SAN FRANCISCO GROUNDWATER SUPPLY PROJECT

Responses to Comments

Planning Department Case No. 2008.1122E
State Clearinghouse No. 2009122075

October 2013

City and County of San Francisco
San Francisco Planning Department

Important Dates:

DEIR Publication Date:	March 13, 2013
DEIR Public Comment Period:	March 13, 2013 to April 27, 2013
DEIR Public Hearing Date:	April 18, 2013
FEIR Certification Meeting Date:	November 14, 2013

Written comments should be sent to:

Sarah Jones, Environmental Review Officer
San Francisco Groundwater Supply Project
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

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CHAPTER 9
Responses to Comments

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9.1 Introduction

9.1.1 Purpose of the Responses to Comments Document

This Responses to Comments document completes the final environmental impact report (Final EIR) analyzing potential environmental effects associated with the proposed San Francisco Public Utilities Commission (SFPUC) San Francisco Groundwater Supply Project. The proposed project would provide an average of up to 4 million gallons per day (mgd) of groundwater to augment San Francisco's municipal water supply. All of the proposed groundwater well facilities would supply groundwater to existing reservoirs, where it would be blended with San Francisco's existing municipal water supply before distribution within the city. All project components would be located on the west side of San Francisco on land owned by the City and County of San Francisco (CCSF). The well facilities would be managed by the SFPUC, including those located on land currently managed by the San Francisco Recreation and Park Department (SFRPD).

The San Francisco Planning Department, as lead agency responsible for administering the environmental review of CCSF projects under the California Environmental Quality Act[1] (CEQA), published a Draft EIR[2] on the proposed project on March 13, 2013. The Draft EIR review met the CEQA 45-day minimum public review. This Responses to Comments document provides written responses to comments received during the public review period.

The Draft EIR together with this Responses to Comments document constitutes the Final EIR for the proposed project in fulfillment of CEQA requirements and consistent with CEQA Guidelines Section 15132. This Responses to Comments document contains the following: (1) a list of persons, organizations, and public agencies commenting on the Draft EIR; (2) copies of comments received on the Draft EIR; (3) the San Francisco Planning Department's responses to those comments; and (4) revisions to the Draft EIR to clarify or correct information in the Draft EIR. See Section 9.1.3, below, for a description of the overall contents and organization of the Draft EIR and Responses to Comments document.

The Final EIR has been prepared in compliance with CEQA, including the CEQA Guidelines[3] and the San Francisco Administrative Code, Chapter 31. It is an informational document for use by: (1) governmental agencies (in addition to the CCSF) and the public to aid in the planning and decision-making process by disclosing the physical environmental effects of the project and identifying possible ways of reducing or avoiding the potentially significant impacts; and (2) the CCSF and SFPU Commission prior to their decision to approve, disapprove, or modify the proposed project. If the SFPUC approves the proposed project, it would be required to adopt CEQA findings and a mitigation monitoring and reporting program (MMRP) to ensure that

1 California Public Resources Code, Section 21000 et seq.
2 State Clearinghouse No. 200912275 and San Francisco Planning Department Case No. 2009.1122E.
3 Title 14, California Code of Regulations, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act.

mitigation measures identified in the Final EIR are implemented. See Section 9.1.2, below, for further description of the environmental review process.

In accordance with CEQA, the responses to comments focus on clarifying the project description and addressing physical environmental issues associated with the proposed project. These issues include physical impacts or changes attributable to the project rather than any social or financial implications of the project. Therefore, this document provides limited responses to comments received during the public review period that were not relevant to the proposed project or its physical environmental effects.

9.1.2 Environmental Review Process

Notice of Preparation and Public Scoping

On December 30, 2009, as described in the Draft EIR, the San Francisco Planning Department sent a Notice of Preparation (NOP) to governmental agencies, organizations, and persons interested in the proposed project (see Appendix A in the EIR). During the approximately 30-day public scoping period that ended on January 30, 2010, the Planning Department accepted comments from agencies and interested parties identifying environmental issues that should be addressed in the EIR. A public scoping meeting was held on January 20, 2010 at the Golden Gate Park Senior Center to receive oral comments on the scope of the EIR. After issuing the NOP in 2009, the SFPUC made changes to the proposed project. Consequently, a revised NOP was published on March 2, 2011 to identify those changes and to describe the proposed facilities and potential environmental effects of the revised project (see Appendix A in the EIR). The second scoping period began on March 2, 2011 and ended on April 1, 2011. In preparing the EIR on the proposed project, the San Francisco Planning Department considered the public and agency comments made on both NOPs.

Draft EIR Public Review

The Draft EIR for the proposed project was published on March 13, 2013 and circulated to local, State, and federal agencies and to interested organizations and individuals for a 45-day public review period. Paper copies of the Draft EIR were made available for public review at the following locations: (1) San Francisco Planning Department, 1660 Mission Street, 1st Floor, Planning Information Counter, San Francisco, California; and (2) San Francisco Main Library, 100 Larkin Street, and other area libraries.[4] On March 13, 2013, the Planning Department also distributed notices of availability of the Draft EIR; published notification of its availability in a newspaper of general circulation in San Francisco; and posted notices at locations within the project area. The distribution list for the Draft EIR and all documents referenced in the EIR were also available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400.

[4] Electronic copies of the EIR could be accessed through the internet at the following address: http://tinyurl.com/puccases.

During the 45-day public review period, the San Francisco Planning Department conducted a public hearing to receive oral comments on the Draft EIR. The public hearing was held before the San Francisco Planning Commission on April 18, 2013 at San Francisco City Hall. A court reporter present at the public hearing transcribed the oral comments verbatim and prepared written transcripts.

During the Draft EIR public review period, the Planning Department received comments from six public agencies, one non-governmental organization, and eight individuals (or groups of individuals). Attachment A of this Responses to Comments document includes copies of the comment letters submitted during the Draft EIR public review period. Attachment B includes copies of the public hearing transcripts. See Section 9.3 for a complete list of persons commenting on the Draft EIR.

Responses to Comments Document and Final EIR

The San Francisco Planning Department distributed this Responses to Comments document for review to the San Francisco Planning Commission as well as to the agencies, organizations, and individuals that commented on the Draft EIR. The Planning Commission will consider the adequacy of the Final EIR – consisting of the Draft EIR and the Responses to Comments document – in complying with the requirements of CEQA. If the Planning Commission finds that the Final EIR complies with CEQA requirements, it will certify the Final EIR.

Following certification of the Final EIR, the SFPUC will review and consider the certified Final EIR and the associated MMRP before making a decision and taking an approval action on the proposed project. Consistent with CEQA Guidelines Section 15097, the MMRP is a program designed to ensure that the mitigation measures identified in the Final EIR and adopted by decision-makers to mitigate or avoid the project's significant environmental effects are implemented. CEQA also requires the adoption of findings prior to project approval in cases where the certified EIR identifies significant environmental effects (CEQA Guidelines Sections 15091 and 15092). If the EIR identifies significant adverse impacts that cannot be mitigated to less-than-significant levels and the project is approved, the findings must include a statement of overriding considerations for those impacts (CEQA Guidelines Section 15093[b]). The project sponsor (in this case, the SFPUC) is required to adopt CEQA findings and the MMRP as conditions of project approval.

9.1.3 Document Organization

This Responses to Comments document is organized to complement the Draft EIR and follows its sequential numbering of chapters. The Draft EIR consists of Chapters 1 through 8 as follows:

- **Chapter 1, Executive Summary.** This chapter summarizes the proposed project, identifies potentially significant environmental impacts and mitigation measures, and describes the alternatives considered in this EIR. It also identifies areas of controversy and issues to be resolved.

- **Chapter 2, Introduction and Background.** This chapter provides project background information and describes the purpose and organization of the EIR, as well as the environmental review process.

- **Chapter 3, Project Description.** This chapter describes the proposed project (including project objectives), summarizes project components, and provides information about project construction. The chapter also lists required permits and approvals.

- **Chapter 4, Plans and Policies.** This chapter describes applicable land use plans and policies and their relevance to the project and then discusses the project's consistency with those plans.

- **Chapter 5, Environmental Setting and Impacts.** This chapter is subdivided into sections for each environmental resource topic. Each section describes the environmental and regulatory setting, the criteria used to determine impact significance, and the approach to the analysis for that resource topic. It then analyzes potential environmental impacts and the project-specific mitigation measures that have been developed to address significant and potentially significant impacts. Each section also includes an evaluation of cumulative impacts with respect to that resource topic.

- **Chapter 6, Other CEQA Issues.** This chapter discusses growth-inducing effects, summarizes the cumulative impacts, identifies the significant environmental effects that cannot be avoided if the proposed project is implemented, and describes the significant irreversible impacts, as well as known areas of controversy.

- **Chapter 7, Alternatives.** This chapter describes the alternatives to the proposed project and compares their impacts to those of the proposed project. This chapter also summarizes the alternatives that were considered but eliminated from further analysis.

- **Chapter 8, EIR Authors and Consultants.** This chapter lists the authors of this EIR.

This Responses to Comments document consists of EIR Chapter 9 plus supplemental attachments, as follows:

- **Chapter 9, Responses to Comments**

  9.1 Introduction
  9.2 Project Description Revisions
  9.3 List of Persons Commenting
  9.4 Comments and Responses
  9.5 DEIR Revisions
  Attachment A – DEIR Comment Letters
  Attachment B – DEIR Hearing Transcript

9.2 Project Description Revisions

9.2.1 Introduction to the Project Description Revisions

The SFPUC has refined the project design since publication of the Draft EIR and, as a result, has updated the Sunset Reservoir facility previously described and analyzed in the Draft EIR. These changes are described in Section 9.2.2, below, and updates to the project description are included as part of the revisions provided in Section 9.5, DEIR Revisions. Section 9.2.3 of this Responses to Comments document evaluates the environmental effects of implementing the project with the revisions to the Sunset Reservoir facility. The evaluation considers whether incorporating the project description revisions would alter the impact analysis or conclusions presented in the Draft EIR; it also describes how the project updates are accounted for in the Draft EIR and indicates any appropriate adjustments to the Draft EIR analysis.

In general, and as detailed below, the project description revisions would not substantially change the construction and operations impacts identified in the Draft EIR. In some instances the project description revisions would result in small increases in the type of or duration of construction activities required; however, these revisions would not affect the impact conclusions presented in the Draft EIR, and mitigation measures identified in the EIR would adequately address the environmental effects resulting from the revisions. Finally, the project description revisions would not require any changes to the No Project Alternative or the range of alternatives already addressed in the Draft EIR.

In summary, the environmental analysis of the project description revisions presented below indicates that no significant new information has been added to the EIR. Consistent with CEQA Guidelines Section 15088.5, the supplemental environmental analysis of the project description revisions presented below concludes that: no significant impacts would result from the project description revisions or from a new mitigation measure proposed to be implemented; there is no substantial increase in the severity of an environmental impact with the implementation of mitigation measures; and there are no additional alternatives or mitigation measures considerably different than those analyzed in the Draft EIR.

9.2.2 Description of the Project Description Revisions

The Draft EIR analyzed effects related to project facilities located at Sunset Reservoir, based on project design information available as of spring 2013. The facilities at Sunset Reservoir included the following:

- Installation of two 12-inch flow meters within vaults located on the east side of Sunset Reservoir.
- Installation of a concrete pad and a chlorine analyzer and sample station at the northwest corner of Sunset Reservoir.
- Modification of an interior room within the existing Sunset Chlorine Station located west of the west side of the reservoir's north and south basins. Modifications would include

installation of a sodium hydroxide storage tank and two chemical metering pumps, installation of a low concrete berm within the room to provide secondary chemical containment, installation of a removable skylight, installation of an emergency shower/eyewash, and relocation of an existing electrical box to the northwest building exterior.

- Installation of 300 feet of chemical injection piping below grade between the building and the north and south basins of the reservoir.

Since publication of the Draft EIR, the SFPUC has made changes to the project design of the pH adjustment facility at the Sunset Chlorine Station, and the associated piping and infrastructure. Accordingly, the EIR has been revised[5] to reflect the following changes and additions to proposed facilities at the Sunset Reservoir:

- Installation of two 12-inch flow meters within vaults located on the east side of Sunset Reservoir.

- Installation of a concrete pad and a chlorine analyzer and sample station at the northwest corner of Sunset Reservoir.

