Francisco to replace the Baden-Merced Pipeline, which is beyond repair. The project would provide seismic reliability and system redundancy for Peninsula and San Francisco customers.
SF-3	Sunset Reservoir – North Basin	Storage	Separate CEQA	This project would involve seismic upgrades and rehabilitation of the existing reservoir, including seismically strengthening the reservoir roof, columns, and beams and stabilizing the earth embankment around the reservoir. There would be no change in reservoir capacity.
SF-4	University Mound Reservoir – North Basin	Storage	Separate CEQA	This project would involve seismic upgrades and rehabilitation of the existing reservoir, including seismically strengthening the reservoir roof, columns, and beams; upgrades to valves, gates, and drainage control; and miscellaneous roadway and site improvements. There would be no change in reservoir capacity.
SF-5	Groundwater Projects	Other	PEIR	This project includes two phases: Local Groundwater Projects and a Regional Groundwater Banking Program. Local Groundwater Projects would include development of about 2 mgd of new local groundwater for injecting and blending with water in the potable water system in San Francisco. The regional banking program would develop about 6 mgd of potable groundwater in San Mateo County as part of a regional conjunctive-use project. In nondrought years under this project, the SFPUC would provide regional system water to these customers to substitute groundwater currently used for municipal purposes, thereby allowing the groundwater basin to recharge naturally; in drought years, the groundwater would be available for local use to supplement the regional system water.
SF-6	Recycled Water Projects	Other	PEIR	This project includes local and regional recycled water projects. The local project would provide about 4.5 mgd of recycled water primarily for irrigation purposes on the west side and the Marina sections of San Francisco; it would include construction of a new recycled water treatment facility and distribution system within parts of San Francisco. The regional projects include SFPUC's partnering with other jurisdictions to develop and implement recycled water, primarily for irrigation uses.

See Figure 3 for the approximate locations of projects.

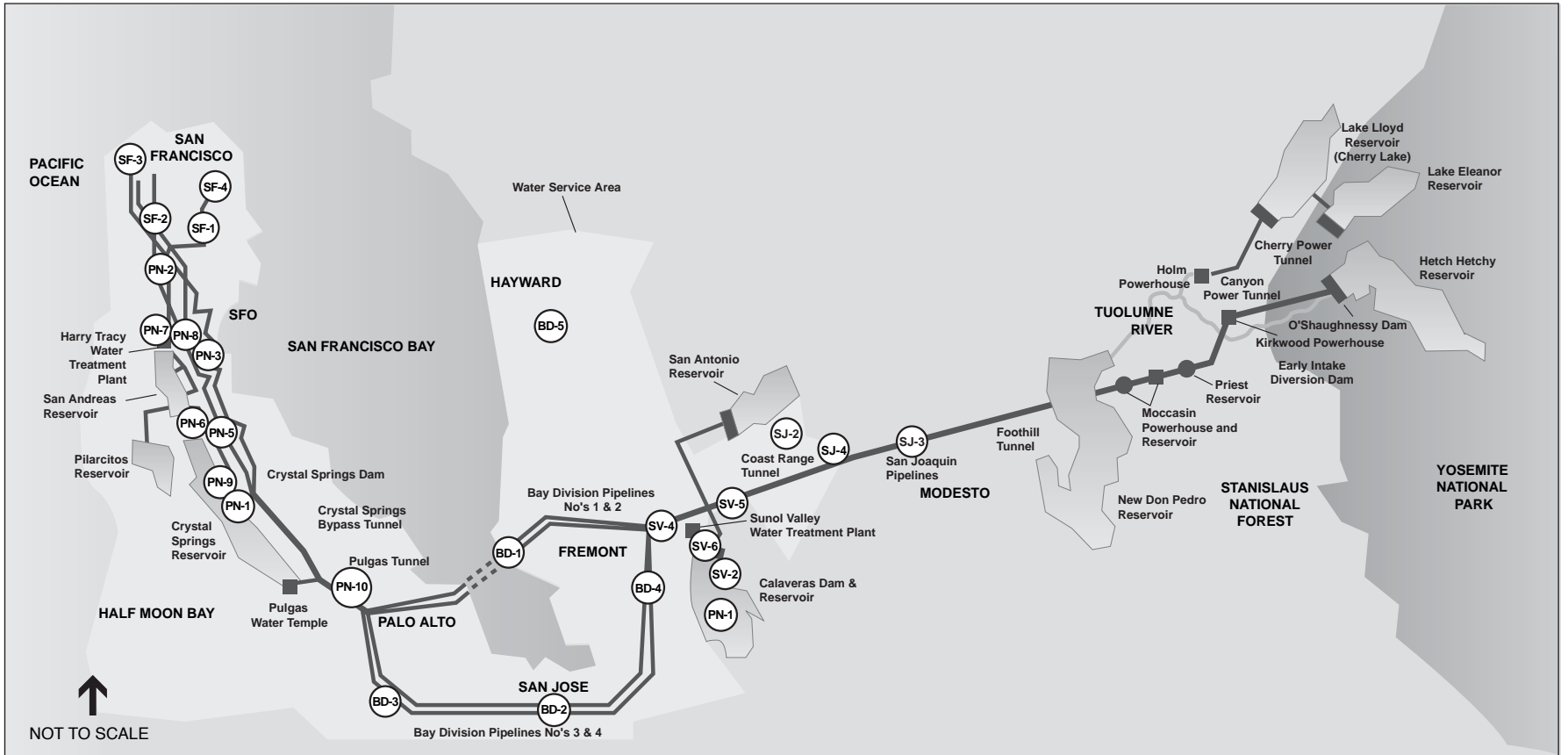
a. Stor = Storage Facility; Trans = Transmission Facility; Treat = Treatment Facility; Other = other types of facilities.

b. This column indicates the status of CEQA analysis for each project.

PEIR = Project to be included in the PEIR impact analysis and alternatives consideration and may undergo or is undergoing additional project-level CEQA analysis as required.

Separate CEQA = Project has undergone or is undergoing separate environmental review independent of the PEIR; however, the project will be considered in the PEIR cumulative effects analyses as relevant.

PEIR, possible separate CEQA = Project to be included in the PEIR impact analysis and alternatives consideration, but may be considered for separate CEQA review and documentation outside of and in advance of the PEIR.



NOTE: Projects SJ-1, SV-3, SV-7, SV-8, BD-6, PN-4, SF-5 and SF-6 not shown because either location not known or project would involve multiple locations. See Table 4 for names and descriptions of projects.

SOURCE: San Francisco Public Utilities Commission (2005)

Figure 3
Location of WSIP Facility Improvement Projects

The projects identified in Table 4 are required to achieve the system performance objectives established by the SFPUC for the regional system and also to support implementation of the proposed water supply option described above. While most of these projects would be needed regardless of which water supply option is ultimately selected, the PEIR will identify particular projects that are not needed for one or more of the water supply alternatives and will identify other projects that may be required to implement a water supply alternative, such as a desalination facility and related transmission/treatment systems.

Table 4 also indicates which WSIP projects will be addressed in the PEIR at a programmatic level of detail and which have undergone or are undergoing separate CEQA review (these latter projects will be considered in the PEIR cumulative analysis as appropriate). The San Francisco Planning Department may also determine that other projects will undergo CEQA review separately and concurrently with the PEIR.

2.7 Implementation Actions

The actions associated with implementation of the WSIP include:

- Ongoing source water protection and systemwide watershed management
- Improved, on-going maintenance
- Drought management planning
- Various actions to secure supplemental water supply to meet 2030 purchase requests and 2030 system firm yield. Actions could include transfer agreements, groundwater conjunctive-use agreements, implementation of water recycling and conservation programs; and possibly additional wells, distribution system connections, and transmission/treatment capacity enhancements
- Construction and operation of WSIP facilities listed in Table 4
- Agreements with SFPUC customers as needed

As the SFPUC continues to develop the projects within the WSIP, it will identify in greater detail the specific implementation actions required for each project and action within the program.

2.8 Schedule

The WSIP includes a preliminary schedule indicating the planning, environmental review, design, and construction phases for all of the regional projects identified in the program. The schedule was developed to assure water delivery service is maintained consistently throughout construction of the numerous projects. The schedule indicates that construction of most projects would be underway by 2008 to 2009 and completed by 2012 to 2013. All projects in the WSIP would be completed by 2017. Acquisition of supplemental water supplies during droughts would be implemented as needed to match water delivery needs of the systemwide customers.

3.0 Environmental Analysis

3.1 Program EIR Level Of Analysis

According to the CEQA Guidelines, Section 15168, a program EIR is one type of environmental review document that may be used to evaluate a plan or program that has multiple components (projects and actions) or to address a series of actions that are related:

- Geographically,
- As logical parts in the chain of contemplated actions,
- In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways.

The PEIR on the proposed WSIP can provide a foundation for any necessary future environmental review of the specific regional system facility projects within the program and, as provided by CEQA, can help simplify the task of preparing any necessary focused environmental documents on projects included in the program. A program EIR can provide the following additional advantages.

