

Appendix A

Notice of Preparation



SAN FRANCISCO PLANNING DEPARTMENT

Notice of Preparation of an Environmental Impact Report

Date: June 24, 2009
Case No.: ~~2008.01396E~~ 2008.1396E
Project Title: **Regional Groundwater Storage and Recovery Project**
Location: The proposed Project is located in the South Westside Groundwater Basin in San Mateo County, and the proposed facilities will be constructed in northern San Mateo County. The South Westside Groundwater Basin is located in San Mateo County within the larger Westside Groundwater Basin which underlies both San Francisco and San Mateo counties. Proposed facilities are located in the cities of South San Francisco, Colma, San Bruno, Millbrae, and Daly City and in unincorporated portions of San Mateo County.

BPA Nos.: N/A
Zoning: N/A
Block/Lot: N/A
Lot Size: Various
Project Sponsor: Greg Bartow, San Francisco Public Utilities Commission
(415) 934-5724
Lead Agency: San Francisco Planning Department
Staff Contact: Diana Sokolove – (415) 575-9046
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PROJECT DESCRIPTION

The purpose of the Regional Groundwater Storage and Recovery (GSR) Project (Project or proposed Project) is to further the use of the South Westside Groundwater Basin as an underground storage reservoir by storing water in the basin during wet periods for subsequent recapture during dry periods. This new dry-year water supply would be made available to the cities of Daly City and San Bruno, the California Water Company (Cal Water) in its South San Francisco service area (collectively referred to as Partner Agencies) and San Francisco Public Utilities Commission (SFPUC) wholesale water customers.

The SFPUC proposes to provide surface water, when available, to Partner Agencies, to be used by these agencies in lieu of pumping groundwater during normal and wet rainfall years. The Partner Agencies currently use groundwater as one of the sources of their drinking water supply. This supply would be partially replaced by surface water supplies from the SFPUC regional water system. The reduction of pumping by Partner Agencies would ultimately increase groundwater storage within the South Westside Groundwater Basin by up to 61,000 acre-feet (AF) (approximately 20 billion gallons). Stored groundwater would be utilized by pumping new Project wells during periods of insufficient surface water supplies (i.e., dry years). As part of the proposed Project, SFPUC would construct new groundwater production well facilities, which would be operated by either the Partner Agencies or SFPUC for pumping groundwater at a rate of 7.2 million gallons per day during dry years. The proposed Project would help meet the water supply reliability needs of all SFPUC customers during dry years and may provide some

increased level of regional operational flexibility to respond and restore service during unplanned outages.

The proposed Project is one of several facility improvement projects identified in the San Francisco Region as part of the SFPUC's Water System Improvement Program (WSIP). The WSIP was adopted by the SFPUC in October 2008 to improve the SFPUC's regional water system with respect to water quality, seismic response, water delivery, and water supply to meet water delivery needs in the service area and establishes level of service goals and system performance objectives. The proposed Project's primary contribution to the WSIP goals is its ability to meet the water supply needs of SFPUC customers during drought years.

The proposed Project consists of 1) cooperative management of surface water and groundwater to optimize the water demand and supply balance; and 2) construction and operation of groundwater production well facilities on 16 of 19 potential sites in northern San Mateo County. Each groundwater well facility site would contain a groundwater production well, pump station, underground distribution piping, and utility connections. Some well facility sites would contain groundwater disinfection units and groundwater treatment facilities. Well facilities would connect to distribution systems for Daly City, San Bruno, Cal Water, and SFPUC. In addition, the Westlake Pump Station in Daly City may need to be upgraded and treatment facilities may need to be added to several well facility sites.

FINDING

This project may have a significant effect on the environment and an Environmental Impact Report is required. This determination is based upon the criteria of the State CEQA Guidelines, Sections 15063 (Initial Study), 15064 (Determining Significant Effect), and 15065 (Mandatory Findings of Significance), and for the reasons documented in the attached project description and description of potential environmental effects. (Documents are also available online at: <http://www.sfgov.org/planning/mea>.)

PUBLIC SCOPING PROCESS

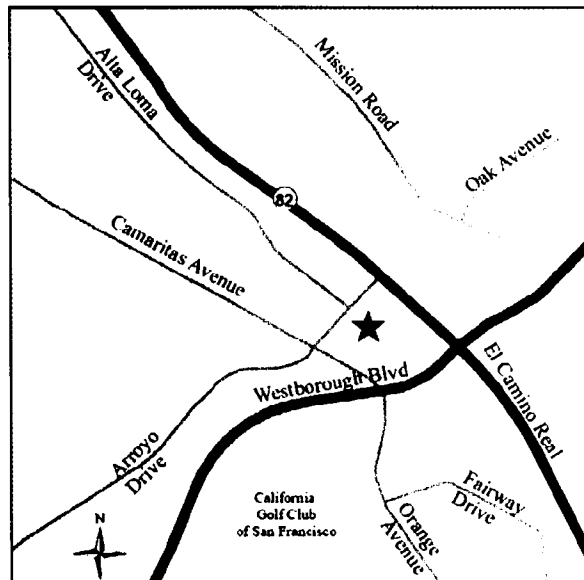
Pursuant to the State of California Public Resources Code Section 21083.9 and CEQA Guidelines Section 15206, a public scoping meeting will be held to receive oral comments concerning the scope of the EIR at the following location, date, and time.

Notice of Preparation of an EIR
June 2009

2008-1346E
~~Case No. 2005-0164E~~
Regional Groundwater Storage and Recovery Project

DATE: Thursday, July 9, 2009
6:15-7:00 p.m. Informational Session
7:00 p.m. Scoping meeting

LOCATION:
South San Francisco Municipal Services Building
Community Room
33 Arroyo Drive
South San Francisco, CA



Written comments will also be accepted at this meeting and until the close of business on **July 28, 2009**. Written comments should be sent to Bill Wycko, Environmental Review Officer, Regional Groundwater Storage and Recovery Project Scoping Comments, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. They also may be submitted by fax to (415) 558-6409 or sent by email to diana.sokolove@sfgov.org.

If you work for a Responsible or Trustee Agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed Project. Your agency may need to use the EIR when considering a permit or other approval for this proposed Project. Please include the name of a contact person in your agency.