- Modification of ~~an interior room within~~ the existing Sunset Chlorine Station located west of the west side of the reservoir's north and south basins. Modifications would include the addition of a pH adjustment facility on the northeast side of the existing chlorine station. The facility would be approximately 15 feet long by 11 feet wide and approximately 11 feet high. The existing Sunset Chlorine Station is approximately 32 feet long by 17 feet wide and approximately 13 feet high. The proposed facility would have two ~~installation of a~~ sodium hydroxide storage tanks and two chemical metering pumps, ~~installation of a low concrete berm within the room to provide~~ including secondary chemical containment features, ~~installation of a removable skylight, installation of~~ and an emergency shower/eyewash~~, and relocation of an existing electrical box to the northwest building exterior~~.

- Installation of ~~300~~approximately 350 feet of chemical injection piping below grade between the building and the north and south basins of the reservoir. Some of the piping would be installed along the side of an existing culvert; however, approximately 95 feet of the piping would be installed via an excavated trench.

- Construction of a concrete vault west of the south basin, near the existing fence along 28th Avenue, which would provide installation and maintenance access for a proposed reservoir surface water inlet flow meter. The vault would be approximately 5 feet wide, 5 feet long, and 25 feet deep.

- Installation of approximately 165 linear feet of electrical conduit that would connect the proposed flow meter to the existing Sunset Chlorine Station.

The required excavation and spoils, dewatering, equipment usage, and construction schedule have been revised, as presented in Section 9.5, DEIR Revisions.

[5] For each change, new language is double underlined, while deleted text is shown in ~~strikethough~~.

9.2.3 Environmental Effects of the Project Description Revisions

The text changes that incorporate the proposed project updates into the individual impact analyses from EIR Chapter 5 are summarized below and are presented in Section 9.5, DEIR Revisions:

- **Land Use.** Sunset Reservoir facility revisions were incorporated into EIR Section 5.2; however, the minor changes to the existing Sunset Chlorine Station structure to include a small new facility rather than minor modification of the existing structure would have no effect on the analysis with respect to altering the existing character of the project area (Impact LU-1).

- **Aesthetics.** Sunset Reservoir facility revisions were incorporated into EIR Section 5.3; however, the proposed facility would be smaller in both size and height than the adjacent Sunset Chlorine Station, and would be sited between the existing station and public viewpoints to the west. The project change would not affect the analysis of impacts on scenic resources and visual character (Impacts AE-1 and AE-4).

- **Cultural and Paleontological Resources.** Sunset Reservoir facility revisions were incorporated into the EIR Section 5.5 setting discussion identifying the location of proposed project components; however, the area of disturbance considered in the impact analysis was not revised, so no change to the impact analysis was required (Impacts CP-1 through CP-4).

- **Transportation and Circulation.** The increase in spoils material that would be removed from the Sunset Reservoir construction area was revised in EIR Section 5.6 from 20 cubic yards to 100 cubic yards. Accordingly, the estimate of truck trips associated with spoils off-haul was revised from 3 to 11; however, the daily vehicle trips associated with construction activities would continue to represent less than 1 percent of existing traffic on regional roads, and the project change would not affect the impact analysis related to performance of the circulation system (Impact TR-2).

- **Noise.** Sunset Reservoir facility revisions were incorporated into the EIR Section 5.7 discussion identifying the location of proposed project components; however, the noise analysis included in the EIR considered all of the construction equipment types currently proposed and the distance between the construction work area and sensitive receptors is the same as considered in the EIR, so no change to the construction-phase impact analysis was required (Impact NO-1).

- **Air Quality.** The increase in equipment use for the Sunset Reservoir construction area was discussed in EIR Section 5.8. Accordingly, the estimate of construction-related pollutant emissions was revised; however, the minor increase in emissions would not cause the project to exceed the significance thresholds for construction-related pollutant emissions. Thus, the project change would not affect the impact analysis related to emission of criteria pollutants and pollutant concentrations (Impacts AQ-1 and AQ-2).

- **Utilities and Service Systems.** The increase in spoils material that would be removed from the Sunset Reservoir construction area was revised in EIR Section 5.6 from 20 cubic yards to 100 cubic yards. However, the total volume of spoils hauled to a landfill would continue to be less than 0.01 percent of the remaining capacity of the area's landfills, and the project change would not affect the impact analysis related to landfill capacity (Impact UT-1).

The revisions to Sunset Reservoir facilities analyzed in the Draft EIR would result in a slight increase in the magnitude of some impacts, but in no case would these updates result in new or substantially more severe impacts than those previously disclosed in the Draft EIR; change the impact conclusions presented in the Draft EIR; or require new or modified mitigation measures. Thus, inclusion of the project description revisions into the EIR as part of Section 9.5, DEIR Revisions, does not require recirculation of the EIR.

9.3 List of Persons Commenting

This Responses to Comments document is organized to respond to all comments received on the Draft EIR, including written comments submitted by letter, fax, or email as well as oral comments presented at the public hearing. This section lists all individuals and organizations that submitted comments on the Draft EIR. Commenters are grouped according to whether they commented as individuals or represented a public agency or non-governmental organization. The complete set of written and oral comments received on the Draft EIR is provided in Attachment A, DEIR Comment Letters, and Attachment B, DEIR Hearing Transcripts.

9.3.1 Federal, State, Regional, and Local Agencies, Boards, and Commissions

- California Department of Fish and Wildlife; Letter, May 2, 2013
- City of Daly City, Department of Water and Wastewater Resources; Letter, April 26, 2013
- Commissioner Michael J. Antonini; Public Hearing, April 18, 2013
- Commissioner Hisashi Sugaya; Public Hearing, April 18, 2013
- Commissioner Katherin Moore; Public Hearing, April 18, 2013
- San Francisco Recreation and Park Department; Letter, June 11, 2013

9.3.2 Organizations

- Golden Gate Audubon Society; letter, April 27, 2013

9.3.3 Individuals

- Carmen Chu, Orson Chang, Ellen Chu, Norman Chu; letter, April 27, 2013
- Edmund Chu, Orson Chang, Ellen Chu, Carmen Chu, and Eunice Chue; letter, April 24, 2013
- Megan Kennedy; letter, undated
- Tim Kennedy; Public Hearing, April 18, 2013
- Steve Lawrence; email, March 18, 2013
- Steve Lawrence; email, April 8, 2013
- Derek Leung; email, March 17, 2013
- Bill Wong; email, March 18, 2013

9.4 Comments and Responses

This section presents summaries of the substantive comments received on the Draft EIR and responses to those comments. The comments and responses are organized by subject and are generally in the same order as presented in the Draft EIR, with general comments on the EIR or proposed project elements grouped together at the beginning of the section. Comments on Chapter 1, Summary, or specific mitigation measures are included under the relevant topical section of the Draft EIR. The order of the comments and responses in this section is shown below, along with the prefix to the topic codes (indicated in square brackets):

Within each subsection under each topic area, similar comments are grouped together and identified using the topic code prefix and sequential numbering for each subtopic. For example, General Comments [GC] are listed as GC-1, GC-2, GC-3, and so on. Each topic code has a corresponding heading that introduces the comment subject; these subsections present quotes of comments and include the commenter's name. However, the reader is referred to Attachments A and B for the full text and context of each comment.

Following each comment or group of comments, a comprehensive response is provided to address issues raised in the comment and to clarify or augment information in the Draft EIR as appropriate. Response numbers correspond to the topic code; for example, the response to comment GC-1 is presented under Response GC-1. The responses may clarify the Draft EIR text or revise or add text to the EIR. Revisions to the Draft EIR are shown as indented text. New or revised text is double underlined; deleted material is shown in ~~strikethrough~~.

9.4.1 General Comments

Comment GC-1: The SFPUC system needs more storage and supplies.

"Finally, the other thing is probably we're seeing only part of the picture here because you did allude to the fact we're going to see in a few weeks a storage facility planned on the Peninsula, which is a separate project. But I think the answer to our quandary which we're in, we have a – I think it's 280 million gallons per day sort of is the point that we need. And we have to -- you know, we can only take so much out of the Tuolumne. And we're trying to find other sources.

But I think your biggest solution -- I'm not against these sources as emergency sources, but the biggest solution will be storage, to -- years are wetter and drier, and population is going to grow, and with water needs are going to grow." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

"COMMISSIONER ANTONINI: I think I have another question that, again, could come in comments and responses.

As reported in the DEIR, and we've we had this throughout the entire water -- we know that – I think the figure was 265 million gallons per day total system. I may be off, but I think that's what's stated. And of that, 184- is wholesale, and 81- is retail -- "retail" being City and County of San Francisco, couple of other exceptions. Castlewood Country Club or something. But retail is basically City of San Francisco.

Then the wholesale is all our customers who buy water from SFPUC, which is important because we make revenue out of it. It makes a lot of sense. One of the few parts of the City that actually has a positive cash flow.

But I think that the biggest probably increase in demand or bigger increase in demand may come from our wholesale side or from the retail side – although we've seen a lot of growth in San Francisco recently, and we're going to have an increase there.

But I'm not against this project for groundwater. But I'm wondering if you're exploring sources on the peninsula in land you own, in the Livermore Valley, particularly around Pleasanton, where you historically have had a lot of really good water supply there. And I know there's still a lot of pumping going on out there. And if we can expand some of the pumping in those areas -- because much of what we're pumping into the system will be used for wholesale customers. So we probably should utilize their aquifers also to meet our demand.

So that's question for responses and for another day. But I think it's an important one to answer." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

Response GC-1

The commenter generally indicates support for the proposed project but requests information regarding additional water supply options. The comment regarding the need for additional water supply storage options and consideration of the availability of other groundwater basin supplies is noted. Development of the additional water supply options discussed in this comment would not meet most of the objectives of the San Francisco Groundwater Supply Project, which are to:

- Expand and diversify the SFPUC's water supply portfolio to increase system reliability
- Increase the use of local water supply sources
- Reduce dependence on imported surface water

The proposed project is a component of the overall SFPUC WSIP, for which a Program EIR (PEIR) evaluation was performed related to potential increases in, and improvements to, the SFPUC water supply portfolio through 2018. Potential options involved water

storage improvements as well as new sources of water, including groundwater. As such, the proposed project would increase the SFPUC's water supply portfolio and the EIR analyzes the impacts associated with implementing the project as proposed, as well as alternatives to the proposed project that meet most of the project objectives. The environmental analysis of the project and alternatives did not identify significant impacts that would indicate that development of additional water supply should be considered as part of this project.

While potential development of additional water supply options is not the subject of the proposed project, the SFPUC continues to evaluate other options for increasing the available water supply to address water supply needs and demands beyond 2018 (SFPUC, 2008). In addition, the SFPUC prepares an analysis of forecasted water supply and demand in its urban water management plan (UWMP), in accordance with the requirements of the 1983 California Urban Water Management Planning Act.[6] The purpose of the act is to assure that water suppliers plan for long-term reliability, conservation, and efficient use of California's water supplies to meet existing and future demands. The act requires all urban water suppliers to prepare a UWMP every 5 years.

The *2010 Urban Water Management Plan for the City and County of San Francisco*—the SFPUC's most recent UWMP—was adopted in 2011. It analyzed water supply and demand to year 2035 under both normal and dry-year conditions (SFPUC, 2013a). However, the report entitled *2013 Water Availability Study for the City and County of San Francisco* provides a more recent analysis of the SFPUC's water supply planning for San Francisco (SFPUC, 2013b). The *2013 Water Availability Study* was updated primarily to incorporate the San Francisco Planning Department's 2012 Land Use Allocation (LUA) projections of housing and employment growth in San Francisco to estimate future retail water demands.

The updated 2012 San Francisco Planning Department's LUA projections result in a retail demand in 2035 of 84.2 mgd, which represents a 3.3 mgd, or 4%, increase over the 2035 demand projections estimated in the 2010 UWMP. The ability to meet the future demand of the retail customers depends in large part upon development of 10 mgd of local WSIP supplies, including conservation, groundwater, and recycled water. These supplies are anticipated to be fully implemented over the next 10 years. Implementation of planned, future water supply projects (i.e., San Francisco Groundwater Supply Project, San Francisco Westside Recycled Water Project, and Eastside Recycled Water Project) would be part of normal-year supplies and would help to meet projected retail demands.

6 California Water Code Division 6, Part 2.6, Sections 10610 through 10656, as amended.

Comment GC-2: The EIR is too technical in nature and too lengthy.

"The documents are lengthy." (Steve Lawrence, email, March 18, 2013)

"FWIW, your EIRs are too long, and too technical. This one, as one example, is not reasonably aimed at the decision-makers: the Commissioners. Real world non-expert people make these important decisions. How can they make them with best information if they will not be able to read and comprehend what you provide? Driving nearly blind, they approve. The process has become a formality." (Steve Lawrence, email, April 8, 2013)

Response GC-2

Comment GC-2 consists of the opinions of the commenter regarding the length and technical detail of the EIR. An EIR is an informational document intended to inform public agency decision-makers (in this case, the San Francisco Planning Commission) and the public of the significant environmental effects of a project; identify possible ways to minimize the significant effects; and describe reasonable alternatives to the project (CEQA Guidelines Section 15121). As such, the San Francisco Groundwater Supply Project EIR includes the technical information and project description details necessary to convey the environmental effects of a complex project that proposes several facilities and locations over a large area of San Francisco as well as pumping operations within a groundwater basin that has multiple existing uses and hydrologic connections to the Pacific Ocean, San Francisco Bay, and several surface water bodies. The document, as a result, is longer than EIRs prepared for less complex projects.