- Provide for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action
- Ensure consideration of cumulative impacts that might not be evident in a case-by-case or project-by-project analysis
- Avoid duplicative consideration of basic policy issues
- Allow the lead agency to consider broad policy alternatives and programwide mitigation measures early in the process when the agency has greater flexibility to deal with basic problems or cumulative impacts
- Allow a reduction in paperwork

A program EIR may be prepared on a plan or program before the details of each and every project within the long-term plan have been developed, as is true for the PEIR on the WSIP. While the SFPUC is aggressively developing the design, construction and operation details of the regional system projects, these project details will not be the focus of the PEIR. The PEIR on the proposed WSIP regional system improvements will be used as a first-tier environmental document; the analysis will focus on the environmental effects of implementing the overall WSIP as a plan to improve and expand the ability of the regional water system to deliver water to the service area. The chief first-tier environmental issues to be evaluated in the PEIR include:

- The overall effects of upgrading and expanding the regional system to meet the water quality and reliability goals proposed for the system
- The effects of providing additional water supply to meet increasing purchase requests within the service area, specifically the effect of increasing average annual water supply to the service area over the next 25 years
- The effects of using the various proposed sources of water to meet the increasing water delivery needs in nondrought and drought periods

The PEIR will evaluate the overall cumulative effects of implementing the various WSIP actions and facility projects in broad terms to identify the major environmental effects and to determine if there are program mitigations and/or program alternatives that should be evaluated at this time. As described in Section 1.2 – Environmental Review Process, the PEIR will not evaluate in detail all the site-specific environmental impacts of constructing and operating each of the many projects proposed as part of the WSIP to rehabilitate, upgrade, and expand the regional system. As required by CEQA, project-level

CEQA review will be conducted for individual projects to address these detailed, site-specific environmental impact issues.

3.2 Environmental Issues to Be Addressed In The PEIR

Following is an overview of the environmental issues that the PEIR will address for the various WSIP actions and projects in association with the proposed water supply option. The PEIR will examine the potentially significant environmental effects in each of the environmental issue areas outlined below, identify mitigation measures, and evaluate whether such measures can reduce impacts to a less-than-significant level.

Surface Water Resources – Hydrology and Water Quality

The WSIP could affect surface water resources in a variety of ways. Changes in the timing and/or amount of supply, diversion and storage could affect Tuolumne River and/or Alameda Creek. Construction activities could cause short-term, temporary effects on local streams and drainages. Potential effects to be evaluated include:

- Changes in surface water flows and resulting adverse effects on beneficial uses (including instream uses such as aquatic habitat and fisheries, and recreation and consumptive uses)
- Changes in surface water quality from program operation or construction activities
- Alteration of existing drainage patterns
- Exposure of people to and/or increasing risk of flooding, seiche, or tsunami hazards

Groundwater Resources – Geohydrology and Water Quality

As part of the WSIP, the SFPUC is proposing greater use of groundwater resources in San Mateo and San Francisco Counties as part of the dry-year supply program. In addition, construction and/or operation of the WSIP facility projects could affect local groundwater resources. Potential effects to be evaluated include:

- Changes in groundwater levels, recharge rates, and/or storage
- Changes in groundwater flow or quality
- Indirect effects (e.g., effects on other beneficial uses of the groundwater, risk of land subsidence)

Fisheries and Aquatic Resources

Fisheries and aquatic resources could be affected indirectly due to changes in river flows or water quality, or directly due to construction activities in or near rivers, streams, and drainages. The PEIR will review the potential for fishery and aquatic resource effects on the Tuolumne River system, Alameda Creek, and within the system reservoirs due to changes in water supply operations as well as, in general, changes in local streams and drainages as a result of facility construction activities. Potential effects to be evaluated include:

- Changes in the extent of habitat or habitat quality
- Changes in a fish population that cause it to drop below self-sustaining levels

- Effects on special-status species
- Interference with the movement of any native or migratory fish species

Terrestrial Vegetation and Wildlife

Construction of the proposed regional system projects could have “footprint” impacts resulting in the loss of habitat at new facilities sites as well as cause construction disturbance to terrestrial habitats and wildlife as a result of short-term effects such as noise, vibration, dust, and erosion. Potential effects to be evaluated include:

- Changes in the extent of habitat or habitat quality for terrestrial plants and wildlife
- Effects on special-status species
- Effects of species populations and the ability to maintain self-sustaining levels
- Interference with wildlife species movement corridors or migration

Geology, Soils, and Seismicity

One of the chief goals of the WSIP is to reduce the vulnerability of the system to severe damage during an earthquake and to improve the repair and response time to restore water delivery after an earthquake. The PEIR will describe the WSIP’s effect on the water system’s vulnerability and response to earthquake damage. In addition, construction of the regional facility projects could result in site-specific impacts to or from local geology and soils conditions. The PEIR will provide a general review of these types of project-specific impacts. Potential effects to be evaluated include:

- Seismic hazards to the water system and/or increased exposure of people and structures to seismic hazards
- Increased exposure of people or structures to geologic hazards (such as liquefaction, poor soil conditions, or unstable slopes)
- Erosion potential

Cultural Resources

The regional facility projects would repair, modify, demolish, and add facilities to the regional system. Construction of these projects could affect the historical significance of components of the water system and/or affect other historic or cultural resources in the vicinity of the system. Potential effects to be evaluated include:

- Effects on archaeological resources
- Effects on historic/architectural resources, including the regional water system
- Effects on Indian Trust assets and Native American resources

Land Use, Plans, and Policies

Construction of the proposed regional system projects could have “footprint” impacts that would affect existing or planned land uses along the regional system. While most of the proposed facility

improvements or additions would occur within existing facility sites and rights-of-way for regional system facilities, some projects would involve construction activities at previously undisturbed areas and/or areas outside of the SFPUC's existing rights-of-way. In addition, construction or operation impacts could affect adjacent land uses. Also, WSIP projects could require removal of land uses including, in some cases, structures that have encroached onto SFPUC lands and rights-of-way such as gardens, fences, and sheds, and in one potential case, a house. While these are not permitted land uses, the PEIR will review potential environmental effects of removing or relocating such encroachments. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential land use impacts associated with implementation of these proposed facility projects. In addition, the PEIR will review appropriate local, regional, state, and federal plans and policies within the overall study area and evaluate their relationship to the WSIP and the SFPUC's jurisdiction as a public utility. Potential effects to be evaluated include:

- Substantial conflict with established local, regional, state, or federal plans, policies, and/or guidelines
- Disruption of an established community
- Inconsistency or incompatibility with existing or planned land uses at or adjacent to proposed regional facility sites
- Short-term construction disruption effects on neighboring land uses
- Operations effects on adjacent land uses

Recreation

Proposed program changes in water delivery operations (i.e., the level and timing of diversion from the Tuolumne River) or changes in reservoir storage could affect water-based recreation. In addition, construction of the proposed regional system projects could have "footprint" impacts that might conflict with or affect existing or planned recreation land uses. Also, construction could cause temporary disruption of these uses due to noise, dust, or access restrictions. The PEIR will evaluate the effects of the proposed water supply options and operations on water-based recreation, such as boating, rafting, or fishing, associated with the regional water system or downstream water resources. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential effects of the facility projects on land-based recreation. Potential effects to be evaluated include:

- Effects on water-based recreation facilities in the regional water system as well as any downstream water resources affected by SFPUC operations
- Effects on land-based recreation facilities and activities due to the siting or operations of proposed facilities or construction activities (e.g., short-term effects due to noise, dust, access restrictions)

Agricultural Resources

Siting of new or modified regional system facilities, primarily in the San Joaquin, Livermore and Sunol Valleys, could affect agricultural lands by removing agricultural soils from production. In addition, construction activities could cause short-term impacts to agricultural activities. Operation of proposed

regional system facilities is not expected to result in ongoing impacts to neighboring agricultural activities. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide a program-level review of the potential effects of the facility projects on agricultural soils and farming activities. Potential effects to be evaluated include:

- Loss of prime farmland
- Impacts or conflicts with existing or planned agricultural activities

Traffic, Transportation, and Circulation

Effects on traffic, transportation, and circulation resulting from the WSIP would largely be associated with facility construction activities and, as such, would be temporary and short term. However, some of the proposed regional system projects could have “footprint” impacts that would affect existing or planned traffic corridors or transportation facilities. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential effects of the facility projects on traffic, transportation, and circulation, including cumulative effects. Potential effects to be evaluated include:

- Effects on the regional transportation network or facilities
- Effects of adding new vehicle trips and contributing to increased traffic congestion during construction and/or operation of proposed facilities
- Effects on traffic safety

Air Quality

Effects on air quality from implementation of the WSIP regional system improvements would largely be associated with facility construction activities and, as such, would be temporary and short term. However, the PEIR will also evaluate potential changes in system operation that could result in long-term air quality effects. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential effects of the facility projects on air quality. Potential effects to be evaluated include:

- Effects of construction emissions, particularly dust
- Effects of system operations
- Consistency with regional air quality plans

Noise and Vibration

Noise and vibration effects from implementation of the WSIP regional system improvements would largely be associated with facility construction activities and, as such, would be temporary and short term. However, the PEIR will also evaluate potential changes in system operation that could result in long-term noise effects affecting adjacent land uses. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR

will provide an overview of the potential noise effects of the facility projects. Potential effects to be evaluated include:

- Effects of construction noise and vibration
- Effects of operations on noise levels

Public Services, Utilities, and Energy

The PEIR will review the potential effects of the WSIP on utilities, public services, and energy resulting from both construction and operation of the improved and expanded regional system. While the regional water system is operated with water delivery as a higher priority than hydropower generation, the SFPUC system provides energy through its hydropower generation facilities to parts of San Francisco, the Modesto and Turlock Irrigation Districts, and other customers. The WSIP has been developed to focus on the water system infrastructure without affecting hydropower facilities. The PEIR will describe the relationship of the WSIP with the hydropower facilities during construction and operation of the WSIP. In addition, some of the WSIP projects, such as the Advanced Disinfection Project, could require substantial increases in the current energy demands of the regional system. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential effects of the facility projects on public utilities and services. Potential effects to be evaluated include:

- Effects on SFPUC hydropower generation and associated effects on power service provided to customers
- Systemwide increases in energy demands and potential need for expansion of power facilities
- Disruption of services (such as water or power) during construction
- Effects on other utilities (such as the need for relocation)

Hazards and Public Safety

The PEIR will review the hazardous materials proposed for use in operation of the system and evaluate potential changes over current operations. Some of the potential hazards are associated only with construction activities for the facility projects. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the facility projects with respect to hazards and public safety. Potential effects to be evaluated include:

- Potential to encounter hazardous materials or waste during construction or potential to release hazardous materials during construction
- Potential for accidental release of chemicals during facility operations or changes with respect to the risk of upset

Visual Quality

Effects on visual quality associated with implementation of the WSIP regional system projects would primarily result due to the siting of new or modified facilities. The PEIR will provide a program-level

review of the potential visual resource impacts that could result from the proposed facilities projects. For some projects, site-specific facility construction and operation impacts will be evaluated in detail in subsequent environmental documents; however, the PEIR will provide an overview of the potential visual effects of the facility projects. Potential effects to be evaluated include:

- Degradation or obstruction of scenic views and designated scenic resources

Socioeconomics

The PEIR will review existing information about the potential socioeconomic effects of drought rationing, general conservation, and water supply costs and outline the potential socioeconomic effects of the WSIP on the customers within the regional system service area that could, in turn, result in physical environmental effects, such as changes in land use patterns and/or densities. The PEIR will summarize existing, available literature about the potential socioeconomic effects associated with drought rationing at different levels, and associated with varying costs of water supply options. If available, the PEIR will discuss the socioeconomic effects in the Bay Area and within the SFPUC service area of the most recent 1987 – 1992 drought.

Growth-Inducement Potential and Secondary Effects of Growth

The PEIR will evaluate the WSIP service goal to meet the future purchase requests of the SFPUC's customers within the existing service area through 2030. There is no proposal to expand the service area, but the SFPUC does propose to increase water supply to meet the needs of planned growth within its current service area. CEQA requires a discussion of a project's potential to remove an obstacle to growth, and an evaluation of the potential indirect environmental impacts, or secondary effects, of that growth. The PEIR evaluation will address the following:

- Relationship of the 2030 customer purchase requests for water supply to the planned growth and land uses reflected in currently adopted local land use plans (i.e., General Plans)
- Regional growth projections for the service area from the Association of Bay Area Governments and the California Department of Finance
- Secondary effects of growth projected within the service area, including effects on land uses, biological resources, traffic and transportation, air quality, noise, water quality, public services, and water resources

Cumulative Effects

The PEIR will evaluate the overall cumulative effects of implementing the WSIP, including implementation of all of the regional system projects. The analysis will also consider the cumulative effects of implementing the WSIP in conjunction with past, present, and reasonably foreseeable projects sponsored by the SFPUC and others in the vicinity of the regional system facilities.

3.3 Alternatives

CEQA requires that an EIR evaluate a reasonable range of feasible alternatives to the project, or to the location of the project, that would attain most of the basic project objectives, but that could avoid or substantially lessen any of the significant effects of the project, so that the merits of each alternative are

compared to those of the proposed program. The PEIR alternatives analysis will identify the potentially significant impacts of the proposed WSIP regional system actions and facility projects. The findings of the PEIR impact analysis will guide the refinement of an appropriate range of alternatives to be evaluated in the PEIR to avoid or substantially lessen identified impacts.

As requested by the SFPUC, the PEIR will present a comparative evaluation of alternative water supply options for normal and dry-year conditions, including increased Tuolumne River diversion and non-Tuolumne River supply sources, such as Delta water transfers and desalination, as well as aggressive conservation and water recycling with no additional, supplemental surface water supplies. The SFPUC is continuing to assess these alternatives to determine their feasibility. The PEIR will identify other water supply options if appropriate. At a program level of detail, the PEIR will focus the alternatives analysis on different water supply source options and quantities as well as system operations and modifications that could reduce or avoid significant impacts associated with the proposed program.

With respect to facility alternatives, the PEIR will identify whether there are significant impacts associated generally with the proposed sites for the regional facilities and, if so, will identify site location alternatives to be considered to avoid or reduce such impacts. The SFPUC has or is completing an evaluation of a range of alternative sites and designs for major regional facility projects in the WSIP. The PEIR will review those project alternatives studies. For projects requiring site-specific EIRs, detailed evaluation of proposed and alternative sites and designs will occur in those subsequent environmental review documents, but the PEIR will provide a program-level review of facility site alternatives.

The PEIR will also include a discussion of impacts associated with the No Program Alternative. The No Program alternative will compare the potential impacts of the WSIP with the impacts that would be expected to occur in the event that the WSIP is not implemented.

SCOPING REPORT

SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Water System Improvement Program Program Environmental Impact Report

Prepared for:
San Francisco Planning Department

February 2006

Prepared by:
ESA+Orion Joint Venture

In conjunction with
Alfred Williams Consultancy, LLC
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1.0 Introduction and Background

1.1 Introduction

The San Francisco Planning Department is the lead agency for implementation of California Environmental Quality Act (CEQA) requirements for all projects sponsored by the City and County of San Francisco or conducted within San Francisco. The San Francisco Planning Department is preparing a Draft Program Environmental Impact Report (PEIR) on the San Francisco Public Utilities Commission's (SFPUC's) proposed Water System Improvement Program (WSIP, or program). The Draft PEIR, which will assess the potential impacts of the WSIP on the physical environment of the program area, is being prepared in accordance with CEQA. CEQA requires the preparation of an EIR when a proposed project (in this case, a proposed program) could significantly affect the physical environment.

As part of the Draft PEIR process, the San Francisco Planning Department conducted a public scoping effort in September and October 2005, soliciting comments from agencies and the public to help determine the scope of the Draft PEIR. This report describes the scoping process and summarizes the public and regulatory agencies' comments received during scoping.

1.2 Notice of Preparation

As the first step in the CEQA process, the San Francisco Planning Department published a Notice of Preparation (NOP) on September 6, 2005 announcing the anticipated preparation of the Draft PEIR on the WSIP. The NOP summarized the goals, objectives, and elements of the proposed WSIP, and presented the San Francisco Planning Department's determination that the proposed WSIP may have a significant effect on the environment. The NOP also described the requirement for preparation of an environmental impact report (EIR) on the WSIP under CEQA. The San Francisco Planning Department determined that a Program EIR is the appropriate environmental document for the proposed WSIP. The NOP also described the scoping process and included information on the public scoping meetings. The scoping process, notification procedures, and outcome of the scoping meetings are described below, following a brief description of the WSIP.

1.3 Water System Improvement Program

The proposed WSIP is designed to increase the reliability of the regional water system, which currently provides drinking water to 2.4 million people in San Francisco, San Mateo, Santa Clara, Alameda, and Tuolumne Counties. The program would implement the service goals and system performance objectives established by the SFPUC for the regional water system in the specific areas of water quality, seismic reliability, delivery reliability, and water supply, through the year 2030. The \$4.3 billion WSIP includes numerous improvement projects located throughout the regional system to meet the system performance goals and objectives; these project include repairs, upgrades, and, in some cases, expansion of system facilities.

The WSIP as presented in the NOP is based on a draft description issued by the SFPUC in February 2005. The SFPUC has continued to develop and refine the WSIP, issuing revised descriptions of various WSIP elements in October and November 2005 and January 2006. The revised WSIP maintains the same overall program, service goals, and system performance objectives as described in the NOP, and changes are limited to modifications and clarification to individual improvement projects, schedules, and costs. Therefore, although the program refinements were developed subsequent to the publication of the NOP and the scoping process, they likely will not affect the environmental analysis and scope of the Draft PEIR.