June 24, 2009
Date

Bill Wycko for
Bill Wycko
Environmental Review Officer

Regional Groundwater Storage and Recovery Project

2008.1346E
~~Case No. 2005.0164E~~

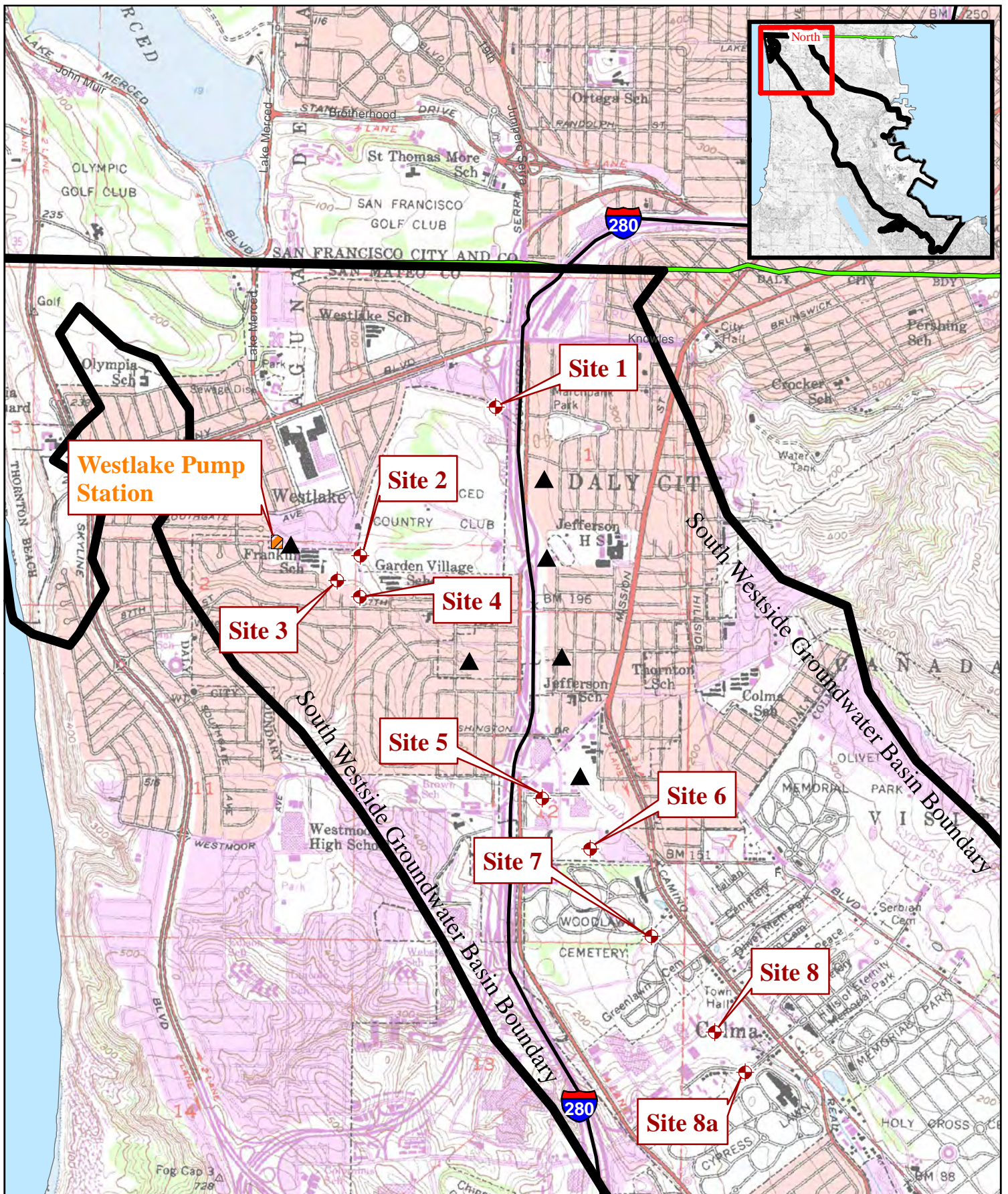
1.0 OVERVIEW AND BACKGROUND

The San Francisco Public Utilities Commission (SFPUC) is proposing the Regional Groundwater Storage and Recovery (GSR) Project (Project or proposed Project), which would be located in northern San Mateo County, California (see Figures 1, 2, and 3). To meet California Environmental Quality Act (CEQA) requirements, the San Francisco Planning Department's Major Environmental Analysis Division (MEA) will prepare and distribute an Environmental Impact Report (EIR) describing and analyzing the environmental effects of the proposed Project. This Notice of Preparation (NOP) provides a description of the Project background, a brief description of the proposed Project elements, and describes some of the proposed Project's potential environmental effects.






The purpose of the proposed Project is to further the use of the South Westside Groundwater Basin as an underground storage reservoir by storing water in the basin during wet periods for subsequent recapture during dry periods. This new dry-year water supply would be made available to the cities of Daly City and San Bruno, the California Water Company (Cal Water) in its South San Francisco service area (collectively designated as Partner Agencies) and SFPUC wholesale water customers.

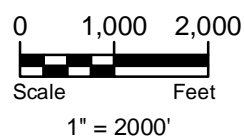
SFPUC proposes to provide excess surface water when available to the Partner Agencies to be used by these agencies in lieu of pumping groundwater during normal and wet years. The Partner Agencies currently use groundwater as one of the sources of their drinking water supply. This supply would be partially replaced by surface water supplies from the SFPUC regional water system. The reduction of groundwater pumping by Partner Agencies would ultimately increase groundwater storage within the South Westside Groundwater Basin by up to 61,000 acre-feet¹ (AF) (approximately 20 billion gallons). Stored

¹ The SFPUC plans for an 8.5-year drought. Over this 8.5-year period, the SFPUC anticipates it will exercise its dry-year supplies after the first year of the drought. Therefore, the 61,000 AF of storage is assumed to be used over 7.5 years of the design drought, with wells operating at a maximum capacity of 7.2 MGD.



Legend

-  Proposed Well Facility Sites
-  Partner Agency Well
-  County Boundary
-  Westlake Pump Station
-  South Westside Groundwater Basin



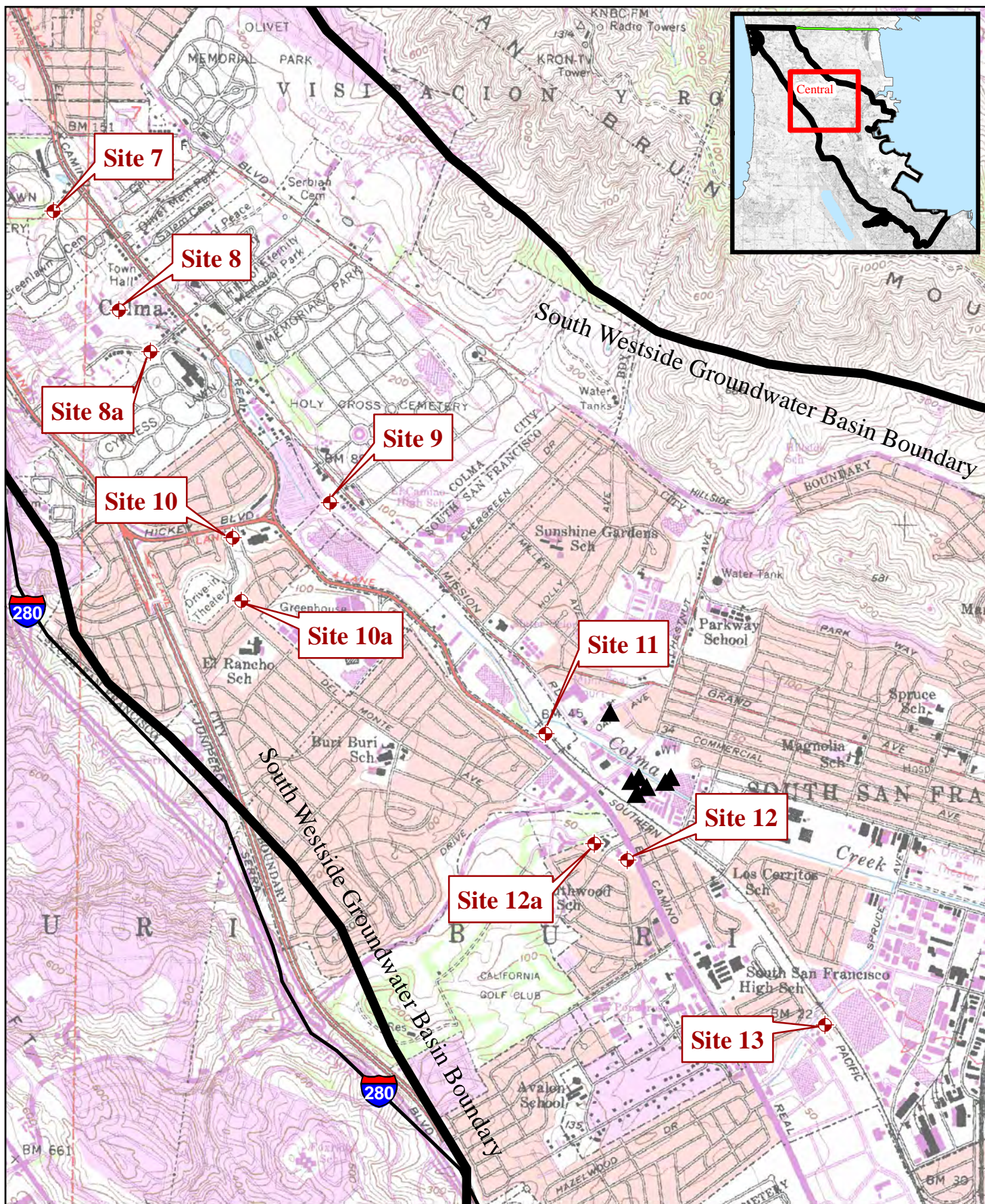
Project Location Map-North

Regional Groundwater Storage and Recovery Project




Figure 1

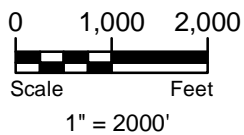
Source: SFPUC and Kennedy/Jenks

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Legend

-  Proposed Well Facility Sites
-  Partner Agency Well
-  South Westside Groundwater Basin