Comment GC-3: The Draft EIR Notice of Availability should have been more broadly distributed.

"We have a concern on the Sunset Ground Water Project 200S.1122E because of the distribution of the ground water to almost the entire city, yet not everyone in the city has received mailings of this project. We, residents in the Sunset district and the undersigned, are the ones who were not informed of such project. Reliance on posting on the internet in your web site is not an acceptable notification.

Hence, project of this magnitude because of its impact should inform all residents concerned (basically entire city) to bring to their awareness and let them voice their opinions." (Carmen Chu, Orson Chang, Ellen Chu, Norman Chu, letter, April 27, 2013)

Response GC-3

Comment GC-3 opines that mailings for the project (i.e., the Notice of Availability for the Draft EIR) should have been distributed to all San Francisco parcels that would receive

groundwater under the project. Two of the basic purposes of CEQA are to (1) inform governmental decision-makers and the public about the potential significant effects, if any, of proposed activities, and (2) provide opportunities for other agencies and the public to review and comment on draft environmental documents. CEQA Guidelines Section 15087, Public Review of Draft EIR, includes the following requirements regarding public and agency notification:

"(a) The lead agency shall provide public notice of the availability of a draft EIR at the same time it sends a notice of completion to the Office of Planning and Research. This public notice shall be given as provided under Section 15105 (a sample form is provided in Appendix L). Notice shall be mailed to the last known name and address of all organizations and individuals who have previously requested such notice in writing, and shall also be given by at least one of the following procedures:

(1) Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas.

(2) Posting of notice by the public agency on and off the site in the area where the project is to be located.

(3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll.

…

(d) The notice required under this section shall be posted in the office of the county clerk of each county in which the project will be located for a period of at least 30 days. The county clerk shall post such notices within 24 hours of receipt.

…

(f) Public agencies shall use the State Clearinghouse to distribute draft EIRs to state agencies for review and should use areawide clearinghouses to distribute the documents to regional and local agencies.

(g) To make copies of EIRs available to the public, Lead Agencies should furnish copies of draft EIRs to public library systems serving the area involved. Copies should also be available in offices of the Lead Agency. …

(i) Public hearings may be conducted on the environmental documents, either in separate proceedings or in conjunction with other proceedings of the public agency. Public hearings are encouraged, but not required as an element of the CEQA process."

Chapter 31 of the San Francisco Administrative Code governs the CCSF's CEQA procedures and goes beyond requirements provided in the CEQA Guidelines. San Francisco Administrative Code Section 31.13(d) reads:

> When the draft EIR has been prepared, the Environmental Review Officer shall file a notice of completion of such draft as required by CEQA. A copy of such notice, or a separate notice containing the same information, shall thereupon be posted in the offices of the Planning Department and on the subject site, and mailed to the applicant, the board(s), commission(s) or department(s) that will carry out or approve the project, and to any individual or organization that has requested such notice in writing. The notice of completion shall be sent by mail to the owners of all real property within the area that is the subject of the environmental impact report and within 300 feet of all exterior boundaries of such area. A copy of the draft EIR shall be provided to the applicant and to such board(s), commission(s) or department(s) and to any individual or organization that has so requested.

Distribution of the Draft EIR Notice of Availability met the noticing requirements of both CEQA Guidelines Section 15087 and Chapter 31 of the San Francisco Administrative Code. Regarding Section 15087(a), the EIR Notice of Availability was mailed to the last known name and address of all organizations and individuals who had previously requested such notice in writing. More than 6,300 notices were distributed to organizations and individuals, including parties interested in issues related to Lake Merced, Golden Gate Park, and the WSIP. In addition, although Section 15087(a) provides for additional notice by one of the three ways listed in Section 15087(a)(1) through (a)(3), notice was provided by all three additional methods. Regarding Section 15087(a)(1), the EIR Notice of Availability and notice of a public hearing were published in the San Francisco Chronicle on March 13, 2013. Regarding Section 15087(a)(2), the EIR Notice of Availability, including notice that a public hearing would be held, was posted at three locations in the vicinity of each of the six proposed well facilities and in the vicinity of proposed Sunset Reservoir project components. Regarding Section 15087(a)(3), and San Francisco Administrative Code Section 31.13(d), the EIR Notice of Availability, including notice that a public hearing would be held, was mailed to the owners and occupants of all properties within 300 feet of the parcels on which the project would be located, including the six proposed well facilities, pipeline routes, and Sunset Reservoir project components. CEQA Guidelines Section 15087(3) provides for notice to owners and occupants contiguous to the *parcel or parcels on which the project is located* (italicized for emphasis).

Regarding Section 15087(d), the EIR Notice of Availability, including notice that a public hearing would be held, was posted at the City and County of San Francisco Office of the County Clerk at City Hall, Room 168, 1 Dr. Carlton B. Goodlett Place. Regarding Section 15087(f), the Draft EIR was distributed to state agencies directly from the San Francisco Planning Department as well as from the State Clearinghouse. The Draft EIR was distributed to regional and local agencies directly from the Planning Department. Regarding Section 15087(g), the Draft EIR was available to the public from the Planning Department's EIR Coordinator for this project, Tim Johnston, from the Planning Department's Planning Information Center, and at the following libraries: the

San Francisco Main Library and the Ortega, Anza, Richmond, Park, and Sunset branches; the Stanford University Jonsson Library of Government Documents; the Government Publications Department of the San Francisco State University Library; the Hastings College of Law Library; and the University of California Institute of Government Studies. Regarding Section 15087(i), a public hearing on the Draft EIR was held on April 18, 2013.

Comment GC-4: Thorough community outreach should be conducted.

"Finally, RPD recommends that the PUC conduct thorough community outreach with nearby residents, park users, and other concerned stakeholders as the proposed projects moves through the planning and approval process, in order to identify and address any potential concerns.

Thank you for considering our comments and we look forward to further collaboration with the project sponsor as the project moves forward." (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response GC-4

Section 9.1.2, Environmental Review Process describes public outreach conducted during the CEQA process, including NOP and Scoping, Draft EIR review, and this Responses to Comments document. In addition, see the response to Comment GC-3 regarding public outreach conducted during the Draft EIR review period.

In addition to CEQA public outreach, the SFPUC has conducted public outreach activities for the proposed project since 2009. Their over 30 outreach activities included mailers to properties in the vicinity of proposed well facilities, informal presentations, advertisements and announcements in neighborhood newspapers, open house and coffee meetings, and participation at street festivals and farmers markets (SFPUC, 2013c). In addition, SFPUC maintains and frequently updates a project website located at: http://sfwater.org/bids/projectDetail.aspx?prj_id=322.

Finally, as described on EIR page 3-52, in advance of construction activities, SFPUC would provide a 10-day public notice describing project construction activities, schedule information, and anticipated effects such as temporary closure of parking spaces or detours, and contact information. The notice would be distributed to adjacent properties and included on the SFPUC website along with project information.

Comment GC-5: The term "adaptive management" should be added to the EIR Glossary.

"The Golden Gate Audubon Society (GGAS), representing about 4000 members in the Bay Area, is pleased to give it's support to the proposed ground water supply project with some limited reservations. Most of our comments and concerns regard Lake Merced.

In the introductory glossary we think it would be wise to add "adaptive management". It is a critical aspect of this project and it should be defined." (Golden Gate Audubon Society, letter, April 27, 2013)

Response GC-5

In response to this comment, the EIR Glossary, page xvii, has been revised to include the following term:

> **Adaptive management.** The iterative process of learning from experience and adjusting management practices based on the feedback received through monitoring.

This revision does not change the analysis or conclusions presented in the EIR.

Comment GC-6: Basin recharge should be improved.

"One thing we did not see in this document is reference to aquifer recharge. Admittedly, our focus in reading the EIR was focused on Lake Merced and impacts on birds. So if our concern has been addressed we apologize for having missed it. If it is not addressed it should be. Groundwater recharge is becoming a more significant issue in San Francisco with each passing day. The problem is that many property owners are paving open space on their property with impervious materials such as concrete, artificial grass, and plastic with river rocks on top. The solution is two-fold. First, an education program should be developed and presented. It would be wise to include information about the use of water gardens and other infrastructure that can be used to decrease runoff. Second, zoning regulations requiring open ground on all lots should be strictly enforced. Third, all existing and new public and private parking lots, paved open space areas, and commercial buildings that require covering large areas of ground should be required to construct infrastructure on their property that would capture and retain rain water that could percolate into the ground.

Thank you for the opportunity to comment on this document. GGAS looks forward to the successful conclusion of this project and the integration of groundwater into the water system in San Francisco. If you have questions or if there is anything GGAS can do to provide more information please feel free to contact us." (Golden Gate Audubon Society, letter, April 27, 2013)

"Secondly, how does the city plan on replenishing the North Westside Groundwater Basin? There is nothing in the Draft EIR that explains how this aquifer will be replenished. The Outer Sunset District is covered by concrete. How is the aquifer going to be recharged? Lake Merced is already low. What are the city's plans for replenishing the aquifer?" (Megan Kennedy, letter, undated)

Response GC-6

Comment GC-6 discusses the need for aquifer recharge. EIR pages 5.16-27 and 5.16-31 discuss the existing groundwater budget (or water balance) for the basin, that is, the amount of water going in and coming out. As discussed, inflow or "recharge" components of the groundwater basin include subsurface inflows from outside of the basin, recharge from precipitation, recharge from applied water (irrigation), recharge from surface water such as Lake Merced and Pine Lake, and recharge from leakage of sewer and water pipes (LSCE, 2010). Lake Merced can either lose water to the groundwater system or gain water and therefore can be considered both a component of groundwater "inflow" and "outflow" depending on lake and groundwater levels, which vary seasonally and annually. Pine Lake, on the other hand, discharges water to the groundwater system and would only be considered a component of groundwater inflow. Based on modeling of historical groundwater conditions in the Westside Groundwater Basin between 1982 and 2002, groundwater storage in the entire groundwater basin increased an average of 174 acre-feet per year (afy) during this time period (HydroFocus, 2011).

See also the response to Comment HY-9 regarding the project's potential to substantially deplete the groundwater basin. As discussed in that response, groundwater pumping by the proposed project would not result in substantial basin depletion. Regarding the comment that aquifer recharge should be increased, a separate effort to improve aquifer recharge is not a component of the San Francisco Groundwater Supply Project. Consequently, the EIR analysis takes into account existing conditions and existing recharge processes to determine what effect the project would have on the groundwater budget. This comment has been provided to the project proponent for their consideration in future planning processes.

Comment GC-7: Comment regarding Responses to Comments process.

"COMMISSIONER ANTONINI: Okay. Thank you. No, I'm not saying it isn't within the document. I just was raising that concern publicly so people would realize that they have to read the documents, pay attention to it, and hopefully then there will be responses -- comments and responses." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

"And one last comment to the gentleman who testified earlier, our only person who testified, you can of course submit written comments on this if you want to expand on your ideas or concerns or whatever. You don't have to -- you don't have to just do it here. You can write a letter to the PUC on your concerns." (Hisashi Sugaya, Commissioner, Public Hearing Transcript, April 18, 2013)

"The California Department of Fish and Wildlife (CDFW) has reviewed the draft Environmental Impact Report (EIR) for the San Francisco Groundwater Supply Project (Project), proposed by the San Francisco Public Utilities Commission (SFPUC). The Project consists of the construction and

operation of six potable groundwater well facilities: two that would be converted from existing irrigation well facilities and four that would be newly constructed. Each facility would include a groundwater production well and a pump station. Included in the Project is construction of a distribution system, including pipelines and connection points, that would connect five of the well facilities to Sunset Reservoir; the sixth well would connect to the existing Lake Merced Pump Station and require a short length of distribution piping to make this connection. The SFPUC would also construct a pH adjustment facility at Sunset Reservoir within an existing reservoir building and a chlorine analyzer at the reservoir.