2.0 Purpose of the Scoping Process

The purpose of scoping is to solicit input from the public and agencies on the appropriate scope, focus, and content of the Draft PEIR. The San Francisco Planning Department will consider all of the input received during the scoping process in the preparation of the Draft PEIR.

The Draft PEIR will describe the existing environmental conditions of the area that could be affected by the proposed program and evaluate the potential effects of the WSIP in accordance with CEQA. The comments provided by the public and agencies during scoping will help the San Francisco Planning Department identify pertinent issues, methods of analyses, and level of detail that should be addressed in the Draft PEIR. The scoping comments will also provide the basis for developing a reasonable range of feasible alternatives that will be evaluated in the Draft PEIR.

The scoping comments will augment the information developed by the EIR team, which includes specialists in each of the environmental subject areas covered in the EIR. This combined input will result in an EIR scope of work that is both comprehensive and responsive to issues raised by the public and regulatory agencies, and that meets CEQA requirements. The Draft PEIR is scheduled to be available for public comment in 2006.

In addition to facilitating public and regulatory agency input on the scope and focus of the Draft PEIR, scoping allows the San Francisco Planning Department to explain the EIR process to the public and to identify additional opportunities for public comment and public involvement during the EIR process. CEQA requires that the public be informed about the significant environmental effects of a proposed project or program, and the ways in which those environmental effects can be avoided or reduced, before the project or program is approved.

3.0 Notification of Scoping

The scoping period began on September 6, 2005 with the issuance of the NOP. Scoping meetings were conducted on October 5, 6, 11, 18, and 19, 2005, and written comments were accepted through October 24, 2005. Agencies and the public were notified in advance about the availability of the NOP and the scoping meeting dates and locations, and were provided with details on the comment process. The following methods of notification were used:

- **Mailing List.** A mailing list was compiled, including approximately 1,400 contacts for affected federal, state, regional, and local agencies; federal, state, regional, and local elected officials; regional and local interest groups; member agencies of the Bay Area Water Supply and Conservation Agency (BAWSCA); other potentially affected water and irrigation districts; SFPUC Community Advisory Committee members; information repositories; media contacts; and individuals who attended the SFPUC informational meetings in May 2005. The May 2005 PEIR Informational Meeting Summary can be found on the PEIR section of the www.sfwater.org website under “Meetings.”
- **NOP and NOP Notice of Availability.** On September 6, 2005, copies of the NOP were distributed via certified mail to 21 affected agencies, and 25 copies were delivered to the State Clearinghouse. Copies of the NOP were also sent via first-class mail to 272 additional organizations and individuals. In addition, a notice of availability of the NOP was distributed via first-class mail to the entire mailing list. (See Appendix A for copies of the NOP and NOP Notice of Availability.)
- **Meeting Notification.** Notice of the scoping meetings was provided to individuals and the general public through the following means (see Appendix B for copies of these materials):
 - **Six-week notice to stakeholders.** The SFPUC emailed advance notice of the meetings to individuals who had requested early notification.
 - **Two-week notice to entire mailing list.** Notifications of the scoping meetings—including information on the WSIP PEIR and the scoping process, and instructions on how to obtain a copy of the NOP and provide public comment—were mailed to the entire 1,400-contact mailing list two weeks prior to the first scoping meeting. The notice included contact information for Spanish and Chinese speakers.
 - **Legal notices.** Notices of the scoping meetings and information on how to obtain a copy of the NOP and provide public comment were placed in the legal classified section of the *Sonora Union Democrat* (9/28/05), *Modesto Bee* (9/29/05), *Fremont Argus* (9/30/05), *San Mateo Times* (10/7/05), and *San Francisco Chronicle* (10/10/05).
 - **Display ads.** Display ads with information about the scoping meetings and information on how to obtain a copy of the NOP and provide public comment were placed in the *Sonora Union Democrat* (9/30/05), *Modesto Bee* (10/1/05), *Fremont Argus* (10/1/05), *San Francisco Examiner* (10/8/05), and *San Mateo Times* (10/8/05).
 - **Community newspapers.** The SFPUC provided text about the scoping meetings to the Clerk of the Board of Supervisors in San Francisco for placement in selected San Francisco community newspapers in September and October 2005.
 - **Website.** A WSIP PEIR webpage was developed and uploaded to the SFPUC's website. Information about the WSIP, the environmental review process, the availability of the NOP, the scoping process, and how to provide public comment was provided in English, Chinese, and Spanish. The website also included the dates and locations of the scoping meetings.

- **Locations to obtain a copy of the NOP.** The NOP notice of availability and full NOP were posted to the project website (www.sfwater.org), as well as the San Francisco Planning Department's website (www.sfgov.org/site/planning). A printed copy of the NOP was also provided to anyone who requested it from the SFPUC or the San Francisco Planning Department.

Table 1 presents an itemized list of mailings.

**TABLE 1
NUMBER OF RECIPIENTS ON MAILING LIST FOR NOP AND NOTICE OF SCOPING MEETINGS**

Category	Number of NOP Recipients	Number of NOP Notice of Availability Recipients
Federal Agencies/Elected Officials	16	25
State and Regional Agencies/Elected Officials	72	30
Local Agencies/Elected Officials	16	630
Water Agencies/Irrigation Districts	84	25
Special Interest and Environmental Groups	44	120
Businesses or other Organizations	4	95
Media, Libraries, and Individuals	57	182
TOTAL	293	1,107

4.0 Scoping Meetings

The San Francisco Planning Department held public scoping meetings at five locations along or near the SFPUC's regional water system during October 2005, approximately one month after publication of the NOP, to solicit input from the public on potential impacts of the WSIP, the significance of impacts, the appropriate scope of the EIR, mitigation measures, and potential alternatives to the WSIP. The locations and dates of the meetings, and approximate number of attendees, are listed below.

- Sonora (93 attendees) – Wednesday, October 5, 2005
Sonora Opera House, 250 S. Washington Street, Sonora, CA
- Modesto (33 attendees) – Thursday, October 6, 2005
Thomas Downey High School Cafeteria, 1000 Coffee Road, Modesto, CA
- Fremont (62 attendees) – Tuesday, October 11, 2005
Fremont Main Library, Fukaya Room, 2400 Stevenson Boulevard, Fremont, CA
- Palo Alto (36 attendees) – Tuesday, October 18, 2005
Palo Alto Arts Center, 1313 Newell Road, Palo Alto, CA
- San Francisco (37 attendees) – Wednesday, October 19, 2005
Tenderloin Community School, 627 Turk Street, San Francisco, CA

The total attendance for the five scoping meetings was 260 (based on the meeting sign-in sheets), representing a range of interested parties from the Tuolumne River Trust, Sierra Club, whitewater rafting groups, the Bay Area Water Supply and Conservation Agency, local governments, and the

League of Women Voters. A total of 80 participants provided oral comments at the five meetings, and local media attended each meeting. All five scoping meetings were recorded by certified court reporters who provided verbatim written transcripts of the proceedings. The transcripts can be found under Appendix D of this report.

Each meeting included presentations on the environmental review process and the proposed WSIP, followed by a formal public comment period. Attendees interested in presenting verbal comments submitted speaker cards and were allotted three minutes to speak. At all the meetings, there was sufficient time for all interested parties to speak. The meetings concluded with closing remarks. Following the formal meetings, attendees were invited to review project display boards and ask questions of the project team. (See Appendix C for copies of the scoping meeting presentation, handouts, display boards, comment/speaker cards, and sign-in sheets.)

The San Francisco Planning Department also held a scoping meeting for resource agencies on Thursday, November 3 in San Francisco. Representatives from the following agencies attended: U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, California Department of Fish and Game, and the United States Fish and Wildlife Service. Representatives from the U.S. Environmental Protection Agency and National Marine Fisheries Service were invited but were unable to attend. A summary of this meeting can be found in Appendix D.

5.0 Overview of Comments Received

Agencies and members of the public utilized several different methods of providing input: verbal comments during the meetings, written comments submitted during the meetings or sent via U.S. mail, email or fax, and voice mail messages left at the San Francisco Planning Department. Tables 2 and 3 summarize the number of comments submitted via each method, and describe the commenters.

TABLE 2
TOTAL NUMBER OF COMMENTS RECEIVED

Category of Commenter	Number	Description
Written Comments		
Comment Letters	104	This includes 5 distinct form letters counted once each, but submitted multiple times, representing approximately 3,275 individuals or organizations.
Verbal Comments		
Speakers at scoping meetings	75	Two people spoke at multiple meetings
Speakers at resource agency meeting	4	
Voicemail messages left at SF Planning Department ^a	187	

^a Received as of November 2, 2005.