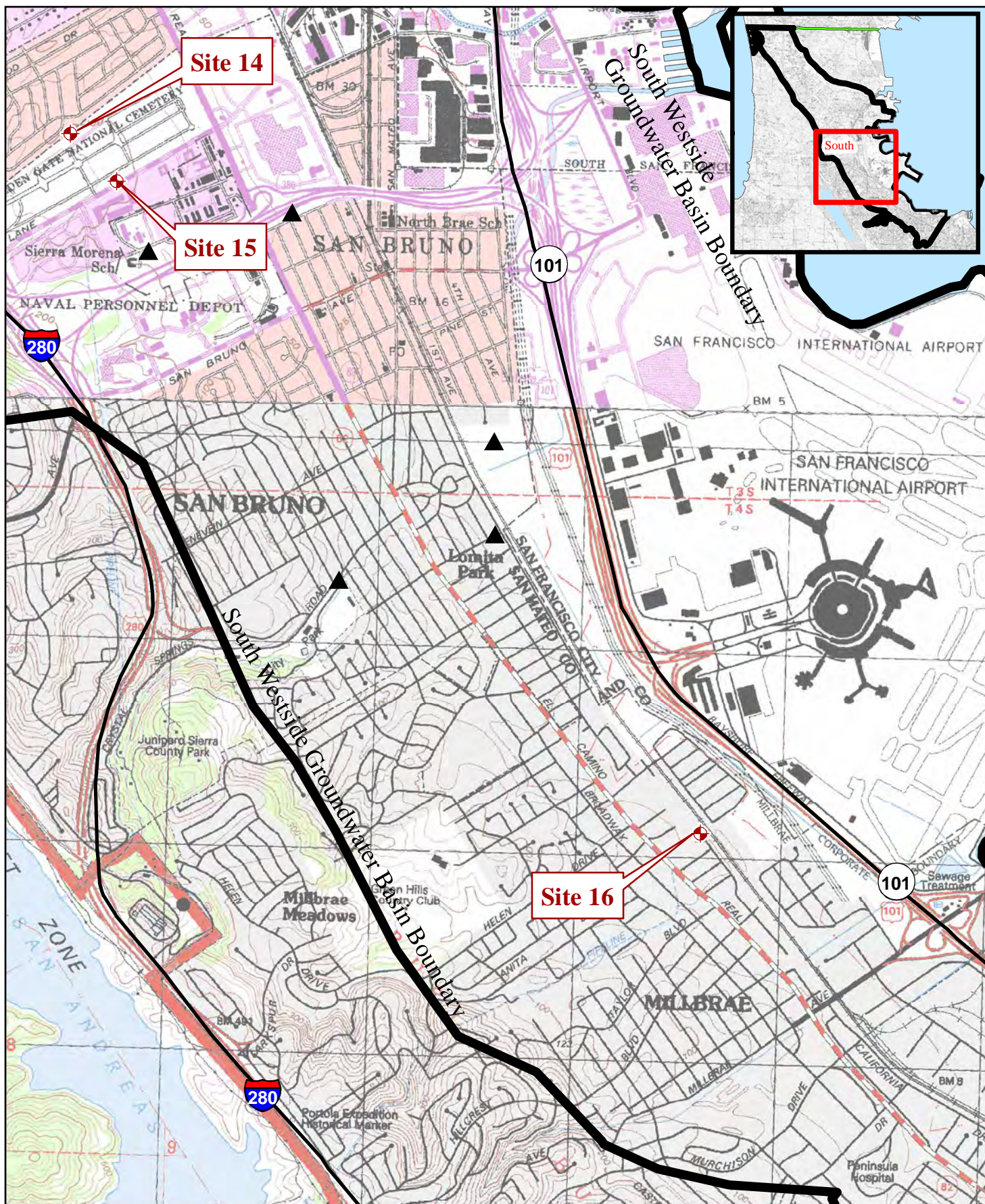


**Project Location
Map-Central**




Regional Groundwater Storage and Recovery Project

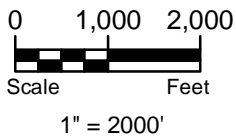
Figure 2

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Legend

-  Proposed Well Facility Sites
-  Partner Agency Well
-  South Westside Groundwater Basin



Project Location Map-South

Regional Groundwater Storage and Recovery Project

Figure 3

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groundwater would be utilized by pumping new Project wells during periods of insufficient surface water supplies (i.e., dry years). As part of the proposed Project, SFPUC would create new groundwater production well facilities, which would be operated by either the Partner Agencies or SFPUC for pumping groundwater at a rate of up to 7.2 million gallons per day (MGD) during dry years. The proposed Project would help meet the water supply reliability needs of all SFPUC customers during dry years and may provide some increased level of regional operational flexibility to respond and restore service during unplanned outages.

The proposed Project is a component of the SFPUC's proposed Water System Improvement Program (WSIP) (see www.sfwater.org). The basic goals of the WSIP are to increase the reliability of the regional water system with respect to water quality, seismic response, delivery, and water supply to meet water delivery needs in the service area. A Program EIR (PEIR) for the WSIP was certified by the San Francisco Planning Commission, and the WSIP was adopted by the SFPUC on October 30, 2008. The PEIR addresses the potential environmental impacts of the WSIP facilities on a programmatic level and evaluates regional water supply alternatives. The proposed Project, which is the subject of this NOP, is one component of the WSIP²; implementation of this proposed Project would contribute to meeting the WSIP's overall goals and objectives.

For purposes of the WSIP PEIR, the SFPUC's regional water system facilities were subdivided into six regions: Hetch Hetchy, San Joaquin, Sunol Valley, Bay Division, Peninsula, and San Francisco. The proposed Project would occur in the San Francisco Region.

2.0 PROPOSED PROJECT FACILITIES

The proposed Project facilities would consist of new groundwater production well facilities within the South Westside Groundwater Basin (Basin); the facilities are designed to withdraw up to 7.2 MGD from the volume of stored groundwater directly resulting from Project-related reduced groundwater

² The Regional Groundwater Storage and Recovery Project was listed as the Conjunctive Use Project in the PEIR.

pumping in the Basin by Partner Agencies during normal and wet years. Up to 16 new groundwater well facilities would be constructed on 16 of the 19 potential sites in northern San Mateo County to supply the needed withdrawal capacity. Well facilities would be connected to Daly City, San Bruno, Cal Water, or SFPUC distribution systems. In addition, the existing Westlake Pump Station in Daly City may need to be modified and treatment facilities may need to be added.

Each groundwater well facility site would contain a groundwater production well, pump station, underground distribution piping, and utility connections. Each well facility would have a disinfection unit as required, unless it is near an existing disinfection unit that can accommodate the additional volume, in which case the well would be connected to the existing unit. Well facility sites where the groundwater may need treatment have been designed with appropriate treatment facilities.

3.0 ENVIRONMENTAL REVIEW PROCESS

As described above, the San Francisco Planning Commission certified the WSIP PEIR in October 2008. The PEIR addressed the potential environmental impacts of the WSIP facilities on a programmatic level and evaluated regional water supply alternatives. The PEIR is available on the San Francisco Planning Department website at www.sfgov.org/planning/mea.

The San Francisco Planning Department will prepare a project-specific EIR to evaluate the environmental effects of the proposed Project. The EIR will be prepared in compliance with the CEQA Guidelines Section 15161 and will address project-specific construction and operational impacts.

The first step in the environmental review process is the formal public scoping process, for which this NOP has been prepared. Following the public scoping period, a Draft EIR will be prepared and circulated for a 45-day public review period. Public comments on the Draft EIR will be accepted in writing during the review period or verbally at a formal public hearing to be held by the San Francisco Planning Commission. The San Francisco Planning Department then will prepare written responses to comments on environmental issues raised during the public review period, and a Response to Comments document will be prepared. That document will be considered by the San Francisco Planning

Commission, along with the Draft EIR and any revisions to the draft based on the response to comments, for certification as a Final EIR.

4.0 PUBLIC SCOPING MEETING

The San Francisco Planning Department will hold a public scoping meeting at the following location, date, and time.