CDFW is identified as a Trustee Agency pursuant to the California Environmental Quality Act (CEQA) Section 15386, and is responsible for the conservation, protection, and management of the state's biological resources. Pursuant to Fish and Game Code Section 1801, it is the policy of the state to encourage preservation, conservation, and maintenance of wildlife resources, including perpetuation of all species of wildlife for their intrinsic and ecological values. In addition, pursuant to Fish and Game Code Section 1802, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. CDFW is submitting comments on the draft EIR to inform the Lead Agency of our concerns regarding sensitive resources which could potentially be affected by the Project, and provide guidance to the SFPUC to ensure that biological resources are protected." (California Department of Fish and Wildlife, letter, May 2, 2013)

Response GC-7

Comment GC-7 regarding the Draft EIR public review and comment process is noted and is consistent with the purpose of the Responses to Comments document and the public review process, as described in Sections 9.1.1 and 9.1.2 above.

9.4.2 Project Description

Comment PD-1: Facility design and existing traffic could result in pipeline rupture.

"So I would hope -- the third question I want to ask, and you didn't have to answer it today, but are we addressing in this report -- it may be in here -- the intra-city pipeline conditions? Because we're going to be putting in new pipelines -- although it isn't part of this project -- there may be changes in pressure that were alluded to by the speaker that spoke from the public, and making sure that we don't have any recurrences of situations that happened at 15th and Wawona and analyzing what effects, if any, this new water supply might have on the pressures within the existing pipes, many of which are fairly old." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

"TIM KENNEDY: Hello. My name is Tim Kennedy. I live at 2587, 41st Avenue, San Francisco, California 94116.

I've come in here today because I am a certified distribution operator and a certified treatment operator. I have nine years in the water industry. And my concern today is as a resident of 41st Avenue.

My primary concern is not with the idea of groundwater wells. I think it's a great idea, especially for -- in cases of emergency such as earthquakes, give us a local water source.

My primary concern is with the pipeline location and particularly with the South Sunset well location.

In the EIR, it says that the well is located on 40th and Wawona, and then the pipeline will go north on 40th; it will make a 90 -- goes up one block north, makes a 90-degree angle; goes one block west, makes another 90 degree angle, and then goes north.

That's going to cause a -- when a well runs, it's like a pump. It's like a vertical turbine pump. It's going to cause a lot of stress on those 90-degree angles. I think that's going to cause problems for the residents and the homeowners in that area. It could cause main breaks." (Tim Kennedy, Public Hearing Transcript, April 18, 2013)

"My other concern is that, on the two wells at both South Sunset and West Sunset, in the -- around homeowners, there's no surge tanks. Normally when you run a well, there should be a surge tank following the discharge side of a well that absorbs the initial impact of the well coming on or the pump coming on and creates less stress on any of the pipelines." (Tim Kennedy, Public Hearing Transcript, April 18, 2013)

"As a homeowner I'm concerned with the 90s the fact that there could be some pipeline rupture without surge tanks. Thank you." (Tim Kennedy, Public Hearing Transcript, April 18, 2013)

"Thirdly, with regards to the South Sunset Well Location and the West Sunset Well Location, why is the city building a well in a residential area without a discharge surge tank. Discharge surge tanks relieve stress on pipelines from sudden changes is pressure and flow. They prevent damage and pipeline rupture. Does the city not understand that discharge surge tanks in residential areas are common practice? Is the city not concerned with property damage and pipeline rupture?" (Megan Kennedy, letter, undated)

"Finally, as a resident of 2587 41st Avenue, I am concerned with the pipeline location of the South Sunset Well project. The city plans to have a vertical turbine pump (without a discharge surge tank) pump north for one block to 40th Ave and Vicente, then take a 90 degree turn west for one block to 41st Ave and Vicente, then make another 90 degree turn north on 41st Ave. This is not a good idea and may cause pipeline ruptures, especially at those 90 degree turns. Why not go north on 40th Avenue until the West Sunset Well Location? This would call for only one 90 degree turn instead of two in such a short distance." (Megan Kennedy, letter, undated)

"2. The area going to be the drilling site is not the best due to the high traffic. Do you realize how many truck and school bus use 41st ave. as their main traffic lane. The weight of heavy traffic will damage the water pipeline in the long run." (Bill Wong, email, March 18, 2013)

Response PD-1

The circumstances regarding pipeline design and pipeline pressures discussed in these comments have been accounted for in the project design. That level of technical detail was not included in Chapter 3, Project Description, of the EIR because it was not information that was needed to support the analysis of CEQA environmental topics, but has been provided by the SFPUC as follows (SFPUC, 2013a):

The project design engineers conducted a surge analysis to account for starting and stopping of the six wells. Surge tanks were designed and would be installed in each well facility. Concrete thrust blocks would be installed at pipeline turn locations, including the 90-degree turns along Vicente Street.

The specified pipeline materials would be rated for installation beneath city streets and would meet building code requirements. The type of earthen backfill around the pipelines, the degree of compaction of the backfill, and the thickness of paving would be designed to withstand the heavy surface vehicular traffic without damage to the pipelines.

Comment PD-2: Existing Golden Gate Park windmills could be utilized as part of the project.

"And then my final question will be are we going to utilize the two windmills that we have at the end of Golden Gate Park, which I think are operational, to help with this whole process because it would make sense to use -- there's a lot of wind out there, and it probably would be a good way to -- that's a different site from where your wells are going to be, but it would be good if we could figure out a way to use what's already there." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

Response PD-2

While the Golden Gate Park windmills formerly provided power to pump groundwater for irrigation purposes, restoration of the windmills did not include restoration of substantial groundwater pumping capabilities such that the windmills could provide the power required to support the proposed project. Further, the proposed project does not include restoring the groundwater pumping capabilities of the windmills. Rather, hydroelectric power from the Hetch Hetchy Regional Water System is available and would provide the power to operate the new groundwater well facilities without the need to construct additional facilities.

Comment PD-3: Consider improving the areas around the South Windmill well facility project site.

"COMMISSIONER SUGAYA: Just a quick comment on Figure 3-13A, which is the South Windmill replacement well facility figure. It shows in green proposed native grass. But the site that you're going to be proposing the building and the rest of the construction and the pipelines and everything are sitting in an area which currently is void of a lot of vegetation.

And I think some of it is being used as a trash dump or something -- or used to be. But the magenta line, the limit of ground disturbance, doesn't take into consideration this whole -- I don't know if it was a quarry at one time or something. Whatever it was -- doesn't encompass the rest of the area.

And I think that it behoove the PUC and Rec Park to take a look at that area, as long as work is going to proceed, to see if it can't be -- if the vegetation program, whether it's native grasses or trees, couldn't be expanded somewhat to include re-vegetating that entire area." (Hisashi Sugaya, Commissioner, Public Hearing Transcript, April 18, 2013)

Response PD-3

This comment is noted. The SFRPD currently uses the area surrounding the proposed South Windmill Replacement well facility to store logs, construction debris, and construction materials. Extended planting in the vicinity of the well facility is not part of the proposed project; the project does include revegetation of any areas disturbed by the project. The San Francisco Clean and Safe Neighborhoods Park Bond (Prop B – 2012) provides funding for restoration activities in Golden Gate Park, which could include the log storage area that is outside of the project area. Planning and environmental review have not commenced for such a future project.

Comment PD-4: Well facilities would be vulnerable due to locations.

"COMMISSIONER MOORE: I find the entire story about the San Francisco's water supply extremely fascinating. I am concerned that the addition of new wells in strategic locations makes these wells highly visible. And what are we considering for these facilities becoming vulnerable,

which is very important part when you have visible water supply facilities." (Katherin Moore, Commissioner, Public Hearing Transcript, April 18, 2013)

Response PD-4

The aboveground facilities (well facilities and pH adjustment facility) have been designed in accordance with SFPUC Security Department requirements. Such features include: providing stronger hardware for doors and locks; installing vents instead of windows; placing security grills behind vents and beneath skylights; implementing secure card-reader access to buildings; installing intrusion alarms at all potential openings; using security cameras; restricting vegetation height to maintain a minimum of 10 feet of clear space around buildings; and providing at least 8 feet of height between the ground surface and a building or fence to prevent access to the building roof (SFPUC, 2013a).

Comment PD-5: Potential cross-contamination between recycled water and groundwater could occur.

"A second part of that question is when you combine potable and recycled water in one project, what do we do about absolutely being sure about cross-connections. Those would be two questions I would like to see specifically answered." (Katherin Moore, Commissioner, Public Hearing Transcript, April 18, 2013)

Response PD-5

The proposed project would not combine potable and recycled water. The proposed project would develop a potable water source from groundwater. SFPUC is developing a separate project proposal to provide recycled water to Golden Gate Park to meet its irrigation needs. As described in the Chapter 3, Project Description, of the EIR, it is expected that landscaping in Golden Gate Park would be irrigated with recycled water in the future. If recycled water is eventually delivered to Golden Gate Park by a separate project included in the WSIP, groundwater would still be available as a backup irrigation supply in case recycled water was ever not available for irrigation. Measures have been incorporated into the project design to prevent cross-contamination of groundwater and recycled water, including piping features such as a "swivel-ell" pipe coupling or an air gap. In addition, State regulations require that irrigation systems be designed and operated to prevent recycled water irrigation within 50 feet of drinking water wells (SFPUC, 2013a). While not included as part of the proposed project, it is noted that implementation of the recycled water project will require compliance with California Department of Public Health's California Safe Drinking Water Requirements, including use of purple piping to identify recycled water distribution pipelines (Section 116815) and California Code of Regulations Title 22 Section 64572, including separation of recycled water pipelines and water mains by at least 4 or 10 feet horizontally (depending on the level of recycled water treatment) and 1 foot vertically.

Comment PD-6: Expression of support for project objectives.

"GGAS agrees with and supports the project objectives:

☐Expand and diversify the SFPUC's water supply portfolio to increase system reliability
☐Increase the use of local water supply sources
☐Reduce dependence on imported surface water

In addition, the project would provide potable groundwater for emergency supply in the event of an earthquake or other major catastrophe (SFPUC, 2009)." (Golden Gate Audubon Society, letter, April 27, 2013)

Response PD-6

The commenter's agreement with and support of the project objectives is noted.

Comment PD-7: Request for information regarding potential Golden Gate Park supplemental lake water supply.

"And another comment, which is a question, I guess, regarding the lakes in Golden Gate Park, particularly Chain of Lakes, which are naturally occurring lakes. I think they're the only ones in Golden Gate Park which are naturally occurring. In recent years, they seem to be virtually stagnant, you know, overgrown and not in very good shape. And I'm wondering if your plan addresses the needs of these lakes to have enough water supply and movement in the water, even though these are Rec Park facilities, I understand, but they're dependent upon water that's come from their pumping at Golden Gate Park which will be somewhat affected by your groundwater pump.

So, I mean, you don't have to necessary reply but that's -- you know." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

Response PD-7

The proposed project includes groundwater pumping to secure additional municipal water supply for distribution to SFPUC system customers. The SFPUC currently provides some water supply to Golden Gate Park (and all irrigation water supply for the Golden Gate Park Panhandle); the SFPUC would continue to do so in the future while the proposed project is operational, including supplementing the water supply of the park lakes, including Chain of Lakes. In addition, the proposed project would provide backup water supply to the park's irrigation water supply system.

Under Phase 1 of the proposed project, the existing Golden Gate Park irrigation wells would continue to supply most of Golden Gate Park's irrigation water supply. Project groundwater pumping of a new well located in Golden Gate Park and 3 wells to the

south of the park would not substantially affect the production capacity of the existing Golden Gate Park irrigation wells and groundwater-dependent land uses (including lake fill) would continue to be supported (see Impact HY-6, EIR pages 5.16-80 to 5.16-84). Phase 2 of the proposed project would not be implemented unless and until a separate recycled water project were approved and constructed, which would provide Golden Gate Park irrigation supply, including lake fill. Phase 2 conversion of the existing irrigation wells to provide municipal water supply could then occur, which would result in a slight reduction in the existing total groundwater pumping in the North Westside Groundwater Basin because the pumping rate of existing Golden Gate Park irrigation wells is slightly greater than the proposed pumping rate of wells to be converted from irrigation wells to municipal water supply wells under the proposed project (see EIR Section 5.1.5, Overview of Groundwater Modeling Approach, EIR pages 5.1-40 to 5.1-51).

As discussed on EIR page 5.16-68, the Golden Gate Park lakes do not intersect the groundwater table and are not hydraulically connected with the aquifer. Groundwater pumping under the proposed project would, therefore, not affect the water levels of the Golden Gate Park lakes.

Comment PD-8: Coordinate project construction and implementation of mitigation measures with the San Francisco Recreation and Park Department.