Verbal comments were made by representatives from government agencies, water agencies, environmental interests, commercial interests, and private citizens. Seventy-five people spoke at the five scoping meetings, including two individuals representing Tuolumne River Trust and Friends of Lake Merced who spoke at multiple meetings. Four representatives from federal and state agencies spoke at the resource agency meeting. Written comments were submitted by federal agencies, state agencies, local agencies, special interests and environmental groups, business groups, and individuals.

Multiple copies of form letters were submitted by the following special interest and environmental groups:

- Working Assets (approximately 2,950 copies)
- Tuolumne River Trust (204 copies)
- Various environmental organizations (more than 100 copies)

**TABLE 3
DESCRIPTION OF COMMENTERS**

Category of Commenter	Number	Description
Written Comments		
Federal Agencies	1	U.S. Department of the Interior
State Agencies	6	State Water Resources Control Board, Central Valley Regional Water Quality Control Board, California Department of Parks and Recreation, California State Lands Commission, California Department of Health Services, California Department of Transportation (Caltrans)
Local Agencies	23	Representing cities, counties, park districts, water districts, sanitation districts, air districts, fire commission
Special Interest Groups	14	Representing Alameda Creek Alliance, Restore Hetch Hetchy, Tuolumne River Trust, Friends of Lake Merced, Environmental Defense, Audubon Society, Sierra Club, Clean Water Action, and others
Businesses	6	Representing rafting companies, manufacturing business, chamber of commerce
Individuals	45	Representing individuals in San Francisco, San Mateo, Santa Clara, Alameda, San Joaquin, Stanislaus, and Tuolumne Counties, and other areas
Verbal Comments from Public and Resource Agency Scoping Meetings		
Federal Agencies	2	U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service
State Agencies	2	San Francisco Bay Regional Water Quality Control Board, California Department of Fish and Game
Local Agencies	7	Representing cities, water districts, county fire commissioners, county boards of supervisors
Special Interest Groups	37	(same as written comments, above)
Businesses	4	Representing rafting companies
Individuals	18	Representing individuals in San Francisco, San Mateo, Santa Clara, Alameda, San Joaquin, Stanislaus, and Tuolumne Counties

In this summary report, verbal and written comments are divided into two broad categories: 1) CEQA, which includes comments on environmental issues or on potential alternatives to be considered in the PEIR; and 2) WSIP, which includes comments on the program and objectives, specific projects within the program, and SFPUC system operations. Tables 4 through 6 show the approximate number of comments in each subject area, with most letters and speakers providing comments in multiple subject areas.

**TABLE 4
APPROXIMATE NUMBER OF COMMENTS BY CEQA SUBJECT AREA**

Type of Comment	Written	Verbal at Scoping Meetings
Agricultural Resources	4	2
Air Quality	5	0
Biological Resources – Aquatic	20	10
Biological Resources – Terrestrial	15	10
Cultural Resources	1	1
Geology, Soils, and Seismicity	2	0
Groundwater Resources	10	2
Hazards and Public Safety	2	0
Land Use, Plans, and Policies	15	0
Noise and Vibration	5	0
Public Services and Utilities	10	1
Recreation	15	10
Socioeconomics	20	10
Surface Water Resources / Water Quality	45	15
Traffic, Transportation, and Circulation	10	0
Visual Quality	5	0
Growth-Inducement	10	10
Cumulative Effects	10	5
CEQA Alternatives	145	80
CEQA Process	10	5

**TABLE 5
APPROXIMATE NUMBER OF COMMENTS RELATED TO ALTERNATIVES**

Recommended Alternative	Number of Written Comments	Number of Verbal Comments at Scoping Meetings	Number of Phone Comments
Conservation and Recycling	75	40	1
Desalination	10	5	
Delta and Other Water Transfers	5	1	
Restore Hetch Hetchy	15	10	1
Other	50	20	

**TABLE 6
APPROXIMATE NUMBER OF COMMENTS BY WSIP SUBJECT AREA**

Type	General	Goals	System Operation	San Joaquin Pipeline System	Other Specific Projects	Filtration	Water Rights	Permits
Written	15	70	10	40	30	15	20	15
Verbal at Scoping		20	5	20	5	5	2	0
Phone				180				

6.0 Summary of Comments by Subject Area

This section summarizes the issues raised in both verbal and written comments during the scoping period. The comment summaries are presented in two categories: CEQA and WSIP. The issues and topics listed below are not inclusive of all comments received, but rather present a summary of the sentiments expressed by the commenters. The numbers in parenthesis following each comment summary refers to the specific comment letter or verbal commenter, which are listed in Tables 7 and 8 at the end of this section and may be used to cross-reference the source of the comments. (Appendix D also contains the index of commenters as well as all of the commenter correspondence and copies of the scoping meeting transcripts.)

6.1 CEQA Comments

6.1.1 Environmental Review Process

Comments on the CEQA/environmental review process included:

- Role of the National Environmental Policy Act (NEPA) in the PEIR review (Letters 93, 94; Verbal 55)
- Request for additional scoping meetings and extension of comment period (Letters 90, 136; Verbal 11)
- Coordination and interaction of the PEIR process with the SFPUC's ongoing changes in the WSIP (Letter 62; Verbal 3, 63, 67)
- Standards of significance used in EIR analysis (Letter 94)

6.1.2 EIR Issue Areas

Agricultural Resources

Comments on agricultural resources primarily related to reduced Tuolumne River water available for irrigation in the Central Valley (Letters 13, 35, 62; Verbal 27) and use of water conservation in agriculture (Letter 82).

Air Quality

Comments on air quality included:

- Effects of construction emissions, particularly dust (Letters 89, 136)
- Effects of system operations, including air pollution from increased energy use (Letters 60, 89)
- Consistency with air quality regulations and regional air quality plans (Letter 89)

Biological Resources

Comments related to biological resources are divided into two main categories: fishery/aquatic resources and terrestrial vegetation/wildlife.

Comments on fishery and aquatic resources related primarily to potential changes in the extent or quality of fish habitat, changes in fish populations, and effects on special-status fish species due to proposed increases in water diversions and changes in stream flow. Comments included suggestions for habitat protection and enhancement, species recovery, survey methods, and ecological benchmarks (Letters 2, 6, 12, 13, 14, 43, 48, 49, 51, 62, 65, 72, 76, 84, 87, 94, 95, 136; Verbal 7, 28, 44, 47, 49, 72, 73).

Some of the fishery-related comments specifically involve the following water bodies:

- Alameda Creek (Letters 2, 6, 14, 62)
- Tuolumne River to its confluence with San Joaquin River (Letters 43, 62, 72, 87, 94, 95)
- San Joaquin River and Delta, and San Francisco Bay (Letters 49, 51, 94)
- Calaveras Reservoir (Letters 6, 48, 62)
- Pilarcitos Creek (Letter 95)

Comments on terrestrial vegetation and wildlife issues were associated both with impacts from construction and operation of facility improvement projects and with diversion of water from natural water bodies. Specific habitats of concern included riparian, wetland, and vernal pool. Comments included suggestions for habitat protection, restoration and enhancement, watershed management, wildlife and habitat surveys, and potential for altering SFPUC water supply operations. The comments included:

- Changes in the extent of habitat or habitat quality for terrestrial plants and wildlife within the Alameda Watershed, Peninsula Watershed (includes Pilarcitos Creek and reservoir), Tuolumne River watershed, San Francisco Bay, and the Delta (Letters 2, 6, 12, 44, 49, 65, 72, 84, 87, 94, 95, 136; Verbal 7, 16, 28, 44, 47, 65, 72, 73; Resource Agency Meeting Summary)
- Effects on special-status species (Letter 17; Verbal 43; Resource Agency Meeting Summary)
- Loss of mature trees (Letter 71)

Cultural Resources

Comments on cultural resources pertained to Native American and cultural resources buried under water at Hetch Hetchy Reservoir, and the potential to encounter cultural resources during system construction and expansion (Letter 62; Verbal 11).

Geology, Soils, and Seismicity

Comments on geologic issues included the potential for seismic hazards to the water system and/or increased exposure of people and structures to seismic hazards (Letters 47, 62).

Groundwater Resources

Comments on groundwater resource issues and conjunctive use programs included:

- Potential changes in groundwater levels, flows, quality recharge rates, and storage in Tuolumne, Stanislaus, Alameda, Santa Clara, and San Mateo Counties, and in particular the Westside Basin (Letters 52, 58, 62, 93, 94, 95, 141; Verbal 53)
- Indirect effects associated with increased use of groundwater resources, including saltwater intrusion, dewatering impacts, and groundwater infiltration into the water system (Letters 10, 20, 71, 137, 141)

Hazards & Public Safety

Comments were raised about the potential to encounter hazardous materials or waste during construction, the potential to release hazardous materials during construction, or the potential to release hazardous materials in the event of a system failure (Letters 38, 71).