DATE: Thursday, July 9, 2009

6:15-7:00 p.m. Informational Session

7:00 p.m. Scoping meeting

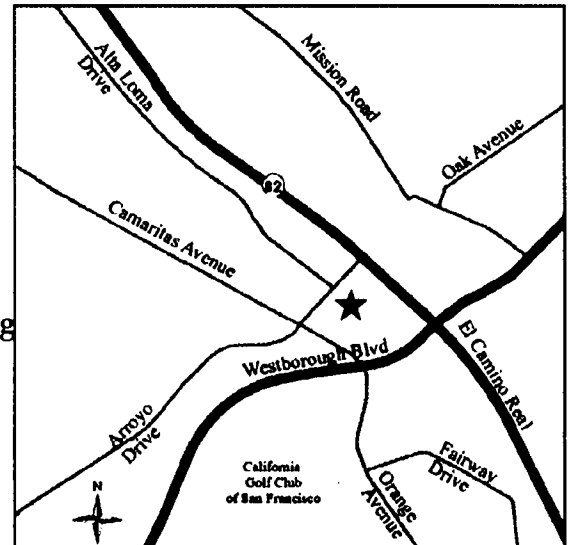
LOCATION:

South San Francisco Municipal Services Building

Community Room

33 Arroyo Drive

South San Francisco, CA



The purpose of this meeting is to assist the Planning Department with its review of the proposed scope and content of the EIR as summarized in this NOP. The public will be given the opportunity to provide comment for consideration. The San Francisco Planning Department also will accept written comments on the scope of the EIR at the meeting or by mail, email, or fax until close of business (5:00 p.m.) on **July 28, 2009**. Written comments may be submitted by mail to the San Francisco Planning Department, Attn: Bill Wycko, Environmental Review Officer, Regional Groundwater Storage and Recovery Project Scoping Comments, 1650 Mission Street, Suite 400, San Francisco, CA 94103. They also may be submitted by fax to (415) 558-6409, or sent by email to diana.sokolove@sfgov.org.

5.0 PROJECT DESCRIPTION

5.1 Project Location

The proposed Project is located in the South Westside Groundwater Basin in San Mateo County, and the proposed facilities will be constructed in northern San Mateo County as shown in Figures 1, 2, and 3. The South Westside Groundwater Basin is located in San Mateo County within the larger Westside Groundwater Basin³, which underlies both San Francisco and San Mateo counties. The Project is also located within the water service areas for the cities of Daly City, San Bruno, and Millbrae and within the Cal Water service area, which includes portions of South San Francisco, Colma, and unincorporated San Mateo County.

Groundwater well facilities would be constructed and operated at up to 16 locations in the cities of Colma, Daly City, South San Francisco, San Bruno, Millbrae, and unincorporated San Mateo County (see Figures 1, 2, and 3). Well facilities would be connected to existing water distribution pipelines owned by Daly City, San Bruno, Cal Water, and SFPUC. The Project also includes an upgrade of the existing Westlake Pump Station in Daly City to serve the proposed new well facility sites.

5.2 Project Objectives

The proposed Project is a regional groundwater storage and recovery project that is part of the SFPUC's WSIP. The overall goals of the WSIP for the regional water system are to maintain high-quality water; reduce vulnerability to earthquakes; increase water delivery reliability; meet customer water supply needs; enhance sustainability; and achieve a cost-effective, fully operational system. The proposed Project's primary contribution to the WSIP goals is its ability to meet the water supply needs of SFPUC customers during drought years. In addition,

³ The Westside Groundwater Basin extends from western San Francisco south into San Mateo County. The Basin has an area of approximately 40 square miles and underlies Daly City, Colma, South San Francisco, San Bruno, Millbrae, and Burlingame. The Westside Groundwater Basin has been administratively divided at the San Francisco County-San Mateo County line. This is a political boundary, not a physical boundary. The portion of the basin that lies within San Francisco County is referred to as the North Westside Groundwater Basin. The portion of the basin that lies within San Mateo County is referred to as the South Westside Groundwater Basin. The Project would occur solely within the South Westside Groundwater Basin.

the Project may provide some increased level of regional operational flexibility to respond and restore service under unplanned outages.

The specific objectives of the proposed Project are to:

- Cooperatively manage the South Westside Groundwater Basin through the coordinated use of SFPUC surface water and the groundwater pumped by the Partner Agencies;
- Provide increased SFPUC surface water to the Partner Agencies in normal and wet years, resulting in a reduction of groundwater pumping by these agencies and an increase in groundwater storage in the South Westside Groundwater Basin;
- Increase the pumping capacity from the South Westside Groundwater Basin by up to 7.2 MGD to supply water during dry years and emergencies; and
- Provide a new dry-year groundwater supply for SFPUC customers and increase water supply reliability during the 8½-year design drought cycle.

5.3 Proposed Project

The proposed Project is a groundwater storage and recovery project, which includes the operation of new groundwater production wells and associated distribution and treatment facilities. This section includes a description of these proposed Project components.

5.3.1 Groundwater Storage and Recovery

The Partner Agencies currently supply potable water to their customers through a combination of groundwater from the South Westside Groundwater Basin and purchase of SFPUC surface water. The proposed Project would provide additional SFPUC surface water to the Partner Agencies during normal and wet years when sufficient surface water supplies are available. The Partner Agencies would reduce their groundwater pumping by a comparable amount and allow the groundwater basin to recharge naturally during these periods.

Figure 4 illustrates the increase in groundwater storage expected from a reduction in pumping during normal and wet years, as well the decrease in groundwater storage projected from an increase in pumping during dry years.

During normal and wet years, the volume of groundwater in the South Westside Groundwater Basin would naturally increase due to the reduced groundwater pumping, eventually reaching an increased storage volume of up to 61,000 AF. During dry or drought years, the Partner Agencies and SFPUC would pump previously stored groundwater. This new dry-year water supply would be made available to both the Partner Agencies and SFPUC wholesale customers under the terms of the Shortage Allocation Plan between the SFPUC and its wholesale customers⁴. A groundwater storage and recovery agreement would be negotiated by and between the SFPUC and Partner Agencies for groundwater and surface water management. Specifically, the agreement would cover water accounting; ownership principles; and operation, maintenance and replacement of facilities.

5.3.2 Production Wells and Associated Facilities

The proposed Project includes new groundwater production well facilities within the South Westside Groundwater Basin to withdraw the increased volume of stored groundwater at a rate of 7.2 MGD. Up to 16 new groundwater well facilities would be constructed on 16 of the 19 potential sites in northern San Mateo County. Of the 19 sites, 5 well facilities would connect to Daly City's distribution system, 3 well facilities would connect to San Bruno's distribution system, 4 well facilities would connect to Cal Water's distribution system, and 7 well facilities would connect to the SFPUC distribution system. In addition, the Westlake Pump Station in Daly City may be expanded and additional treatment facilities added.

Each groundwater well facility site would contain a groundwater production well, a pump station, underground distribution piping, and

⁴ The Shortage Allocation Plan identified a water allocation method to be used to determine the share of water for wholesale customers during shortages caused by drought.