"RPD staff plans to work with the PUC to ensure that the mitigation measures proposed in the DEIR are fully and successfully implemented. In particular, we request that the PUC coordinate closely with RPD's Natural Areas Program staff on the mitigation measures relating to biological resources at Lake Merced and Golden Gate Park, in order to ensure protection of the special-status species that are identified in the DEIR. Additionally, we request that the PUC coordinate with RPD's Planning Unit and/or Recreation Programs staff to ensure that changing water levels at Lake Merced do not negatively affect recreational boating programs and activities.

We also wish to note the following important considerations for successful implementation of the proposed project:

- Implementation and construction of the proposed facilities should be coordinated closely with our Operations Division and recreation program staff to ensure that work does not disrupt public access to the park facilities.
- Renovations are planned at the West Sunset Playground through the 2012 Clean and Safe Neighborhood Parks Bond. It is anticipated that construction on these park improvements will begin in May 2015 and be completed in August 2016. All work proposed at the West Sunset Playground as part of the proposed project should be planned and carried out in close coordination with RPD and the bond-funded renovation work.
- The facilities at South Sunset Playground will need to be constructed entirely from the street side of the park in order to avoid interruptions to the field programming.

- These projects have been presented to the Recreation and Park Commission as informational items only. The project details for each proposed location, including final design, scope and schedule, will need to be brought before to the Commission formally for their approval.
- Per City Charter requirements, the proposed new Central Pump Station Well Facility in Golden Gate Park will require approval from the Board of Supervisors." (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response PD-8

In response to Comment PD-8 requesting that project construction and implementation of mitigation measures be coordinated with San Francisco Recreation and Park Department staff and that Recreation and Park Commission approval would be required, it is noted that implementation of Mitigation Measure M-BI-3: Plant Replacement Trees (EIR page 5.14-49) specifically requires coordination with SFRPD. In addition, EIR Section 3.6.1, Approvals Required, includes the following required approval: San Francisco Recreation and Parks Commission approval and adoption of findings necessary for construction and maintenance of well facility structures on park lands, and approval of an agreement with the SFPUC regarding construction in and use of park-managed property (EIR page 3-61). It is expected that SFPUC coordination with San Francisco Recreation and Park Department would be required to develop the agreement with SFPUC regarding construction in and use of park-managed property, and that such coordination could include the details identified by department staff in Comment PD-8. It is also expected that the agreement would include necessary conditions to ensure that field programming, park access, ongoing park maintenance activities, and repairs and renovations are not disrupted.

EIR Section 3.6.1, Approvals Required, also includes the following required approval: San Francisco Board of Supervisors adoption of CEQA findings, approval of the well facility structures in Golden Gate Park, and appropriation funding (EIR page 3-61).

9.4.3 Transportation and Circulation

Comment TR-1: The West Sunset well facility would affect parking.

"4. Putting a pump station on 40th Ave and Quintrar (sic) street will only create parking problem. During weekend and summer, The parking lot is always occupy full. With pump station at the location, it will going force more parking problem in the neighborhood." (Bill Wong, email, March 18, 2013)

Response TR-1

Comment TR-1 discusses parking conditions at the West Sunset Playground. A discussion of parking conditions is included in the EIR on pages 5.6-25 and 5.6-26. As noted there, construction staging and construction worker parking would be temporarily located at a

staging area within the parking lane along Quintara Street, from 41st Avenue to just east of 40th Avenue, during the approximately 15- to 18-month construction period at the West Sunset well facility. In addition, a portion of the West Sunset Playground parking lot would be included in the project construction area. During construction, the number of on-street parking spaces and the capacity of the parking lot would be reduced, temporarily affecting automobile parking, and area residents may have to find alternate parking spaces in the surrounding area. Following project construction, on-street parking and off-street parking at the West Sunset Playground parking lot would be restored, with the possible exception of one parking space associated with the well facility (at the edge of the proposed concrete paving area).

9.4.4 Recreation

Comment RE-1: Siting of well facilities would not likely affect prominent park locations or uses.

"Staff from the RPD Capital and Planning Division worked with the PUC on the planning and design of the proposed project from 2006 to 2010, and provided written comments to PUC stating general conditions for the construction of facilities at RPD properties. We are pleased to see that the proposed project as presented and analyzed in the DEIR is consistent with the feedback provided by RPD staff through our earlier correspondence with the PUC, thereby minimizing potential adverse impacts on recreational uses and facilities. Specifically, the proposed new well facilities are generally small in footprint and designed to be compatible with adjacent recreational uses and open space. In the case of Golden Gate Park and Lake Merced, the new pump facilities are located adjacent to existing utility and/or maintenance facilities and therefore are not expected to affect prominent locations or actively used recreational areas within the parks." (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response RE-1

The comment summarizing coordination that occurred between the San Francisco Recreation and Park Department and SFPUC regarding well facility siting and design is noted. Consistent with Comment RE-1, EIR Impact RE-2 (EIR page 5.11-10) indicates that proposed well facilities would not be located on active play fields at South Sunset or West Sunset Playgrounds, or in high visitor use areas of Golden Gate Park. The Lake Merced well facility site is within an area managed by SFPUC and is not open to the public. Thus, project siting and operation would not result in the greater use of recreational facilities elsewhere in the park or outside of the park due to loss of recreational use areas within the park. For these reasons, there would be a less-than-significant impact relative to a potential increase in the use of existing neighborhood and regional parks or other recreational facilities, and substantial physical deterioration of the facilities would not occur or be accelerated; therefore no mitigation is required.

Comment RE-2: The project could affect Lake Merced water levels and recreational boating programs.

"Thank you for providing the San Francisco Recreation and Park Department (RPD) with the opportunity to review the Draft Environmental Impact Report (DEIR) for the San Francisco Groundwater Supply Project.

The proposed project would involve construction of new groundwater well facilities at three RPD properties: West Sunset Playground, South Sunset Playground, and Golden Gate Park. In addition, two existing well facilities in Golden Gate Park would be replaced (the existing irrigation well facilities would be demolished, and new groundwater wells of similar size would be constructed in the same locations).

A fourth new groundwater well facility would be built at Lake Merced on land owned by the project sponsor, the San Francisco Public Utilities Commission (PUC). This facility would be located adjacent to RPD-owned and managed lands surrounding Lake Merced, and the operation of this well could also potentially affect RPD's recreational boating programs at the lake." (San Francisco Recreation and Park Department, letter, June 11, 2013)

The following topics identified in the DEIR are of particular interest to RPD:

- Water Levels at Lake Merced, …" (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response RE-2

In response to Comment RE-2, EIR Impact RE-3 (EIR pages 5.11-20 to 5.11-27) discusses the potential for the project to physically degrade existing recreational resources. As discussed, the lake itself is a recreational resource used for boating/paddling and fishing, including fishing from floating and stationary docks. Reduced water levels would reduce the lake acreage available for boating and fishing and detract from the scenic quality of the lake. There may be periods during operation of the project in drought conditions when there is not a sufficient lake depth to support the approximately 250 existing daily on-water users (Kinsey, 2012). Further, the water's edge could be more than 150 feet farther from the existing shoreline, in which case stationary docks would not be in contact with the water's edge and floating docks would have to be moved to provide water access. In addition, under the proposed project, East Lake would nearly dry up and Impound Lake would dry up altogether during an extended drought. Following an extended drought, lake level conditions and associated effects on recreational resources would improve as water levels increase due to increased precipitation. Recreational resources would likely be degraded substantially, as described above, and therefore, operation of the proposed project would result in a significant impact on Lake Merced as a recreational resource. However, Mitigation Measure M-HY-9, Lake Level Management for Lake Merced requires the SFPUC to implement lake level management procedures to

maintain Lake Merced at water levels similar to conditions that are predicted to occur without the project. Therefore, with implementation of Mitigation Measure M-HY-9, Lake Merced would be maintained as a recreational resource at conditions similar to that which would be expected without project-related pumping. These corrective actions include the additions of supplemental water and/or alteration of pumping patterns, as necessary. As a result, no additional recreation-specific mitigation is required.

9.4.5 Biological Resources

Comment BI-1: Tree and vegetation effects should be addressed.

"And also, if you're going to be constructing new pipelines, I assume trenching would -- may effect the trees between the current and existing road, which is Martin Luther King, and your well site. So I would hope that any kind of vegetative disturbance would be replaced in kind or that there would be a vegetation program for that area as well. That means between the well site and the road." (Hisashi Sugaya, Commissioner, Public Hearing Transcript, April 18, 2013)

"Mitigation for vegetation destruction at project sites should include replanting with native vegetation when possible or with habitat appropriate non-native vegetation if necessary. Under no circumstances should weeds be allowed to take over areas near any of the project sites. Should additional mitigation be necessary, it would be beneficial to remove non-native, invasive vegetation from the shoreline of Lake Merced and replant it with native vegetation." (Golden Gate Audubon Society, letter, April 27, 2013)

"*Mitigation Measure M-BI-3: Plant Replacement Trees.*

M-BI-3 states that the SFPUC shall replace trees removed with trees of equivalent ecological value (i.e., similar species) at a 1: 1 ratio, or if that is not feasible, at a ratio of one-inch for every one-inch removed at the tree's diameter at breast height (dbh); and that tree replacement plantings shall be monitored annually for a minimum of three years, and if necessary, replanted to ensure success of the replacement plantings.

CDFW recommends replacing trees and non-native vegetation with native trees and native vegetation that will attain similar height and canopy cover. Replacement vegetation and trees should be monitored for a minimum of 5 years. Trees should have a 60% success rate at the end of 5 years." (California Department of Fish and Wildlife, letter, May 2, 2013)

"The following topics identified in the DEIR are of particular interest to RPD:

…

- Tree Removal" (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response BI-1

Comment BI-1 discusses vegetation disturbance, particularly at the South Windmill Replacement well facility. As shown on EIR Figure 3-13a, most of the ground disturbance associated with construction of the South Windmill Replacement well facility would be within the existing storage area for logs, construction debris, and construction materials, which is substantially devoid of vegetation. The area surrounding the well facility that would be disturbed by the project would be seeded with native grass following project construction. The project would include installation of a groundwater pipeline and an overboard pipeline between the well facility and Martin Luther King Jr. Drive that would traverse a non-native forest area dominated by blue gum eucalyptus and Monterey cypress and containing tree-sized *Myoporum* shrubs (EIR page 5.14-11). As discussed in Impact BI-3 (EIR pages 5.14-47 through 5.14-48), tree removal would only be required at the Lake Merced, West Sunset, and North Lake well facilities. Tree removal would not be required at the South Windmill Replacement well facility. It is also noted that protection of trees adjacent to the construction areas is proposed to be adopted by the SFPUC as part of the project (see EIR page 3-17, Site Preparation and Construction).

As described above, tree removal would be required at the Lake Merced, West Sunset, and North Lake well facilities. The five trees to be removed from SFRPD-managed lands are Monterey cypress and would be replaced with trees of equivalent ecological value (EIR Mitigation Measure M-BI-3). The CDFW recommendation to extend monitoring of tree replacements to 5 years to achieve a 60% success rate (rather than 3 years and replacement of trees at a 1:1 ratio, as indicated in Mitigation Measure M-BI-3) is noted, but is not required to avoid a significant impact related to conflicts with applicable local policies or ordinances. The mitigation measure requires replanting within the first 3 years if necessary to ensure the success of the replacement plantings at a 1:1 ratio, or 100 percent replacement. Monterey cypress are typical species that establish successfully within the Golden Gate Park and West Sunset Playground areas, and existing Monterey cypress in the vicinity of the proposed project areas are mostly in fair to good health (Environmental Science Associates, 2012). It is expected that this species would establish quickly following planting, and monitoring for three years is deemed appropriate to ensure replaced trees have become established and are in good health. Because the land where tree replantings would occur is managed by the SFRPD, the selection of tree species, and whether to use native trees, would be determined in coordination with that city agency; however, as stated in the mitigation, removed trees would be replaced with trees of equivalent ecological value. As noted above, SFPUC proposes as part of the project to protect trees adjacent to the construction areas. The proposed project facility footprints and areas of disturbance are primarily located in landscaped areas, areas devoid of vegetation, or ruderal areas (see EIR pages 5.14-11 through 5.14-12). Thus, project construction activities and facility siting would not cause substantial loss of sensitive vegetation habitat. Native grass seeding and other landscaping would be installed, as discussed in EIR Chapter 3, Project Description, Section 3.4.1, Groundwater Well Facilities, and in Section 5.3, Aesthetics, Impacts AE-4 and AE-5, which include representation of the draft landscape plans for each well facility.

Comment BI-2: Breeding bird nest avoidance measures should be incorporated as a mitigation measure.

"Pages 5.14-44 and 5.14-45 of the draft EIR indicate a potential for impacts to bird nests by vegetation, tree removal and project activities. CDFW recommends the methodologies discussed for nest avoidance in this section be incorporated into a mitigation measure that also includes mitigation, such as additional tree plantings, for any potential significant effects.