Land Use, Plans, and Policies

Comments on land use issues included:

- Potential for conflict with established local, regional, state, or federal plans, policies, and/or guidelines, including plans related to Yosemite National Park, Stanislaus National Forest, Tuolumne River, San Joaquin River, Golden Gate National Recreation Area, and San Bruno Mountain (Letters 12, 17, 19, 53, 84, 87, 93)
- Compatibility of WSIP with existing or planned land uses at or adjacent to proposed regional facility sites (Letters 14, 84, 136)

Noise and Vibration

Comments on noise or vibration issues included potential effects of construction noise and vibration on adjacent facilities and land uses (Letters 14, 28, 58, 71, 136).

Public Services, Utilities, and Energy

Comments on public services, utilities, or energy included:

- Potential for increases in energy demands, need for expansion of power facilities, effects on SFPUC hydropower generation, and associated effects on power service provided to customers (Letters 60, 68)
- Potential for disruption of services such as water, power, or fire protection during construction, and potential need for relocation of utilities (Letters 14, 39, 64, 93, 97, 137; Verbal 40)

Recreation

Comments on recreational issues included:

- Potential effects on water-based recreational activities on water bodies within and downstream of the regional system, including whitewater rafting on the Upper Tuolumne River and Cherry Creek, boating on the Lower Tuolumne River, and boating/rafting and fishing at various locations (Letters 12, 13, 32, 49, 55, 62, 65, 68, 69, 72, 77, 78, 87, 92, 94, 136; Verbal 6, 7, 28, 44, 72, 73)
- Potential effects on land-based recreation facilities and activities (such as hiking, birding, or camping) in Yosemite and East Bay parks, due to the siting, construction, or operation of proposed facilities, or due to overall program implementation (Letters 14, 17, 54, 60, 62, 77, 136; Verbal 73)

Socioeconomics

Comments on socioeconomic issues included:

- Direct and indirect impacts of WSIP rationing scenarios (Letters 69 and 91)
- Economic impacts of WSIP and increased water diversions from the Tuolumne River to Tuolumne and Stanislaus Counties (Letters 5, 13, 15, 18, 40, 41, 42, 44, 51, 54, 73, 93, 94, 96, 136; Verbal 11, 12, 33)
- Economics of conservation (Letters 49, 95)
- Economics of increased fees (Letter 38; Verbal 37)
- Economic benefits of WSIP (Letter 46)
- Potential for environmental justice issues (Letters 38, 55; Verbal 68)

Surface Water Resources and Water Quality

Comments on surface water resources and water quality included:

- Potential changes in surface water flows and resulting effects on beneficial uses due to proposed increases in diversions (Letters 5, 6, 8, 33, 41, 44, 49, 51, 55, 62, 65, 67, 68, 72, 79, 84, 87, 93, 94, 95, 133, 163; Verbal 10, 13, 16, 32, 33, 55, 66, 67, 72; Resource Agency Meeting Summary). Comments included suggestions for methods of analysis, requests to restore stream flows to affected watersheds, and recommendations for program-level mitigations to enhance stream flows and restore wildlife habitat on the lands and rivers affected by San Francisco's water system. Specific concerns were raised about the following water bodies:

- (1) Alameda Creek and watershed (Letters 6, 62; Resource Agency Meeting Summary)
 - (2) Tuolumne River to its confluence with San Joaquin River, including water transfers affecting the Tuolumne River (Letters 49, 62, 65, 67, 72, 84, 94, 95; Resource Agency Meeting Summary)
 - (3) Cherry Creek (Letter 62)
 - (4) Pilarcitos Creek and watershed (Letters 6, 8, 95)
 - (5) Lake Merced (Letter 72)
 - (6) Stanislaus River watershed (Letter 93)
 - (7) San Joaquin River and Delta, and San Francisco Bay (Letters 62, 94)
- Changes in storage in Hetch Hetchy, Calaveras, and Don Pedro Reservoirs (Letter 62)
 - Changes in surface water quality, specifically the parameters of temperature, dissolved oxygen, and turbidity, due to WSIP operation or construction activities and associated impacts on habitat, fish, and wildlife. Specific concerns were raised about the following water bodies:
 - (1) Alameda Watershed (Letters 14, 62)
 - (2) San Francisquito Creek (Verbal 45)
 - (3) San Francisco Bay (Letters 13, 60, 72; Verbal 60)
 - (4) Impact on Delta water quality from Tuolumne diversion (Letters 13, 67, 72, 136; Verbal 7, 28, 44, 73)
 - (5) Calaveras Reservoir (Letter 62)
 - (6) San Joaquin River (Letter 62; Verbal 34)
 - Alteration of existing drainage patterns and related stormwater management and water quality concerns due to WSIP construction and operation, including changes in point and nonpoint discharges to San Francisco Bay (Letters 10, 14, 60, 71, 138)
 - Exposure of people to, and/or increased risk of, flooding, seiche, or tsunami hazards, including tidal flooding (Letters 38, 71; Verbal 45)
 - Exposure to flooding below Calaveras, Hetch Hetchy, and Don Pedro Reservoirs (Letter 62)
 - Changes in stream/fluviol geomorphology (Letter 72; Resource Agency Meeting Summary)
 - Impacts of global warming (Letters 9, 60, 93; Verbal 5, 15, 35)

Traffic, Transportation, and Circulation

Comments on transportation issues included:

- Effects on the regional transportation network or facilities (Letters 14, 71, 135, 136)
- Effects of adding new vehicle trips and contributing to increased traffic congestion during construction and/or operation of proposed facilities, potentially affecting emergency access and causing roadway wear and tear (Letters 28, 58, 71)

Visual Quality

Comments on visual quality included the potential degradation or obstruction of scenic views and designated scenic resources, including impacts on parks, open space, river corridors, and local communities along the regional system (Letters 12, 13, 14, 53, 71).

6.1.3 Other EIR Topics

Growth Inducement

Comments on growth inducement primarily consisted of the relationship between the 2030 customer purchase requests for water supply associated with the WSIP and the planned growth and land uses reflected in currently adopted local land use plans. The comments indicated concern over the dispersal of planned growth beyond San Francisco and the wholesale customers' service area. Concern was also expressed about secondary effects of growth projected within the service area, including effects on land uses, biological resources, traffic and transportation, air quality, noise, water quality, public services, and water resources. In addition, commenters recommended strategies for analyzing growth and for reducing growth-related impacts (Letters 1, 55, 60, 62, 91, 94, 136; Verbal 2, 11, 21, 23, 31, 37, 45, 68, 70).

Cumulative Effects

Comments on the overall cumulative effect of implementing the proposed WSIP were associated with the potential for combined effects of the WSIP and other projects in the vicinity of the regional water system. They also included comments on the combined effects of implementing all the improvement projects in the WSIP. Comments involved the extent of geographic coverage for the cumulative impact analysis, jurisdictions with other projects that could contribute to cumulative effects, and types of analyses to be conducted. Comments also referred to the cumulative impacts of recycling and groundwater and of water conservation, both of which should be addressed in the PEIR (Letters 4, 28, 53, 60, 62, 63, 93, 94; Verbal 12, 31, 37, 64, 71).

Alternatives

Comments on alternatives to be analyzed in the PEIR received during the scoping period included:

- No Program alternative (Letters 91, 94)
- Water Supply alternatives —
 - Desalination (Letters 1, 11, 20, 21, 32, 55, 60, 80, 81, 84, 93, 135; Verbal 20, 52, 54)
 - Increased recycled water and/or conservation on regional and local levels (Letters 1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 20, 21, 23, 25, 27, 30, 31, 33, 35, 37, 38, 40, 41, 42, 43, 44, 45, 48, 50, 51, 52, 55, 57, 59, 60, 62, 65, 68, 70, 72, 75, 76, 78, 81, 82, 84, 85, 90, 91, 93, 94, 95, 96, 135, 136, 142, 143; Verbal 1, 7, 9, 14, 16, 18, 19, 20, 21, 27, 28, 29, 30, 32, 36, 41, 44, 47, 49, 52, 53, 58, 64, 65, 66, 69, 70, 71, 72, 73, 74)