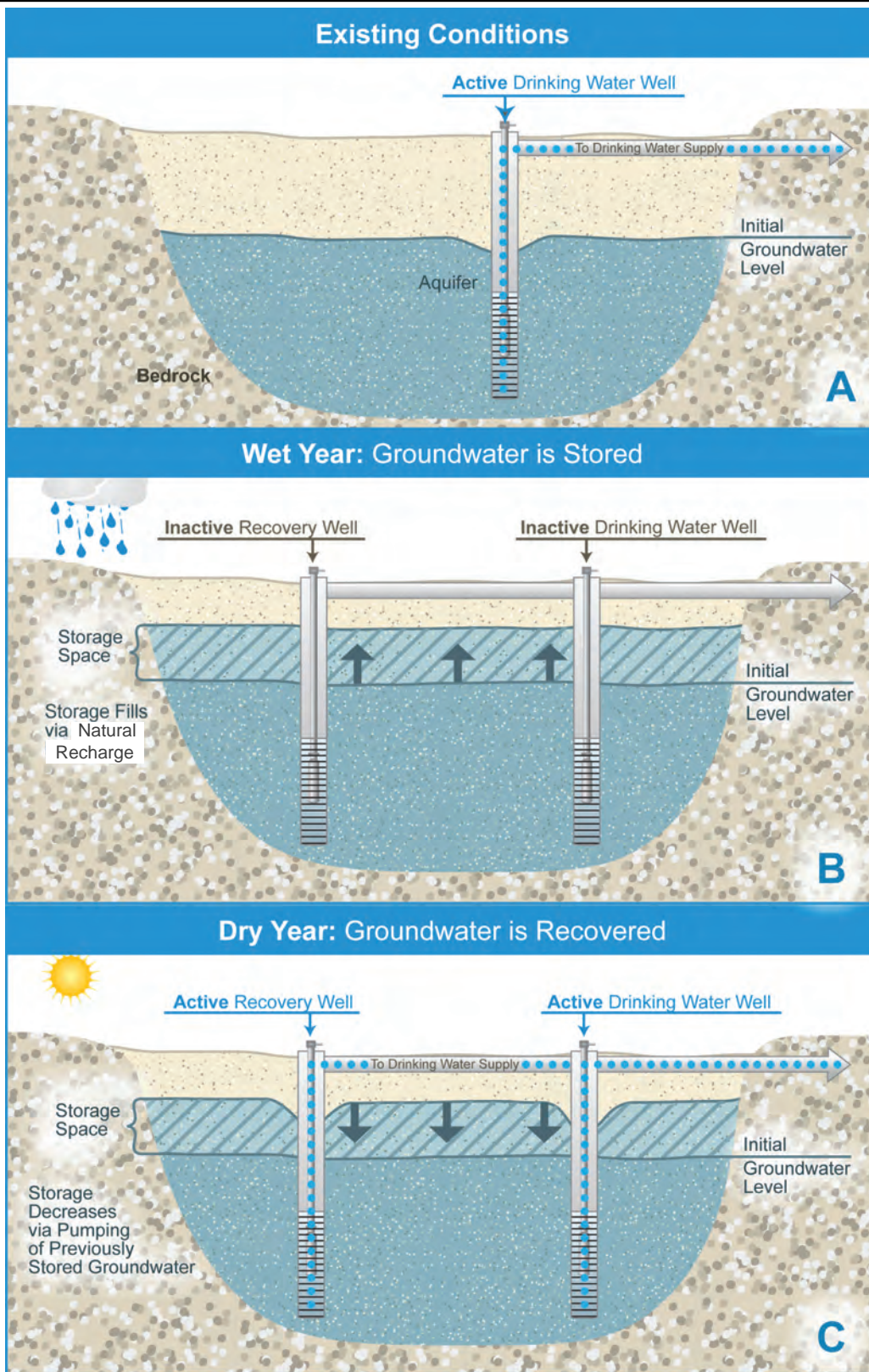


Figure (A) reflects the existing groundwater conditions, showing available storage space above the aquifer. In (B) the upward arrows represent the filling of the storage space with groundwater during wet years; in (C) the downward arrows represent the decline in stored water during dry years. The "Drinking Water Wells" represent the existing wells operated by the Cities of San Bruno and Daly City and California Water Service Company. The "Recovery Wells" represent the new wells that are proposed as part of the Project.

Groundwater Storage and Recovery
Regional Groundwater Storage and Recovery Project
Figure 4

utility connections. Each well facility also would have a disinfection unit, unless it is located near an existing disinfection unit that can accommodate the additional volume, in which case the well would be connected to the existing unit. Well facility sites where the groundwater may need treatment have been designed with appropriate treatment facilities (e.g., disinfection and manganese treatment). The facilities and the nature, extent and anticipated duration of construction activities are described further below.

Prior to confirming the final selected sites and full development of the groundwater well facilities, monitoring wells and test wells may be installed at the well facility sites to gather information about local groundwater characteristics and to determine the technical feasibility of each of the sites to produce sufficient volumes and quality of water for operation of a groundwater production well. If selected, sites would be converted from test wells to permanent production wells; pumps would be added, well enclosures would be built (fencing or building), disinfection units and treatment facilities would be constructed as needed, and utility and distribution pipelines would be installed.

A list of the 19 potential well facility sites and pump station upgrade is provided in Table 1.

TABLE 1
Well Facility Locations

Site ID ^a	Site Name	Location
1	Lake Merced Golf Course	Daly City
2	Park Plaza Meter	Daly City
3	Ben Franklin Intermediate School	Unincorporated San Mateo County (Broadmoor)
4	Garden Village Elementary School	Unincorporated San Mateo County (Broadmoor)
5	Right-of-Way at Serra Bowl	Daly City
6	Right-of-Way at Colma BART	Daly City
7	Right-of-Way at Colma Boulevard	Colma
8	Right-of-Way at Serramonte Boulevard	Colma

TABLE 1
Well Facility Locations

Site ID ^a	Site Name	Location
8a	Standard Plumbing Supply	Colma
9	Treasure Island Trailer Court	South San Francisco
10	Right-of-Way at Hickey Boulevard	South San Francisco
10a	Alta Loma Drive	South San Francisco
11	South San Francisco Main Area	South San Francisco
12	Funeral Home	South San Francisco
12a	Funeral Home	South San Francisco
13	South San Francisco Linear Park	South San Francisco
14	Golden Gate National Cemetery	San Bruno
15	Golden Gate National Cemetery	San Bruno
16	Millbrae Corporation Yard	Millbrae
PS	Westlake Pump Station Upgrade	Daly City

a. The EIR will evaluate the environmental effects of the development of all 19 well facility sites, even though a maximum of 16 well facilities would be constructed.

Well Station Design

The SFPUC has considered institutional, regulatory, operational, maintenance, and technical information in the design of the well stations. Three well station types are included in the proposed Project:

- Type 1 - well only, building or fenced enclosure;
- Type 2 - well plus chemical treatment building; and
- Type 3 - well plus chemical treatment and filtration building.

Site-specific well station design characteristics are listed in Table 2 and described in detail below. These characteristics include proposed building type, pump type, water distribution system connection point, groundwater disinfection location, and the method that would be used to achieve agency-specific water quality goals (i.e., blending with surface water or treatment).

TABLE 2

Site-Specific Well Station Characteristics

Site ID	Site Description	Well Station Type ^a	Pump Type	Connection Point	Alternate Connection Point	Disinfection Location	Method for Achieving Water Quality Goals
1	Lake Merced Golf Club	Type 2	Above-ground	SFPUC San Andreas Pipeline #2	Daly City	At site	Blending ^b
2	Park Plaza Meter	Type 1 with fenced enclosure	Submersible	Daly City	SFPUC Sunset Supply	Westlake Pump Station	Blending
3	Ben Franklin Intermediate School	Type 1 with fenced enclosure	Submersible	Daly City	SFPUC Sunset Supply	Westlake Pump Station	Blending
4	Garden Village Elementary School	Type 1 with fenced enclosure	Submersible	Daly City	SFPUC Sunset Supply	Westlake Pump Station	Blending or iron/manganese treatment
5	Right-of-Way at Serra Bowl	Type 2	Above-ground	Daly City	Cal Water	At site	Blending or iron/manganese treatment
6	Right-of-Way at Colma BART	Type 2	Above-ground	Cal Water	SFPUC Pipeline	At site	Blending or iron/manganese treatment
7	Right-of-Way at Colma Boulevard	Type 2	Above-ground	Cal Water	SFPUC Pipeline	At site	Blending or iron/manganese treatment
8	Right-of-Way at Serramonte Boulevard	Type 2	Above-ground	Cal Water	SFPUC Pipeline	At site	Blending or iron/manganese treatment
8a	Standard Plumbing Supply	Type 2	Above-ground	Cal Water	SFPUC	At site	Blending
9	Treasure Island Trailer Court	Type 2	Above-ground	SFPUC Sunset Supply Pipeline	None	At site	Blending

TABLE 2

Site-Specific Well Station Characteristics

Site ID	Site Description	Well Station Type ^a	Pump Type	Connection Point	Alternate Connection Point	Disinfection Location	Method for Achieving Water Quality Goals
10	Right-of-Way at Hickey Boulevard	Type 2	Above-ground	Daly City	SFPUC San Andreas #2	At site	Blending
10a	Alta Loma Drive	Type 2	Above-ground	SFPUC San Andreas Pipeline #2	Cal Water	At site	Blending
11	SSF Main Area	Type 2	Above-ground	SFPUC Sunset Supply Pipeline	Cal Water	At site	Blending
12	Funeral Home	Type 2	Above-ground	SFPUC Sunset Supply Pipeline	Cal Water or other SFPUC pipeline	At site	Blending
12a	Funeral Home	Type 2	Above-ground	SFPUC Sunset Supply Pipeline	Cal Water or other SFPUC pipeline	At site	Blending
13	SSF Linear Park	Type 3	Above-ground	San Bruno	Cal Water, SFPUC, or other San Bruno	At site	Blending or iron/manganese treatment
14	Golden Gate National Cemetery	Type 1 with building enclosure	Above-ground	San Bruno	SFPUC pipeline	At site	Blending or iron/manganese treatment
15	Golden Gate National Cemetery	Type 3	Above-ground	San Bruno	SFPUC pipeline	At site	Blending or iron/manganese treatment
16	Millbrae Corp Yard	Type 2	Above-ground	SFPUC Crystal Springs Pipeline #2	None	At site	Blending

a. Type 1 is Well Only; Type 2 is Well plus Chemical Treatment Building; Type 3 is Well plus Chemical Treatment and Filtration Building; see text below for further description of conceptual layouts.

b. Blending is the mixing of groundwater with other potable supply water

Buildings would be about 15 feet tall and constructed of concrete block. Acoustical louvers for noise reduction would be used. The buildings would be painted in neutral colors with anti-graffiti coating.