CDFW appreciates the opportunity to comment on the San Francisco Groundwater Supply Project. CDFW staff is available to meet with you to further clarify our comments and provide technical assistance on any changes necessary to protect resources. If you have any questions, please contact Ms. Jeanne Chinn, Environmental Scientist, at (707) 944-5523 or jeanne.chinn@wildlife.ca.gov; or Mr. Craig Weightman, Senior Environmental Scientist, at (707) 944-5577." (California Department of Fish and Wildlife, letter, May 2, 2013)

"Construction timing should be geared toward starting projects in sensitive areas like woodlands, grasslands, marshes, etc., prior to the nesting season so as to reduce impacts on nesting birds. The nesting season in and around San Francisco begins as early as January for a very few species. The most likely to be impacted would be Great Blue Heron, Great Horned Owl and Anna's Hummingbird. The nesting season for the bulk of our nesting species begins in mid February, peaks in late April, fledging occurs through May and early June, and most nesting is completed by mid July. However, depending on various other variables the season can continue into August or later. Surveys are necessary to determine if nesting birds are present." (Golden Gate Audubon Society, letter, April 27, 2013)

Response BI-2

Preconstruction surveys for nesting birds have been incorporated into the project description as project construction requirements, as discussed in EIR Section 5.14, Biological Resources, Impact BI-1. As described in Chapter 3, Project Description, Section 3.4.1, Groundwater Well Facilities, under the heading "Site Preparation and Construction," the SFPUC would conduct tree removal and pruning activities as well as other construction activities outside of the bird nesting season (January 15 to August 15) to the extent feasible. If construction during the bird nesting season could not be fully avoided, a qualified wildlife biologist would conduct preconstruction surveys for nesting birds prior to project work. The SFPUC would ensure that the preconstruction surveys are conducted within 7 days of the start of construction (i.e., activities involving active ground disturbance, vegetation removal, or building demolition). If active nests are located during the preconstruction survey, the SFPUC would set up and maintain a line-of-sight buffer area around the active nest and prohibit construction activities within the buffer; modify construction activities; and/or remove or relocate active nests. The project requirements to conduct nesting bird surveys and install appropriate buffers are proposed to be adopted by

the SFPUC as part of the project, and their implementation would be adequate to protect the reproductive success of nesting birds. Tree planting would not be necessary to address significant impacts on nesting birds because the requirements proposed to be adopted by SFPUC as part of the project would avoid impacts to nesting birds. However, to the extent that trees would be removed under the proposed project within areas managed by the SFRPD, the SFPUC would be required to replace those trees by Mitigation Measure M-BI-3, Plant Replacement Trees. This mitigation measure is required to address potential conflicts with applicable local policies or ordinances, such as a tree preservation policy.

Comment BI-3: The EIR description of bird species should be revised.

"Though we agree there is a low potential for impacts on Bank Swallows, it is incorrect to state they occasionally forage at Lake Merced (Table 5.14-2). The hundreds of Bank Swallows that utilize the nesting colony at Fort Funston depend almost entirely on Lake Merced for foraging. Since they forage on flying insects, there little chance this project will have any impact on them." (Golden Gate Audubon Society, letter, April 27, 2013)

"We realize Impact RE-3 deals with our concerns, at least in part. Impact BI-1 should be expanded to include monitoring of Tri-colored Blackbird (fall and winter in marsh roosts) and "San Francisco" Common Yellowthroat (year round resident in marsh). Both are species of concern." (Golden Gate Audubon Society, letter, April 27, 2013)

"As stated above, Tri-colored Blackbird and "San Francisco" Common Yellowthroat should be discussed in this document. Both occur at Lake Merced, but given the proposed project sites there would seem to be a low potential for impacts on either species. The same would be true for unusual migrant species, some of which may be listed, that might occur at any of the project sites during fall migration." (Golden Gate Audubon Society, letter, April 27, 2013)

"Double-crested Cormorants do not nest in a single colony at Lake Merced. There are 3 colonies, none of which are located near a project site. It is questionable if there will be any impact on this species from project construction." (Golden Gate Audubon Society, letter, April 27, 2013)

Response BI-3

Comment BI-3 provides recommendations regarding the potential presence of special-status species in the project area. EIR Section 5.14, Biological Resources, is consistent with the comment that the project is highly unlikely to have any direct or indirect impacts on bank swallows.

San Francisco common yellowthroat—or "salt-marsh" common yellowthroat (*Geothlypis trichas sinuosa*) as it is discussed in the EIR—are both names used to identify the common yellowthroat subspecies within the San Francisco Bay region. The species is included in Section 5.14, Biological Resources, Table 5.14-2 as having a high potential to occur in the project area, since it is known to breed at Lake Merced. Common yellowthroat is also discussed, along with other migratory and special-status birds that are known to or may occur at Lake Merced, on EIR page 5.14-28. Furthermore, common yellowthroat is discussed on EIR page 5.14-52 as a species that nests close to the waterline and could potentially be affected by rapid decreases in water levels if such decreases were to result from project operations. As noted on EIR page 5.14-52, Virginia rail and sora nesting success would appear to be highly sensitive to water fluctuations, so these birds were utilized as indicator species to determine significance thresholds for impacts on birds nesting at or near the waterline.

Tricolored blackbird is not mentioned in the EIR, as it was not listed in the California Natural Diversity Database search for the project area. The species is apparently uncommon at Lake Merced but has been seen during the nonbreeding season. On the basis of this new information, EIR Table 5.14-2 is revised to include tricolored blackbird (see revisions below). Since tricolored blackbird has not apparently established a nesting colony at Lake Merced and does not appear abundant in the area during the non-nesting season, there is no need to discuss the species further in the EIR.

Section 5.14, Biological Resources, Impact BI-1 discusses potential construction-related impacts on nesting birds. Project construction is not expected to specifically affect salt-marsh common yellowthroat or tricolored blackbird any differently than other nesting species, and the proposed project incorporates preconstruction surveys for nesting birds (see the response to Comment BI-2). Therefore, it is not necessary to add a discussion to Impact BI-1 related to monitoring for these species.

With respect to double-crested cormorants, EIR Table 5.14-2 notes the presence of a colony, but EIR page 5.14-36 goes on to note the presence of three rookeries, and page 5.14-56 mentions several rookeries. It is a matter of semantics as to whether the three rookeries make up a single colony or whether each should be called a separate colony, as the terms are sometimes used synonymously. While it is true that none of the rookeries is located near the project facility sites at Lake Merced and direct impacts on the species are unlikely, potential indirect impacts on the species (and nesting great blue herons as well) could occur if the lake's water surface were to rise to elevations sufficient to kill the rookery trees currently in use. This potential impact is discussed on EIR page 5.14-56, which concludes that the project would not cause an impact on rookery trees. The proposed project would not contribute to increasing lake levels, and decreasing lake levels would not adversely affect eucalyptus and other large trees currently being used or with potential for use as rookery trees. The EIR authors agree with the commenter that direct and indirect impacts on double-crested cormorants are unlikely.

In response to Comment BI-3, EIR page 5.14-23, Table 5.14-2, line 5 has been revised:

Bank swallow *Riparia riparia*	–/CT	Colony nester on sandy cliffs near water, marshes, lakes, streams, the ocean. Forages in fields.	**Low potential.** No suitable nesting habitat present~~, although~~ However, this species nests nearby and ~~occasionally forages at~~ Lake Merced is an important foraging ground for bank swallows nesting at Fort Funston.

In response to Comment BI-3, EIR page 5.14-24, Table 5.14-2, new line 11 has been added:

Tricolored blackbird *Agelaius tricolor*	–/* (nesting colony)	Colonial nester in freshwater marshes. Nests over or near the water, typically in emergent vegetation.	**Low potential.** Although the species has been observed at Lake Merced during the nonbreeding season, no known nesting colonies are present.

In response to Comment BI-3, EIR page 5.14-25, Table 5.14-2, line 6 has been revised:

Double-crested cormorant *Phalacrocorax auritus*	–/–	Nests along coast on isolated islands or in trees along lake margins.	**High potential.** There ~~is a colony of~~ are three double-crested cormorant~~s~~ rookeries at Lake Merced (SF Field Ornithologists, 2003).

These revisions do not change the analysis or conclusions presented in the EIR.

Comment BI-4: Mitigation Measure M-BI-1a should be revised.

"**Biological Resources**

Mitigation Measure M-BI-1a: Avoidance and Minimization Measures for California Red-Legged Frog and Western Pond Turtle

M-BI-1 a states that prior to disturbing California red-legged frog (CRLF) and western pond turtle (WPT) habitat, the SFPUC will provide environmental awareness training for all construction workers, install exclusion fencing along the work area boundaries one week prior to work activities at each site, a qualified biologist shall survey the excluded work area within 48 hours before onset of initial ground-disturbing activities as well as be present during initial vegetation clearing and ground-disturbing activities, and provide overnight cover or escape ramps for any excavations deeper than two feet. If frogs or turtles are found, the SFPUC will halt construction and contact the U.S. Fish and Wildlife Service (USFWS) and CDFW for instruction on how to proceed and only resume construction after approval by both agencies.

CDFW recommends that it would be more efficient as well as protective of the species for the SFPUC to develop contingency plans for CRLF and WPT should an individual of either species be found rather than rely on consultation after the fact. A relocation plan should identify a specific area or areas where WPT and CRLF can be relocated, a protocol for how injured individuals will be handled, and provide a protocol for retention and documentation of dead

individuals. Please note, CRLF is a federally threatened species, and authorization from the USFWS is required for relocation activities.

Additionally, given the possible presence of WPT on the Project sites, CDFW recommends any excavated, steep-walled holes or trenches more than six inches deep are provided cover at night or one or more escape ramps constructed of earth fill or wooden planks at a 3:1 slope (run:rise) and be inspected by a qualified biologist each morning prior to work activities." (California Department of Fish and Wildlife, letter, May 2, 2013)

Response BI-4

Comment BI-4 indicates that in the unlikely event that a California red-legged frog or western pond turtle were encountered during project construction, an agency-approved relocation plan would streamline the response process and be more protective of the species. However, given the low-likelihood of potential occurrence of these species, preparation of a relocation plan in advance of construction would be not be necessary.

In response to this comment, EIR page 5.14-44, Mitigation Measure M-BI-1a, bullet 4 is revised as follows:

- During project activities, excavations deeper than ~~2 feet~~ 6 inches shall be covered overnight or an escape ramp of earth or a wooden plank at a 3:1 rise shall be installed; openings such as pipes where California red legged frogs or western pond turtles might seek refuge shall be covered when not in use; and all trash that may attract predators or hide California red-legged frogs or western pond turtles shall be properly contained on a daily basis, removed from the worksite, and disposed of regularly. Following construction, the construction contractor shall remove all trash and construction debris from work areas.

These revisions do not change the analysis or conclusions presented in the EIR.

Comment BI-5: Impacts on special-status species in Golden Gate Park and at Lake Merced are of interest.

"The following topics identified in the DEIR are of particular interest to RPD:

…

- Special-Status Species in Golden Gate Park and at Lake Merced …" (San Francisco Recreation and Park Department, letter, June 11, 2013)

Response BI-5

EIR Impacts BI-1, BI-4, and BI-5 address project impacts on special-status species. As discussed in Impact BI-1 (EIR pages 5.14-42 to 5.14-6), project construction activities could adversely affect western pond turtle (Lake Merced, Central Pump Station, and North Lake

well facility sites), California red-legged frog (Central Pump Station and North Lake well facility sites), special-status bat species (all well facility sites and Sunset Reservoir), and monarch butterflies (Golden Gate Park well facilities). EIR mitigation measures M-BI-1a through 1c include avoidance and minimization measures that would reduce potential impacts on these species to a less-than-significant level by requiring preconstruction surveys, exclusion methods, and additional construction measures. Facility siting and maintenance activities would not result in substantial biological resources effects because noise and human activity levels at the well facilities during project operations would be similar to pre-project conditions (Impact BI-4, EIR pages 5.14-49 and 5.14-20). As discussed in Impact BI-5 (EIR pages 5.14-62 through 5.14-64), operation of the proposed wells would result in Lake Merced water surface elevation decreases, which if rapid, could strand nests, resulting in adverse biological impacts. However, because the rate of decreases would not be substantial, the project would not have a significant impact on the reproductive success of special-status birds nesting at or near the water line and no mitigation is required.

9.4.6 Hydrology and Water Quality

Comment HY-1: The rationale for use of the selected groundwater model for analysis of well interference effects should be explained.