- Water transfers from surface waters other than the Tuolumne River, including Delta water (Letters 1, 67, 68, 84, 136; Verbal 33)
- Stormwater (Letter 26; Verbal 22)
- Groundwater (Letters 38, 62, 68)
- Alternative with different combinations of water sources (Letter 94)
- Operational alternatives —
 - Restore Hetch Hetchy Valley and remove O’Shaughnessy Dam (Letters 5, 54, 55, 62, 68, 72; Verbal 3, 12, 26, 61, 62, 65, 68, 76, 77)
 - Keep Hetch Hetchy dam (Letter 23)
 - Filtration alternative for Hetch Hetchy water (Letters 55, 60, 62, 68, 72, 83, 93, 95, 133, 137)
 - Repair leaky pipes alternative (Letters 31, 84)
 - Alternatives that allow increased releases to surface streams (i.e., alternatives that reduce diversions), including releases to the Tuolumne River (Letters 55, 73, 94, 96, 142), increases in rafting flows above existing levels (Letter 55), and releases to Pilarcitos Creek (Letter 95; Verbal 58)
- Alternative program objectives —
 - Alternative that meets only seismic and water quality objectives (Letter 94)
 - Alternative that meets sustainability objective (Letter 94)
 - Alternative that does not fully meet 2030 purchase request (Letters 62, 94, 95)
 - Alternative rationing objective/scenarios (Letters 58, 69, 91)
 - Alternative that meets program goals and objectives, but without maintaining a gravity-driven system (Letter 95)
- Alternative storage —
 - Expansion of downstream and off-stream storage (Letters 68, 95)
 - New Melones Reservoir (Letter 68)
 - Groundwater banking in Central Valley/conjunctive use (Letters 62, 68)
 - Increased storage at Calaveras Reservoir (Letters 54, 62, 91, 94)
 - Use of water stored in other Sierra reservoirs, such as Cherry, Eleanor, or Don Pedro Reservoirs (Letter 54)
- Conveyance alternatives (Letters 68, 95)
 - Intertie between the SFPUC system and the Santa Clara Valley Water District (Letter 61)
 - Pump station at Tesla Portal (Letter 62)
 - Pump station downstream from Holm Powerhouse to pump from Cherry Creek, and large intertie to Cherry Creek (Letter 62)
 - Don Pedro Reservoir to San Joaquin Pipelines (Letter 68)

- Cherry Reservoir to Mountain Tunnel (Letter 68)
- South Bay Aqueduct to San Antonio Reservoir (Letter 68)
- California Aqueduct/Delta Mendota Canal to Hetch Hetchy system (Letter 68)
- Alternative without San Joaquin Pipeline No. 4 (Letter 73, 94, 96, 142)
- Alternative that analyzes the maximum conveyance capacity (Letter 95)
- Alternatives with additional facilities projects to meet various objectives (Letter 62)

6.2 WSIP Comments

6.2.1 SFPUC Regional System

Comments on the facilities and operations of the existing SFPUC regional water system included:

- Existing water and hydropower system operations (Letters 6, 8, 55, 62, 93, 133)
- Rafting flows, including releases, timing and volume, and seasons (Letters 55, 62, 92)
- Raker Act and Tuolumne River water rights (Letters 9, 11, 34, 35, 37, 52, 55, 62, 90, 93, 94, 133, 137); other water rights (Letter 58)
- Filtration avoidance, status and stipulations of waiver for Hetch Hetchy water system, and public health/water quality considerations of filtration avoidance (Letters 55, 60, 62, 68, 72, 83, 93, 95, 133, 137; Resource Agency Meeting Summary)
- Existing drinking water and water quality regulations, including use of chloramines for disinfection and effect of chloramines on pipe materials. Specific regulations include California Safe Drinking Water Act and Disinfectants and Disinfection By-Product Rule (Letters 52, 56, 60; Verbal 46, 60)
- Operations and status of existing facilities, including San Joaquin pipeline system, Alameda Diversion Dam, releases from Calaveras Reservoir, Sunol Valley Water Treatment Plant, Sunol area water system, Mountain Tunnel, and Groveland facilities (Letters 2, 62, 93, 95, 97, 137)

6.2.2 Program Description

Assumptions

Comments requesting clarification or corrections to assumptions used in WSIP development included:

- Water demand/purchase request assumptions, including comparison with assumptions used for long-term water supply, use of Master Water Sales Contract, consideration of elasticity of demand, and clarification on conservation assumptions (Letters 55, 60, 62, 66, 139)
- Corrections to water demand assumptions (Letters 16, 57)
- Design drought compared to historical hydrology (Letters 62, 133)

Goals and Objectives

- WSIP goals and performance objectives, including clarification on the basis for the goals and objectives, and consistency with SFPUC goals in other documents (Letters 60, 62, 91, 141)
- Add program goal, level of service, and specific components to address sustainability, stewardship, and environmental enhancement (Letters 2, 6, 8, 13, 40, 41, 50, 51, 60, 62, 76, 78, 81, 94; Verbal 63, 69)
- Add program goal for redundancy (Letter 91)
- Basis for 20 percent rationing objective (Letters 57, 91, 139)

Program Elements

- Relationship of program elements, improvement projects, and operational assumptions to goals and clarification on how goals will be met (Letter 91, 94, 141)
- Requests for modeling results (Letters 91, 133)
- Ability of the WSIP to meet the goals and levels of service (Letter 91)
- More information on 10 million gallons per day (mgd) of additional conservation, water recycling, and groundwater supply programs (Letter 91)
- More information on proposed conservation as part of WSIP (Letters 55, 62, 91)
- More information on proposed drought response program, and how proposed drought rationing would be shared among SFPUC customers; more information on how rationing scenario relates to transmission capacity (Letter 91)
- Relationship between water delivery and hydropower generation with proposed program operations (Letter 91)
- Confirm with Modesto and Turlock Irrigation Districts regarding water transfers from those systems as a project element (Letter 133)

Facilities Improvement Projects

Comments on specific facility improvement projects in the WSIP included:

- San Joaquin Pipeline No. 4 (Letters 11, 12, 13, 15, 21, 41, 43, 44, 60, 67, 72, 78, 76, 84,90, 96; Verbal 33)
- Calaveras Dam Replacement (Letters 6, 8,14, 62, 95)
- Alameda Creek Fisheries Enhancement (Letters 2, 6, 95)
- Additional 40 mgd Treated Water Supply (Letter 6)
- Irvington Tunnel/Alameda Siphon (Letter 62)
- Hetch Hetchy Advanced Disinfection (Letters 56, 62)
- Bay Division Pipeline (Letters 62, 71; Verbal 42)
- Slipline Bay Division Pipeline No. 4 (Letters 71, 141)
- East Bay Municipal Utility District-SFPUC Hayward Intertie (Letter 62)
- Bay Division Pipeline Nos. 3 and 4 crossovers (Letter 62)
- Recycled water projects (Letters 58, 62)
- Tesla Portal Disinfection (Letter 56)

- Sunol Valley and Harry Tracy Water Treatment Plant projects (Letter 56, 58)
- Cross connection controls (Letter 56)
- Groundwater project (Letter 58)
- Capuchino Valve Lot (Letter 58)

Agency Coordination/Permits and Approvals

Comments included requests for continued coordination and consultation with agencies and other jurisdictions involved (Letters 14, 17, 39, 53, 58, 61, 63, 64, 66, 67, 69, 71, 89, 91, 93, 133, 137, 138, 139, 141; Resource Agency Meeting Summary). In addition, the Turlock Irrigation District indicated that the Modesto and Turlock Irrigation Districts should be consulted to confirm proposed water transfers as a project element (Letter 133).

Comments on regulatory compliance and permitting issues were received from governmental agencies as well as members of the public. Comments cited rules and regulations to which the WSIP (or some aspect of it) may be subject (Letters 6, 9, 10, 19, 37, 53, 56, 60, 62, 89, 91, 93, 95, 133, 135; Resource Agency Meeting Summary). Regulations, rules, and agreements cited (other than those related to CEQA and NEPA) included:

- Agreement between SFPUC and Golden Gate National Recreation Area
- Pre-1914 appropriative water right/Raker Act
- National Pollutant Discharge Elimination System permit process
- Clean Water Act, Sections 303 (d), 401,404
- Public Resources Code, Section 6327
- Wholesale Regional Water System Security and Reliability Act (AB 1823)
- California Safe Drinking Water Act
- Porter-Cologne Water Quality Control Act, including the Basin Plan
- Encroachment permit from Caltrans
- San Joaquin Valley Air District Air Quality Rules and Regulations
- Agreement between San Francisco and Modesto and Turlock Irrigation Districts regarding the Don Pedro Project and Federal Energy Regulatory Commission (FERC)-order fish flows
- State Water Code Section 73503(b)
- Stage 2 Disinfectant and Disinfection By-Product Rule
- Tuolumne County Ordinance Code 13.20 pertaining to groundwater
- Special Drainage Area 7-1 Drainage Fees
- California Fish and Game Code 5937
- AB 2717 pertaining to statewide Landscape Task Force
- San Joaquin River Agreement, including the Vernalis Adaptive Management Plan
- Wild and Scenic Rivers Act

Schedule

Comments on the WSIP schedule related primarily to scheduling priorities (Letters 1, 15, 38, 56, 64, 68).