It is anticipated that all outdoor site lighting would be activated by motion-controlled sensors, with manual switching available for as-needed night operations. Facilities would be designed to meet California's energy efficiency standards outlined in Title 24 of the California Code of Regulations and use recycled materials to the extent possible.

Type 1 Conceptual Layout: Well-Only. The conceptual layout for the "well-only" type includes an approximately 40-foot by 20-foot building or fenced enclosure to house the wellhead, pump, piping, and associated electrical and control equipment.

Type 2 Conceptual Layout: Well plus Chemical Treatment. The conceptual layout for the "well with chemical treatment" type would consist of a 40-foot by 20-foot building to house the wellhead, pump, pipeline, and associated electrical and control equipment, plus an approximately 15-foot by 15-foot building extension for chemical storage and handling. Space would be provided onsite for disinfection, pH adjustment, and fluoride addition if needed.

Type 3 Conceptual Layout: Well plus Chemical Treatment and Filtration. The conceptual layout for the "well with chemical treatment and filtration" type would be similar to Type 2 but with the addition of a filtration system. The building dimensions would be approximately 25 feet by 80 feet. Filtration would be located only at well facilities that require manganese and/or iron removal. This well station type would be larger than the other types to provide space for the wellhead, treatment facilities, and filtration vessels. The filtration system consists of a series of vertical pressure vessels. The number and size of the pressure vessels would depend on the well yield and the number of wells connected to the filtration system. The backwash water from the system would connect to a nearby sanitary sewer. It is anticipated that filters would be backwashed, on average, once a day for 4 minutes.

Well Pumps

Each well facility site would contain either a submersible or above-ground pump. The selection of the pump type is based on the preference of the Partner Agency responsible for well operation. In most cases, the wells would be equipped with above-ground pumps. In comparison to submersible motors, above-ground motors are more efficient, have a longer service life, are more durable in cases where variable frequency drives are required, and are more accessible and thus easier to maintain. In cases where noise, visibility, or lack of space is an issue, submersible pumps would be used. Submersible motors are quieter to operate, but more difficult to maintain, because maintenance requires the removal of the entire pump assembly. Any wells that are in fenced enclosures (i.e., without buildings) have been designated for submersible pumps.

Utility and Distribution Piping

Underground piping would connect the wells to the local distribution systems or SFPUC water distribution system. In addition, underground piping would connect well facilities to the storm drain system and/or the sanitary sewer system to allow discharge of the initial flush of water. Chloraminated water would be de-chlorinated or sent to the local sanitary sewer system. Backwash from the manganese treatment facilities would also be sent to the local sanitary sewer system. The piping for all selected sites would consist of a total of approximately 4,600 feet of 6-inch pipe and 12,500 feet of 8-inch pipe. In general, the pipeline route would be excavated to a depth of 6 feet. The maximum width of the pipeline work area (including the trenches) would be 20 feet. The pipelines would be constructed using conventional open-cut trenching techniques. Above or underground electrical lines would also be installed from the groundwater well facilities to the nearest power source (PG&E facilities). The dimension of the trenches for the underground electrical lines would be smaller than those of the water pipelines.

Westlake Pump Station Upgrade

Upgrades to the Westlake Pump Station may be necessary to serve the well stations at Sites 2, 3 and 4. The upgrades would include new chemical storage tanks, replaced or upgraded chemical metering pumps, a resized

transformer, and up to three new booster pumps to deliver the additional water into the distribution system.

5.3.3 Construction Methods

Monitoring Wells, Geotechnical Borings, and Test Wells

Prior to the selection and full development of the groundwater production well sites, monitoring wells and test wells may be installed and geotechnical borings may be drilled at the well facility sites to gather information about local groundwater characteristics and to determine the technical feasibility of each of the sites to produce sufficient volumes and quality of water for operation of a groundwater production well. Depending upon the results of the testing, well facility sites would be selected, and test wells converted to permanent production wells, which would consist of full development of the well facility site to include the addition of pumps to the wells, the addition of enclosures around the well, installation of disinfection units and treatment facilities as needed, and installation of utilities and distribution pipelines.

In the event that additional monitoring or test wells are needed, the selected site would need to be cleared of vegetation and graded for installation and drilling of the borehole. For monitoring wells, a borehole would be drilled to a depth of approximately 750 feet below ground. For test wells, one steel casing would be installed to a depth of approximately 50 feet, with a borehole drilled to a depth of approximately 550 to 700 feet. Equipment used for well drilling and construction would include a mounted drill rig on a support truck, pump and pick up trucks or trailers and similar equipment. Construction of a monitoring well would be completed in approximately three weeks, with construction activities occurring between 8:00 AM and 7:00 PM Monday through Friday only. Construction and testing of test wells would require approximately 4 weeks. Drilling would extend for about a week both during the day and night. If the results of the test wells were favorable and the wells were selected as permanent production well sites, then development of production well facilities would occur, as described below.

Additional geotechnical borings may be required and would be drilled to a depth of approximately 50 feet below ground surface (deeper if fill or soft soil is encountered). A boring would be completed in approximately two days. Drilling activities would occur between 8:00 AM and 7:00 PM Monday through Friday only.

Construction of Well Station Facilities

Each well facility site would include a construction staging area; some sites may have two optional locations for staging areas. The minimum size of the staging area would be 1,500 square feet. Staging areas would be fenced. Any temporary spoils (excavated material) storage would occur inside the staging areas.

Construction of facilities at the well sites would require site clearing and grubbing. Site excavation and grading would be minor, with grading to a maximum depth of 5 feet for the building foundation (if the well facility includes a building) and utilities underneath the building. After the foundation and utilities connections are constructed, the remainder of the building would be constructed and the well pump and other equipment installed, as needed. No significant near-surface groundwater is expected at any site; therefore dewatering for construction of project facilities is not anticipated. Diesel generators with self-contained fuel tanks may be used during construction. Construction equipment is expected to include: a front end loader, backhoe/excavator, fork lift, telescopic crane, cement mixer, concrete pump truck, compactor, hauling trucks, pump-setting rig, and arc welder.

It is estimated that during the peak construction period, the maximum number of construction workers at any one site would be 15.

Construction of Distribution and Utility Connections

In general, the pipeline routes would be excavated up to a depth of 6 feet. The width of pipeline construction zones would be generally 20 feet, and the width of the electrical connection construction zones would be less than 20 feet. The pipelines would be constructed using conventional open-cut trenching techniques. Construction equipment is expected to include: an excavator, front-end loader, hauling trucks, compactor, asphalt trucks, and arc welder. Diesel generators with self-contained fuel tanks may be

used during construction. At some sites, pipeline excavation would generate excess soil (called spoils) that would be reused onsite (for engineering fill) or disposed of at a Class III non-hazardous waste disposal site. After pipeline placement, the trenched area would be restored to its original condition.