"The City of Daly City welcomes the opportunity to comment on the Draft Environmental Impact. Report for the San Francisco Groundwater Supply Project. The comments provided have been coordinated with Daly City's groundwater consultant, HydroFocus Inc. of Davis, CA. Daly City and San Francisco have a well established track record of mutual cooperation aimed at preserving the Westside Groundwater Basin as a potable drinking water supply. These efforts include securing grant funding to drill a series of groundwater sentinel wells, activities to construct and distribute recycled water, creating a fully vetted groundwater aquifer model, and ongoing semi-annual groundwater monitoring among basin users. It is from that vantage Daly City offers the following comments.

1. **Impact HY-6: Project operations would not decrease the production rate of existing nearby wells as a result of localized groundwater drawdown within the Westside Groundwater Basin such that existing or planned land use(s) would not be supported. (Less than Significant).** Daly City concurs. In "Approach to Analysis: Groundwater Pumping Operations," the DEIR indicates that groundwater-level changes in the North Westside Groundwater Basin were modeled using the Westside Basin Groundwater-Flow Model Version 3.1, supplemented by a spreadsheet-based Lake Merced lake-level model. However in the "Approach to Analysis: Well Interference" section, the DEIR indicates that groundwater level changes in existing pumping wells due to project operations (well interference effects) were determined with a different model developed specifically for the EIR analysis. There is no explanation of why the publically available, peer-reviewed Westside Basin Groundwater-Flow Model was rejected for use in favor of the new model. Comparisons between simulated drawdown at specified well locations indicated that the DEIR's Well Interference Model simulated 2 to more than 10 feet greater drawdown than the Westside Basin Groundwater-Flow Model, indicating that the DEIR analysis is conservative

(i.e., expected drawdowns due to project pumping are less than simulated with the DEIR Well Interference Model)." (City of Daly City, Department of Water and Wastewater Resources, letter, April 26, 2013)

Response HY-1

In response to the comment regarding use of the MODFLOW numerical flow model to analyze well interference effects, this model was specifically employed to simulate how the pumping cones of depression at the project wells would affect existing wells in the North Westside Groundwater Basin (as discussed on EIR Section 5.16, Hydrology and Water Quality, page 5.16-80) (LSCE, 2012). The basinwide numerical flow model developed by Daly City (HydroFocus, 2011) was used in this EIR to evaluate other operational effects of the project, but was not used to support the analysis of well interference potential because the basinwide numerical flow model does not allow evaluation of well interference effects independently from the regional influences resulting from other non-project groundwater pumping and/or annual variations in recharge. Therefore, a less complex numerical model (MODFLOW) was developed that could account for varying hydrogeologic conditions north and south of Lake Merced, which allowed for the evaluation of the interference effects independently from the regional influences of other non-project groundwater pumping and from annual variations in recharge.

Comment HY-2: The project could result in subsidence effects.

"I am writing this letter to voice my concerns in regards to the Draft Environmental Impact Report for the San Francisco Groundwater Supply Project. I am a homeowner and resident of the Sunset District. I have a number of problems with this Draft Environmental Impact Report.

First off, pumping water out of the ground in an area where the houses are built on sand dunes is going to cause subsidence. There are already subsidence problems throughout the Outer Sunset District. Disturbing what lies beneath these sand dunes will cause severe damage to the foundations of the houses and buildings in the area. Is the city going to take responsibility for any damage to my home's foundation? Where is the proof that subsidence will not occur?" (Megan Kennedy, letter, undated)

"Hopefully …, land does not subside, …. But if these or some of them do happen, likely it will be during a drought emergency." (Steve Lawrence, email, April 8, 2013)

"3. Underneath this area were sand support the housing. Drilling in this area will cause structure settlement problem as the water table under the sand is extract. Who is going to pay for the

damage? You can drive around and observe the structure settlement problem already happening." (Bill Wong, email, March 18, 2013)

"Residence settlement will become a big problem because the reduction of water table under the sunset area." (Bill Wong, email, March 18, 2013)

Response HY-2

Comment HY-2 discusses the potential for land subsidence to occur due to decreased groundwater levels. EIR Section 5.16, Hydrology and Water Quality, Impact HY-7 addresses the potential for the project to result in substantial land subsidence (EIR pages 5.16-84 through 5.16-88). Land subsidence can result from a number of processes, including groundwater pumping. Clays are more compressible than sands when dewatered for a sufficient amount of time; the fact that the Outer Sunset is built on former sand dunes and that the underlying aquifer is composed of sand decreases its susceptibility to subsidence caused by groundwater extraction. Observations of differential settlement, as described in the comments, may be the result of decomposition of organic matter (e.g., garbage or vegetation) in underlying areas that were filled during grading for development, or the fill may have been inadequately compacted (SFPUC, 2013a). However, as described in Impact HY-7, no land subsidence resulting from groundwater extraction has been documented in the North Westside Groundwater Basin despite extensive groundwater extraction in the early 1930s, and current extraction at the San Francisco Zoo and Golden Gate Park. This suggests that the sediments in the Westside Groundwater Basin have limited compressibility. Therefore, based on a conceptual understanding of the mechanisms required for land subsidence and the apparent lack of historical subsidence in the area, the potential for extensive future subsidence due to the project would be limited because of the low compressibility of the semiconsolidated sediments that underlie the project area (Fugro, 2012).

To quantify the estimated amount of land subsidence that could occur due to project pumping, subsidence calculations were performed for the Lake Merced and South Sunset well facilities because these areas have the greatest portion of clay layers and, therefore, a greater potential for subsidence (EIR Figure 5.16-2). The impact analysis conducted for the EIR presented substantial evidence regarding the potential for subsidence to occur, based on the extent to which the project would decrease groundwater levels below historical lows, the presence and thickness of clay layers or clayey sand layers, and the compressibility of those layers. As discussed in Impact HY-7, the estimated subsidence due to project-related pumping would likely range between 1.9 and 3.0 inches. In general, structures can withstand subsidence or settlement of 6 inches or less without damage (Lambe and Whitman, 1969); therefore, the EIR considers projected subsidence of 6 inches or more to be a significant impact. The estimated subsidence due to project pumping is less than the significance threshold of 6 inches for structures and changes in

drainage patterns. Also, it is less than the significance threshold of 1 foot for flooding impacts on land within a 100-year flood zone (EIR page 5.16-86). Therefore, potential impacts related to land subsidence would be less than significant relative to structures, drainage patterns, and flooding.

As to the effect of subsidence during a drought emergency, as stated on EIR page 5.16-115, increased pumping in the event of a declared emergency resulting from an earthquake or other disaster (including a drought) would be limited to a 30-day time period. Once the water system is restored following an emergency, groundwater pumping would return to the rates proposed under the project. The effect of pumping the project wells at higher rates for a 30-day period was considered in the groundwater modeling used to evaluate potential well interference LSCE, 2012). In that modeling, the pumping rates of the project wells were increased by approximately 50 percent to approximate a one-month emergency pumping period. The magnitude and extent of drawdown of groundwater levels were evaluated for that emergency pumping period and did not result in discernible change from the drawdown estimated to occur under normal project operations. Since the analysis of land subsidence also depends on the magnitude of groundwater level drawdown, the well interference evaluation is a justifiable basis for concluding that the temporary increase in project pumping rates during an emergency would not cause a substantial increase in subsidence effects.

Comment HY-3: Comment regarding soil compressibility.

"**2. Impact HY-7: Project operations would not result in substantial land subsidence due to decreased groundwater levels in the Westside Groundwater Basin. (Less than Significant). Daly City concurs.** The subsidence analysis provides reasonable results given the tools and data available. However, in "Approach to Analysis: Subsidence," the DEIR states that "typical soil compressibility values for the Merced Formation" were used to calculate potential subsidence. No measured values for soil compressibility are available for Westside Basin sediment deposits, and the values used in the analysis are therefore assumed. Furthermore, plans are being made to significantly increase groundwater extractions from the deepest parts of the aquifer system (the "deep" aquifer), which is beneath the thickest and most extensive continuous clay bed identified in the basin (the "W-clay"). These factors introduce uncertainty in the subsidence analysis results and its conclusion of no significant impact. It is prudent therefore to establish baseline land surface elevation information from which future data can be compared to reliably conclude whether or not subsidence occurs. The South Westside Basin Groundwater Management Plan specifies similar actions to collect evidence of active subsidence should basin water levels decrease below historic levels." (City of Daly City, Department of Water and Wastewater Resources, letter, April 26, 2013)

Response HY-3

Comment HY-3 suggests that because of uncertainties in the subsidence analysis, the proposed project should identify baseline land surface elevations for use in determining whether subsidence would occur under the proposed project. The uncertainties stated are related to the soil compressibility values used for the Merced Formation and also increased pumping from the Deep Aquifer, which is below a clay layer known as the "W" clay that could be compressed as a result of the increased pumping.

The Comment suggests that pumping from the Deep Aquifer would occur and that such pumping would affect the clay layer above the Deep Aquifer. It is important to note that none of the proposed project wells would pump from the Deep Aquifer (Kennedy/Jenks, 2012a), and therefore sediments in the "W" clay layer would be unaffected by project pumping. Regarding the compressibility values used for the Merced Formation, site-specific compressibility data are not available for the Merced Formation, as stated in the technical memorandum presenting the results of the subsidence analysis for the proposed project (Fugro, 2012). Compression ratios derived from areas of known land subsidence in Santa Clara Valley were used in the subsidence estimates for the project to provide a conservative analysis. The compression ratios used are based on younger and less-consolidated sediments compared to those in the proposed project area. Therefore, the analysis in Impact HY-7 (EIR pages 5.16-84 through 5.16-88) is conservative and there is no basis for requiring the establishment of baseline land surface elevations in order to compare such data to future data.

Comment HY-4: The project could result in seawater intrusion.

"3) The North Westside Groundwater Basin is susceptible to seawater intrusion under certain conditions. The Shallow Aquifer is in direct hydraulic connection with the Pacific Ocean between Lincoln Park and the San Francisco Zoo area, indicating a potential for seawater intrusion to occur in the Shallow Aquifer in this area (page 5.16-31).

There are gaps in the "-100-foot" clay layer south of the proposed South Sunset well facility, including one between the Taraval and San Francisco Zoo coastal groundwater monitoring locations. At these gaps the Shallow and Primary Production Aquifers could be hydraulically connected (page 5.16-32).

This potential seawater intrusion poses a risk in degradation of groundwater quality and thus would make the groundwater potentially unsuitable for its identified use." (Edmund Chu, Orson Chang, Ellen Chu, Carmen Chu, and Eunice Chue, letter, April 24, 2013)

"… Please report the quantities you actually intercept (prevent from flowing to the ocean), and how you measure this. …" (Steve Lawrence, email, April 8, 2013)

"Hopefully …, and salt sea water does not intrude. But if these or some of them do happen, likely it will be during a drought emergency." (Steve Lawrence, email, April 8, 2013)

"The Ocean Beach Master Plan (SPUR, 2012) embraces a "managed retreat" strategy. This may result in the ocean re-opening a water pathway to Lake Merced, I have heard. If re-opening occurs, how is the aquifer affected? The ocean is rising (about two inches every three years in the near term, according to a recent estimate). Absent a plan to prevent the ocean's intrusion, you should plan for foreseeable intrusion. Eventually an El Nino winter storm at high tide will assault Ocean Beach; that is foreseeable. … What happens if salt water comes to pollute the Lake and aquifer? Is that something that can be dealt with without major expense and environmental consequence?" (Steve Lawrence, email, April 8, 2013)

Response HY-4

Comment HY-4 states that the North Westside Groundwater Basin could be susceptible to seawater intrusion under existing conditions, and those conditions might be more likely to occur due to sea level rise, so groundwater pumped from the aquifer may have degraded water quality. Further, groundwater pumping under the proposed project also has the potential to cause seawater intrusion and degrade groundwater quality, making it unsuitable for its identified use.

In accordance with the requirements of CEQA, the EIR contains a detailed analysis of the existing conditions of the aquifer related to seawater intrusion and then analyzes whether the project would cause seawater intrusion (see EIR pages 5.16-88 to 5.16-104). It also considers the cumulative effects of the project and any other reasonably foreseeable projects that might contribute to seawater intrusion (see EIR pages 5.16-133 to 5.16-137).

As stated on EIR page 5.16-90, seawater intrusion has not been observed in coastal monitoring wells in the North Westside Groundwater Basin, and the seawater/freshwater interface is assumed to be west of the shoreline. As discussed in this impact analysis, a sufficient decline in groundwater levels for a sufficient amount of time could cause seawater to intrude into the Shallow Aquifer, where the Shallow Aquifer is in direct communication with the ocean, as well as into the Primary Production Aquifer. Because the modeling effort conducted for the EIR analysis concluded that seawater intrusion could occur with implementation of the proposed project, the EIR identifies impacts related to seawater intrusion as potentially significant and provides a mitigation measure to ensure that the beneficial uses of the North Westside Groundwater Basin are not adversely affected by project operation.