**TABLE 7
INDEX OF WRITTEN COMMENTS**

Letter No.	Commenter	Federal Agency	State Agency	Local Agency	Business	Special Interest	Individual
1, 47	Steve Lawrence						X
2	Jeanine Ishi						X
3	Mike Kellogg						X
4	Michale Fornalski						X
5	Voters Choice Tuolumne County					X	
6	Alameda Creek Alliance					X	
7	R. Inez Baker						X
8	John G. Cordes						X
9	State Water Resource Control Board		X				
10	Central Valley Regional Water Quality Control Board		X				
11	Bob Hackamack						X
12, 87	Echo Wilderness Company				X		
13	Holly Welles						X
14	East Bay Regional Park District			X			
15	Tom Kuhn						X
16	City of Palo Alto			X			
17	California Parks and Recreation, Diablo Valley District		X				
19	California State Lands Commission		X				
20	Darryl Bramlette						X
21	Matthew J. Richardson						X
22	Alexander Gaguine						X
23	Patricia Kopf						X
24	Elaine Gorwan						X
25	Tuolumne County Planning			X			
26	Kay Bargmann						X
27	Scott Lewis						X
28	K. G. Snetsinger, J. C. Etheridge						X
29	George F. Peterson						X
30	Dusten Dennis						X
31	Zephyr Whitewater				X		
32	Marlee G. Powell						X
33	Mary Allen						X
34	Allen Bueb						X
35	Ellie Owen						X

Letter No.	Commenter	Federal Agency	State Agency	Local Agency	Business	Special Interest	Individual
36	Tuolumne Chamber of Commerce				X		
37	Friends of Lake Merced					X	
38	City of East Palo Alto			X			
39	Union Sanitary District			X			
40	Denise D'Anne						X
41	Patrick O'Hefferman						X
42	Stanislaus County Board of Supervisors			X			
43	Working Assets Form Letter					X	
44	Tuolumne River Form Letter					X	
45	Debbie Redmond						X
46	NUMMI Inc.				X		
47	Steve Lawrence Addendum						X
48	John G. H. Cant						X
49	Cathy McGowan						X
50	Christina Murphy						X
51	Nestor Ramirez						X
52	Libby Lucas						X
53	Golden Gate National Recreation Area	X					
54	Mark Palley						X
55	Gerald Meral						X
56	California Department of Health Services		X				
57	Stanford University					X	
58	City of San Bruno			X			
59	Vicki Trabold						X
60	Clean Water Action					X	
61	City of Palo Alto			X			
62	Restore Hetch Hetchy					X	
63	City of Fremont			X			
64	Alameda County Water District			X			
65	Friends of the Tuolumne					X	
66	City of Burlingame			X			
67	Contra Costa Water District			X			
68	Environmental Defense					X	
69	City of Daly City			X			
70	Stephanie Dolrenry						X
71	City of Menlo Park			X			

Letter No.	Commenter	Federal Agency	State Agency	Local Agency	Business	Special Interest	Individual
72	37 Environmental Organizations (same as 99-131)					X	
73	Tuolumne River Trust Form Letter					X	
75	Roger J. Janow						X
76	Olivia Fisher						X
77	Ralph E. Gaarde						X
78	Susan S. Reichle						X
79	Matthew Cutshall						X
80	Fred & Virginia Rush						X
81	Don Wood						X
82	Tom Dickerman						X
83	Glynn Reynolds						X
84	Doris Grinn						X
85	Scott Bryon Cariss						X
87	Echo Wilderness Addendum				X		
89	San Joaquin Valley Air District			X			
90	Linda A. Earhart						X
91	Bay Area Water Supply & Conservation Agency			X			
92	Whitewater Voyages				X		
93	Tuolumne County Board of Supervisors			X			
94	Stanford Legal Clinics					X	
95	Sierra Club					X	
96	Personalized Form Letter					X	
97	Alameda County Fire Commission			X			
98	Watershed Form Letter					X	
132	Stanford Legal Clinics Errata					X	
133	Turlock Irrigation District			X			
135	California Department of Transportation		X				
136	Gordon Hollingsworth						X
137	Groveland Community Services District			X			
138	Alameda County, Zone 7			X			
139	North Coast County Water District			X			
141	Santa Clara Valley Water District			X			
142	Phyllis Stevens						X
143	Dan Hernandez					X	

Note: Some comment numbers are missing due to removal of duplicates or multiples of form letters.

**TABLE 8
INDEX OF VERBAL COMMENTS**

Verbal Comment No.	First Name	Last Name	Organization Name (if applicable)	Written Comment No.
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Speakers at multiple meetings

v16, v44, v59, v73	Heather	Dempsey	Tuolumne River Trust	44
v1, v63	John	Plummer	Friends of Lake Merced	37

Sonora Meeting

v1	John	Plummer	Friends of Lake Merced	37
v2	Noah	Hughes		
v3	Sunny	Hendricks	Tuolumne Band of Mc-Wuk Indians	
v4	Jerry	Cadagan	Restore Hetch Hetchy	
v5	Bob	Neuer		
v6	Jerry	Malone	SFPUC	
v7	Monica	Weakley	Tuolumne River Trust	
v8	Ron	Good	Restore Hetch Hetchy	62
v9	Bob	Hackamack	Restore Hetchy Hetchy	11
v10	Doris	Grinn		84
v11	Mark	Thornton	Tuolumne County Board of Supervisors	
v12	Gary W.	Danielson	Sierra Land Use Group, Inc	
v13	Allen	Bueb		34
v14	Ron	Pickup	Citizen	
v15	Rick	Breeze-Martin	Citizen	
v16	Heather	Dempsey	Tuolumne River Trust	44
v17	Steve	Welch	Tuolumne River Outfitters Association	
v18	John	Buckley	CSERC	
v19	Jimmy	Gado	Citizen	
v20	Clint	Weakley		
v21	Peter	Shumway		
v22	Doris	Grinn		
v23	Dolores	Boutin	Resident	
v24	Jerry	Cadagan	Restore Hetch Hetchy	
v25	Ron	Good	Restore Hetch Hetchy	62

Modesto Meeting

v26	Spreck	Rosekrans	Environmental Defense	68, 72
v27	Danny	Gottlieb	Stanislaus Taxpayers Assoc.	
v28	Patrick	Koepele	Tuolumne River Trust	
v29	Jeani	Ferrari	Tuolumne River Trust	

Verbal Comment No.	First Name	Last Name	Organization Name (if applicable)	Written Comment No.
v30	Elaine	Gorman		24
v31	Carl	Collins		
v32	Sally	Chenault		
v33	Gordon	Hollingsworth		136
v34	Mike	Passalaqua		

Fremont Meeting

v35	Susan	Gearhart		
v36	Justine	Burt		
v37	Jana	Sokale		
v38	John	Cant	Alameda Creek Alliance	48
v39	James	Gearhart		
v40	Nick	Chapman	Fire Commissioner, Alameda County	97
v41	Jeff	Miller	Alameda Creek Alliance	6
v42	Douglas	Chun	Alameda County Water District	
v43	Alison	Chaiken	Alameda Creek Alliance	
v44	Heather	Dempsey	Tuolumne River Trust	44
v45	Maria	Banico	City of East Palo Alto	134
v46	Wynn	Grich	Alternative Technology of Water Nationally	
v47	Juliet	Lamont	Sierra Club Bay Chapter	
v48	Greg	Scott		
v49	Jeff	Lorelli	Alameda Creek Alliance	
v50	Rich	Cimino	Alameda Creek Alliance	
v51	Maryalice	Bonilla	Sierra Club	

Palo Alto Meeting

v52	Alice	Ringer	Sierra Club Loma Prieta Chapter	
v53	Libby	Lucas	California Native Plant Society & Sierra Club	52
v54	Chris	Condon	Sierra Club Mac River Trips	
v55	Justin	Pidot	Stanford Environmental Law Clinic	94
v56	Richard	Zimmerman	Sierra Club Loma Prieta Chapter	95
v57	Amy	Fowler	Santa Clara Valley Water District	
v58	Bill	Young	Sierra Club Loma Prieta Chapter	
v59	Heather	Dempsey	Tuolumne River Trust	44
v60	Lillian	Lieberman	CCAC	

San Francisco Meeting

v61	Joe	Daly	Tuolumne River Outfitters, ECHO Wilderness Co.	12, 87
v62	Craig	Carozzi		
v63	John	Plummer	Friends of Lake Merced	37

Verbal Comment No.	First Name	Last Name	Organization Name (if applicable)	Written Comment No.
v64	Jennifer	Clary	Clean Water Action	60
v65	Vake	Sigg		
v66	Jeff	Hoffman	Sierra Club	
v67	Dan	Sullivan	Sierra Club, California Water Committee	
v68	Jerry/Gerald	Meral	Tuolumne River Trust	55
v69	Holly	Welles	Tuolumne River Trust	13
v70	Victoria	Hoover	Sierra Club	
v71	Steve	Kreftig	San Francisco League of Conservation Voters	
v72	Cathleen	Sullivan	Sierra Club, San Francisco Bay Chapter	
v73	Heather	Dempsey	Tuolumne River Trust	44
v74	Tom	Radulovich	Transportation for a Livable City	
v75	Keith	Miller	California Canoe & Kayak, Inc.	
v76	Richard	Rypinski	Restore Hetch Hetchy	
v77	Scott	Blume	Tuolumne River Trust	
v78	Kelly	Fergusson	Menlo Park City Council Member, BAWSCA	
v79	Amandeep	Jawa	League of Conservation Voters	

Resource Agency Meeting

			Multiple federal and state agencies	See meeting summary
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