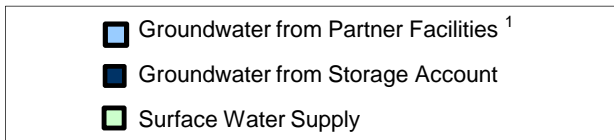
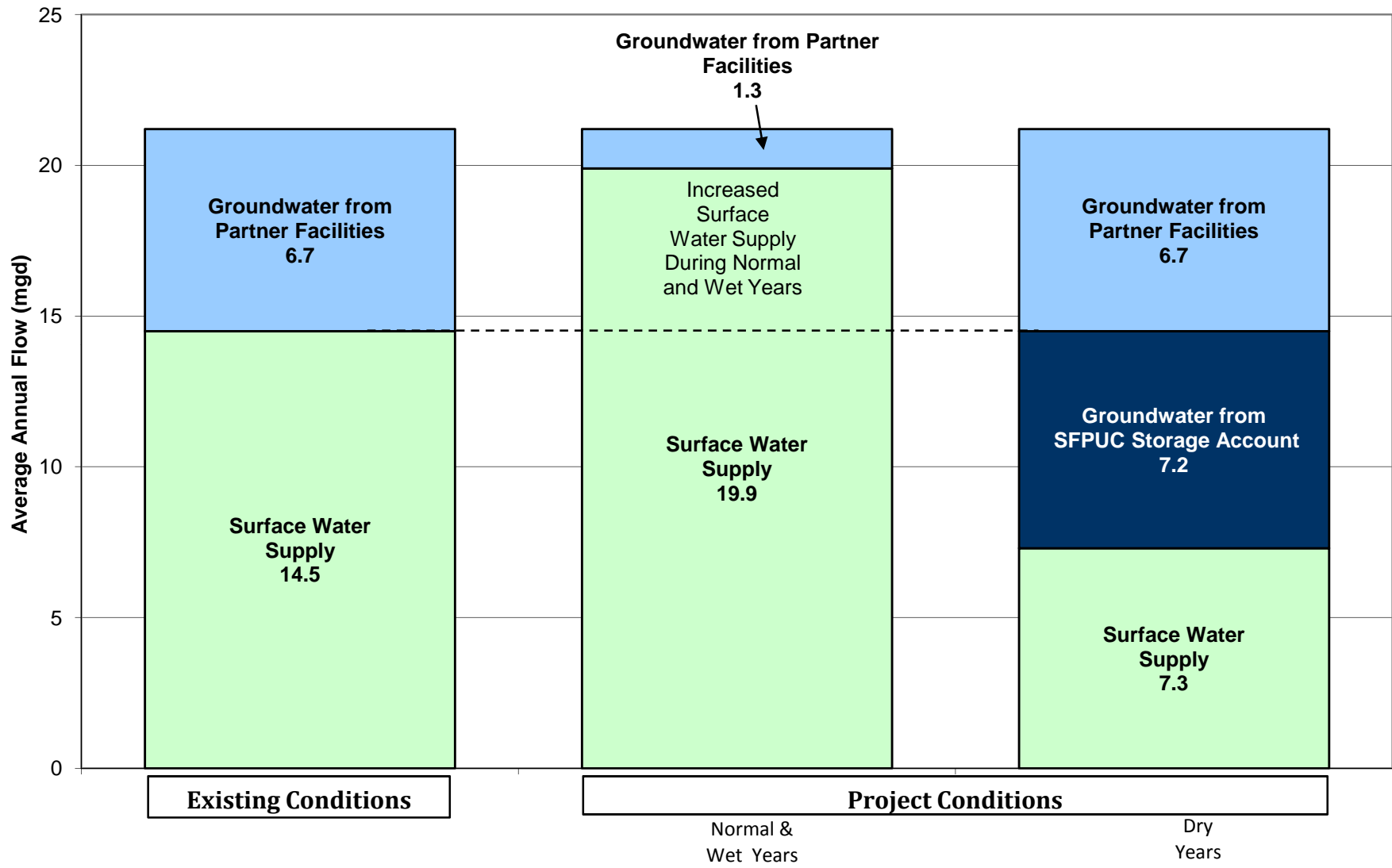
5.3.4 Operation and Maintenance

Project operations would be designed to allow natural recharge of the South Westside Groundwater Basin through reduced Partner Agency groundwater pumping, to provide up to 61,000 AF of increased groundwater in storage to be used by the SFPUC and Partner Agencies during drought conditions.

Figure 5 illustrates how the Project would change the source of water supply for the Partner Agencies. During normal and wet years, the portion of water supply coming from SFPUC surface water would increase compared to the existing condition. During dry years, the portion of water supply coming from groundwater would increase compared to the existing condition. For SFPUC wholesale water customers, the source of water supply would not change during normal and wet years; but the portion of groundwater delivered to some SFPUC customers would increase during dry years, compared to existing conditions.

An accounting of additional storage volumes (called the SFPUC Storage Account) would track the amount of water that has been stored during the normal and wet years and the amount of water pumped during dry years. The specific volumes shown in Figure 5 are based on historic rainfall and hydrology (MWH, 2007), but actual volumes in any given year would vary depending on several factors, including: 1) the final location and capacity of the project well facilities, 2) the availability of additional stored water in the SFPUC Storage Account, and 3) direction from the Operating Committee⁵ regarding which wells should be used.

⁵ It is expected that a Project agreement by and between SFPUC and the Partner Agencies would establish an Operating Committee. The role of the Operating Committee would be to monitor and track the SFPUC Storage Account, including any losses from the system, and establish pumping schedules for the project wells.



Source of Water Supply for Partner Agencies

Regional Groundwater Storage and Recovery Project

¹ Partner facilities are operated by City of Daly City, City of San Bruno, and Cal Water.

Figure 5

During normal and wet years, the proposed groundwater well facilities would be operated by SFPUC or by Partner Agencies only periodically for maintenance purposes. During dry years, the proposed groundwater well facilities would be operated by SFPUC or by Partner Agencies for additional water supply.

All well stations would be unmanned, but subject to remote monitoring and operation by the Partner Agency or SFPUC who would operate the well facility. Each well station would be visited daily when wells are operating for routine equipment checks, lasting approximately 30 minutes each. During normal and wet years, wells would be visited on a weekly basis, would be normally off, but regular exercising would be conducted. Longer term maintenance would include removal and repair or replacement of pumps, valves, and other equipment. Production wells may require redevelopment and/or rehabilitation on an infrequent basis.

6.0 PERMITS AND APPROVALS REQUIRED

The SFPUC may be required to obtain the following permits and approvals for Project construction and operation:

- Section 404 Permit from the U.S. Army Corps of Engineers (USACE) if the Project affects jurisdictional wetlands or waters of the U.S.
- U.S. Department of Veterans Affairs approval and National Environmental Policy Act (NEPA) review for Sites 14 and 15 at the Golden Gate National Cemetery.
- U.S. Fish & Wildlife Service Section 7 consultation under the federal Endangered Species Act, if the Project affects threatened or endangered species or their habitat.
- Review by the Advisory Council on Historic Preservation may be required if the Project affects properties listed on or eligible for the National Register of Historic Places.
- Permit amendments and approval of well construction and operation from the California Department of Public Health, Water Supply Division.
- Section 1602 Lake and Streambed Alteration Agreement from the California Department of Fish and Game if the Project could affect streambeds under California jurisdiction.
- Section 2081/2080.1 Incidental Take Permit from the California Department of Fish and Game if a “take” (to hunt, pursue, catch, capture,

or kill, or attempt the same) could occur to state-listed species as a result of the Project.

- California Department of Fish and Game Memorandum of Agreement if needed to ensure no effect to fully protected species.
- Preparation of a California Department of Toxic Substances Control Contaminated Soil Treatment Work Plan (required only if contaminated soil is encountered during construction).
- San Francisco Bay Regional Water Quality Control Board Discharge permits, if required, for emergency and/or maintenance water discharges, and for “overboard” pumping of well waters.
- San Francisco Bay Regional Water Quality Control Board Section 401 Certification, the state certification of the federal Section 404 Wetlands Permit.
- California Department of Transportation Encroachment permits to cross State roadways and Interstate Highways.
- State Water Resources Control Board Stormwater General Permit and Stormwater Pollution Prevention Plan, if more than one acre of land is disturbed.
- Bay Area Air Quality Management District permit for stationary equipment that may generate air pollutants (e.g., generators).
- EIR certification by the San Francisco Planning Commission.
- Board of Supervisors approval may be needed for funding appropriation or property rights acquisition.
- SFPUC approval, adoption of CEQA findings and mitigation monitoring and reporting program (MMRP).
- Adoption of CEQA findings and MMRP by local City Councils or Boards of Supervisors.
- San Francisco Historic Preservation Commission review of local, state and national landmarks and historical landscapes.
- Determination of Project consistency with park use by local Recreation and Park Commissions and approval of use of property under their jurisdiction.
- Approval of local Unified School District(s) for use of property under their jurisdiction.
- Approval of exterior design of proposed facilities on SFPUC property or right-of-way by the San Francisco Arts Commission.
- Agreements with Partner Agencies.
- Local Department(s) of Public Health approval of well construction and operation permits in accordance with California Department of Water Resources Standards.

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- Local Department(s) of Public Health approval of Certified Unified Program Agencies (CUPA)/Hazardous Materials Business Plan for Project operations.
- Local Department(s) of Public Works approval of excavation permits, encroachment permits, and temporary occupancy permits for street space.
- Bay Area Rapid Transit (BART) encroachment permits to cross existing BART system.

7.0 PROPERTY RIGHTS ACQUISITION

Several types of property rights would be needed for Project construction and operation, as shown in Table 3. The process for acquiring right-of-way involves the preparation of deed and appraisal map, an appraisal of fair market value, negotiations with property owners, and condemnation (if necessary).

TABLE 3
Property Rights Proposed for Acquisition

Property Acquisition Type	Rights
Access Easement	Temporary or permanent rights to enter or cross another property
Pipeline Easement	Rights to install and maintain a pipeline over or across another property
Fee Acquisition	Purchase of all the property rights, land, improvements (if any), etc.
Encroachment Permit	Rights to encroach across a publicly-owned street or highway for pipeline or other purposes

Of the 19 potential well sites, 12 sites are on SFPUC fee-owned land or within SFPUC right-of-way. The other seven well sites are on other public and private parcels which would require an acquisition of property use rights for the well(s), connecting pipelines, and/or access. Lastly, several sites have lengthy connecting pipeline requirements that would most likely be constructed on a combination of public and private parcels.

8.0 CONSTRUCTION SCHEDULE

The proposed Project schedule expected at the time of this NOP includes construction of permanent well facilities and pipeline connections from April 2012 through approximately May 2014.

9.0 ENVIRONMENTAL ANALYSIS

9.1 Environmental Issues to be Addressed in the EIR

The EIR will address all environmental issue areas required under CEQA. The EIR will address environmental impacts of the proposed Project due to construction and operation activities and will propose mitigation measures for impacts considered to be significant. The following sections describe the anticipated environmental issues that will be addressed by the EIR.

9.1.1 *Land Use and Visual Quality*

Construction and operation of the proposed Project could affect land uses and visual quality of the Project sites and surrounding areas. Potential impacts to be evaluated in the EIR include:

- Temporary and permanent disruption or displacement of existing land uses during construction including construction impacts on such sensitive land uses as schools, residences and funeral homes, and the potential temporary closure of a portion of South San Francisco Linear Park to the public.
- Impacts on scenic vistas or visual character, including potential impacts on the visual character of Golden Gate National Cemetery, Woodlawn Cemetery, Greenlawn Memorial Park, and Lake Merced Golf Club.

9.1.2 Geology, Soils and Seismicity

Construction and operation of new well facilities and below-ground distribution pipelines and electrical power lines could result in site-specific impacts on or from local geology and soils conditions. Potential impacts to be evaluated in the EIR include:

- Seismic hazards and/or increased exposure of people and structures to seismic hazards, including impacts from ground-shaking in the event of an earthquake on the San Andreas fault or other Bay Area fault.
- Increased exposure of people or structures to geologic hazards (such as liquefaction, poor soil conditions, or unstable slopes) from construction in geologic hazard zones.
- Soil erosion potential from construction activities.
- Potential land subsidence from drawdown of the groundwater aquifer.

9.1.3 Hydrology and Water Quality

Construction and operation of the Project could affect surface water quality and could affect groundwater levels and quality in the Project area and in the South Westside Groundwater Basin as a whole. Potential impacts to be evaluated include:

- Changes in local groundwater quality and levels within the South Westside Groundwater Basin as a whole.
- Changes in drinking water quality due to use of treated groundwater.
- Alteration of drainage patterns and increase in stormwater flows due to increase in the amount of impervious surfaces.
- Degradation of surface water quality as a result of erosion and sedimentation, hazardous materials release during construction, and construction dewatering discharges.

9.1.4 Biological Resources

The proposed Project could result in a permanent loss of wetlands and sensitive habitats and could directly impact special-status wildlife and plant species. Temporary impacts to biological resources could result from proximity to construction activities, including noise, vibration, and dust. Potential impacts to be evaluated include:

- Impacts on wetlands and aquatic resources.
- Impacts on sensitive wildlife habitats and protected/heritage trees.
- Impacts on special-status wildlife and plant species – direct mortality and/or habitat effects.
- Conflicts with adopted conservation plans or other approved biological resources plans.

9.1.5 Cultural Resources

The proposed Project could affect archaeological, historical, or paleontological resources through ground-disturbing activities during construction, or by introducing new facilities that compromise the historic integrity of historic buildings or landscapes. Potential impacts to be evaluated include:

- Impacts on archaeological and paleontological resources.
- Impacts on the historical significance of a historic district, contributor to a historic district, or historic landscape. Of particular focus will be the proposed well facilities on 1920s Lake Merced Golf Club; the turn of the century Woodlawn Cemetery, the Cypress Lawn Cemetery, and the Golden Gate National Cemetery.
- Impacts on Native American cultural resources.

9.1.6 Traffic, Transportation and Circulation

Construction could have temporary impacts on traffic volumes, traffic safety, and parking in the vicinity of the well facility sites and at the Westlake Pump Station. Potential impacts to be evaluated EIR include:

- Temporary reduction in roadway capacity and increased traffic delays, including impacts from short-term closure of one parking and/or traffic lane. Impaired access to adjacent roadways and land uses.
- Temporary displacement of on- or off-street parking.
- Increased traffic safety hazards during construction.
- Long-term traffic increases during facility operation.

9.1.7 *Noise and Vibration*

Construction noise and vibration impacts from the proposed Project would be associated with facility construction activities, and therefore, would be temporary and short-term. Operation of the proposed pumps and treatment facilities could create permanent noise impacts. Potential impacts to be evaluated include:

- Impacts of construction noise and vibration on sensitive receptors in the vicinity of Project construction sites, especially such sensitive land uses as schools, health care facilities, cemeteries, funeral homes, and churches.
- Noise impacts from groundwater well station operation, including pumps and groundwater treatment facilities.

9.1.8 *Recreational Resources*

Construction could temporarily disrupt recreational uses in the vicinity of the well facility sites as a result of noise, dust, and temporary access restrictions. The EIR will evaluate the impact of the Project on recreational resources. Potential impacts to be evaluated include:

- Temporary and permanent impacts on recreational facilities, including but not limited to Lake Merced Golf Club and Linear Park in South San Francisco.

9.1.9 Other Environmental Issues

Other environmental issues that will be evaluated in the EIR include the Project's potential impacts on air quality and greenhouse gas emissions; public services and utilities, including the Project's beneficial effect on water supply; agricultural resources; hazards, including the potential hazards from chemical storage at the well sites; and energy resources.

The EIR also will evaluate any potential growth-inducing impacts that could result from implementation of the Project. The EIR also will address whether the Project could result in impacts that would be significant when combined with the impacts of other SFPUC or non-SFPUC projects occurring in the same geographic area as the Project and at the same time.

9.2 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. The EIR will identify the potentially significant impacts of the proposed Project. The findings of the EIR impact analysis will guide the refinement of an appropriate range of alternatives to be evaluated in the EIR that would avoid or substantially lessen significant impacts, while still meeting the project objectives. Alternatives suggested during the public scoping period would also be considered. The EIR will include a discussion of impacts associated with the No Project Alternative.

10.0 REFERENCES

- MWH. 2007. Final Alternatives Analysis Report, Groundwater Conjunctive Use Project. October.
- MWH. 2008. San Francisco Public Utilities Commission Water System Improvement Project Groundwater Conjunctive Use Project WSIP Project CUW30103 Conceptual Engineering Report. November.
- SFPUC. 2005. 2005 Urban Water Management Plan for the City and County of San Francisco. December.

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City of San Francisco Planning Department. Program Environmental Impact Report for the San Francisco Public Utilities Commission's Water System Improvement Program (State Clearinghouse No. 2005092026). 2008. September.