The specified mitigation measure includes expanding the coastal monitoring well network to include the Golden Gate Park area (Mitigation Measure M-HY-8a); continuous groundwater-level monitoring in coastal monitoring wells screened in the Primary

Production Aquifer (Mitigation Measure M-HY-8b); and implementing an adaptive management program to avoid seawater intrusion (Mitigation Measure M-HY-8c). The adaptive management program requires the SFPUC to implement the proposed project in a stepwise manner, conduct monitoring of the expanded coastal monitoring network, and alter pumping as needed to prevent chloride concentrations from reaching 250 milligrams per liter (mg/L) at any of the coastal monitoring locations. With implementation of this program, chloride concentrations landward of the coastal monitoring wells would never exceed the secondary drinking water Maximum Contaminant Level (MCL) of 250 mg/L for chloride. If seawater intrusion were to occur, it would be stopped near the ocean shoreline at the coastal monitoring network before the existing uses of the North Westside Groundwater Basin are adversely affected. The adaptive management program specifies trigger levels based on observed water quality and requires the SFPUC to alter its pumping program to avoid seawater intrusion. With use of these numeric trigger levels, it is not necessary to quantify the amount of groundwater intercepted by the proposed project.

As noted on EIR page 5.16-115, increased pumping in the event of a declared emergency resulting from an earthquake or other disaster (including a drought) would be limited to the 30-day time period required for the SFPUC to restore the water system to normal operations. Once the water system is restored following an emergency, groundwater pumping would return to the rates proposed under the project. As stated on EIR page 5.16-90, movement of the seawater/freshwater interface can be a slow process. The rate of movement depends on aquifer conditions, and seawater intrusion occurs only when the conditions that cause seawater intrusion are sustained for a sufficient period of time. The effect of pumping the project wells at higher rates for a 30-day period was considered in the groundwater modeling used to evaluate potential well interference (LSCE, 2012). In that modeling, the pumping rates of the project wells were increased by approximately 50 percent to approximate a one-month emergency pumping period. The magnitude and extent of drawdown of groundwater levels were evaluated for that emergency pumping period and did not result in discernible change from the drawdown estimated to occur under normal project operations. Since the analysis of seawater intrusion also depends on the magnitude of groundwater level drawdown, the well interference evaluation is a justifiable basis for concluding that the temporary increase in project pumping rates during an emergency would not cause a substantial increase in seawater intrusion effects.

Comment HY-4 also speculates that a "water pathway to" Lake Merced may eventually develop if a "managed retreat" strategy, as envisioned by the *Ocean Beach Master Plan*, were implemented in the vicinity of Lake Merced, and if so, the comment goes on to suggest that this could result in seawater intrusion to both the groundwater and Lake Merced. The commenter seems to be suggesting that a managed retreat of existing development could allow an overland connection between the Pacific Ocean and Lake Merced to form as a result of further, managed erosion of the shoreline, resulting in seawater entering Lake Merced, and then into the underlying groundwater basin. It is noted that the *Ocean Beach Master Plan*, as proposed by SPUR, has not been adopted by

the CCSF or any other State or federal agency. Also, while the *Ocean Beach Master Plan* does discuss managed retreat as a potential option for the management of shoreline erosion, it does not conclude that managed retreat could result in the development of an overland connection between the Pacific Ocean and Lake Merced. However, should such a connection be made as a result of such a managed retreat, any seawater intrusion occurring as a result of actions under the *Ocean Beach Master Plan*, or as a result of sea level rise, would not constitute an impact of the proposed project. Regardless, this EIR includes a mitigation measure (described above) to ensure groundwater quality in the North Westside Groundwater Basin is not adversely affected by seawater intrusion as a result of the proposed project.

Comment HY-5: Requests clarification regarding the location of proposed monitoring for potential seawater intrusion.

"**3. Impact HY-8: Project operations would possibly result in seawater intrusion due to decreased groundwater levels in the Westside Groundwater Basin. (Less than Significant with Mitigation).** Daly City concurs. The seawater intrusion analysis concluded that the project "could result in the landward migration of the seawater/freshwater interface to a greater degree than would occur under existing conditions." Existing (background) chloride concentrations in coastal monitoring wells typically range from 30 to 50 mg/L, and the DEIR relies on the "slow" movement of the seawater/freshwater interface to design its mitigation strategy. The recommended strategy allows chloride concentrations in coastal monitoring well samples to increase, and employs the San Francisco Bay Region Basin Plan's water quality objective for agricultural water supply (142 mg/L) as the action level for implementing increased monitoring; increased monitoring is intended to project if groundwater quality continues to degrade to the secondary chloride MCL (250 mg/L) within 3 years. However, the Basin Plan specifies background as the primary groundwater objective, and the proposed action level and threshold concentrations are 3 to 5 times greater than background chloride concentrations. Therefore, it would be helpful to stipulate these levels are being monitored from the City's sentinel wells located closer to the ocean and some distance away from the potable production wells." (City of Daly City, Department of Water and Wastewater Resources, letter, April 26, 2013)

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Response HY-5

Comment HY-5 states that the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan) specifies background as the primary groundwater quality objective, and that the trigger levels proposed in the EIR are three to five times higher than background chloride concentration levels. The Basin Plan does state, on page 3-8, that "the maintenance of existing high quality of groundwater (i.e., "background") is the primary groundwater objective." In addition, the Basin Plan specifies numeric water quality objectives for some parameters, including substances capable of producing taste and odor. For groundwater that serves as a municipal supply, the numeric water quality

objective for chloride is 250 mg/L, and for groundwater that serves as an agricultural supply, the water quality objective for chloride is 142 mg/L, as discussed in Impact HY-8 (EIR page 5.16-92).

As discussed in Response HY-4, the EIR includes a mitigation approach that uses these water quality objectives for chloride as trigger levels to ensure that the beneficial uses of the North Westside Groundwater Basin are not adversely affected by operation of the proposed project. With this approach, corrective actions would be implemented if chloride concentrations were to reach the water quality objective for agricultural uses, and thus chloride concentrations would never exceed the Basin Plan water quality objective and secondary drinking water MCL of 250 mg/L for chloride landward of the coastal monitoring wells. These sentinel wells are primarily located near the Great Highway and near the ocean shoreline. As discussed on EIR page 5.16-99, the six proposed production well facilities are located from 950 to 7,500 feet inland, and the San Francisco Zoo irrigation well is approximately 1,500 feet inland. Based on this distance to the proposed production wells and the estimated rate of seawater progression in the North Westside Groundwater Basin, it would take over 16 years for the freshwater/seawater interface, if unimpeded, to reach the South Windmill Replacement well facility (located 950 feet from the coastline) and over 120 years to reach the Central Pump Station well facility (located 7,500 feet inland) once the interface reaches the coastline (Kennedy/Jenks, 2012b). Therefore, by using information from the existing coastal monitoring wells and from wells to be incorporated into the coastal network under Mitigation Measure M-HY-8a, the SFPUC would have sufficient warning time to halt the progression of the freshwater/seawater interface near the coastline and prevent the interface from reaching irrigation or project wells. Thus, chloride concentrations landward of the coastal monitoring network would not exceed the numeric water quality objectives of the Basin Plan, and would not be expected to rise substantially above background levels with implementation of the coastal monitoring program and implementation of an adaptive management program to address seawater intrusion as provided for under Mitigation Measures M-HY-8a through M-HY-8c.

Comment HY-6: Lake Merced is connected to the groundwater basin.

"… You may believe that the Lake is not connected with the underlying aquifer, but others disagree. …" (Steve Lawrence, email, April 8, 2013)

Response HY-6

Comment HY-6 indicates that there is some disagreement regarding Lake Merced's connectivity to the groundwater basin. As discussed on EIR page 5.16-35, the lake is incised into the upper portion of the Shallow Aquifer and is hydraulically connected to this Shallow Aquifer. Previous investigations have shown that the lake is essentially an exposed part of the water table that defines the upper boundary of the Shallow Aquifer,

and the impact analysis included in the EIR considers the lake and groundwater basin to be hydraulically connected.

Comment HY-7: The project could result in impacts on Lake Merced.

"**4. Impact HY-9: The proposed project would possibly have a substantial, adverse effect on water quality that could affect the beneficial uses of Lake Merced. (Less than Significant with Mitigation).** Daly City concurs. Modeled lake levels are predicted to be approximately 10 feet lower than predicted under the existing condition scenario. Corrective actions are proposed that include adding supplemental water (either SFPUC system water, treated stormwater, or recycled water), if available, and/or altering or redistributing pumping patterns. Daly City is working in conjunction with San Francisco on a Lake Merced Management Plan as part of its efforts associated with the Vista Grande Drainage Basin Improvement Project." (City of Daly City, Department of Water and Wastewater Resources, letter, April 26, 2013)

"COMMISSIONER ANTONINI: Well, I have a number of comments and questions. To preface, I've been a resident of western San Francisco for almost 40 years now. And I remember the late '90s in particular with the Lake Merced water level getting precipitously low. In fact, at some times it was below sea level, and there was a lot of fears of influx of saltwater.

And fortunately, a couple of changes were made in the early part of the century. I understand that under the direction of then-Supervisor Tony Hall and Supervisor Sean Elsbernd, where -- I think my understanding was that almost all the irrigation for Harding Park was being done out of groundwater at that time. And one thing, we started using more of Hetch Hetchy to keep the water level higher.

And then the other thing that was done, with an agreement with Daly City, was to use the water from the Aqua Vista -- Vista Grande canal and put that water back into Lake Merced instead of it going into the ocean, which it was before.

And I guess my question is, if you were kind of at a line where we were losing -- now we're not quite up to the level it was historically, but it's pretty good. I'm not quite sure how we're going to take 4 million gallons per day out of the aquifer and not have that lake sink again." (Michael J. Antonini, Commissioner, Public Hearing Transcript, April 18, 2013)

"We are concerned with the following "Systemwide Operation Strategy":

"Dry-year transfer from the Modesto and/or Turlock Irrigation Districts of about 2 mgd coupled with the Westside Groundwater Basin conjunctive-use project to meet the drought year goal of limiting rationing to no more than 20 percent on a systemwide basis."

Our concern here is with Lake Merced water levels and water quality during drought cycles. Should lake levels drop significantly, or should water quality decline, particularly to the level the lake no longer can support a fishery, adaptive management strategies need to be implemented. Those measures should be outlined here.

In non drought cycles we urge that Lake Merced levels be monitored and assessed to determine if draw by wells associated with this project impact the lake. Should they do so adaptive management measures should be implemented. Those measures should be identified as part of the overall plan for this project so triggers can be established that would require the implementation of adaptive management measures. They should include reducing draw from specific wells, discontinuing the use of specific wells, drilling wells deeper, or drilling additional wells at a point in the aquifer that will have less of an impact on Lake Merced." (Golden Gate Audubon Society, letter, April 27, 2013)

"We agree with the "Systemwide Operation Strategy" of "Development of 20 mgd of conservation, recycled water and groundwater within the SFPUC service area (10 mgd in the retail service area and 10 mgd in the wholesale service area)."

An additional potentially significant but mitigable WISP water supply and System operations impact is on the Lake Merced fishery and biological resource. The fishery is almost entirely recreational, but it should be protected and enhanced. Adaptive management and mitigation measures should be in place in the event of negative impacts. The natural biological resources, both terrestrial and marine are a significant matter of concern as well. Lake Merced hosts about 50 nesting species of birds annually. Through the course of the year, 150 or more species are seen there with many dependent on it's resources for spring or fall migration or for winter residence. The marsh around the lake is natural and should be protected. Native plants, invertebrates and residual vertebrates reside at the lake and merit consideration here. We could go into listed species here, but in San Francisco we should make every effort to protect and enhance the habitat for all our wildlife and natural resources. We urge that mitigable impacts on these resources be included in the EIR." (Golden Gate Audubon Society, letter, April 27, 2013)

"… Since the degree of certainty about this conclusion is far less than 100%, it would seem more reasonable to outline adaptive management strategies in the case impacts are found. Impacts C-HY-5 … should be treated the same way." (Golden Gate Audubon Society, letter, April 27, 2013)

"Hopefully Lake Merced stays reasonably full, …. But if these or some of them do happen, likely it will be during a drought emergency." (Steve Lawrence, email, April 8, 2013)

Response HY-7

Comment HY-7 discusses the potential effects of project groundwater pumping on Lake Merced water levels, including cumulative effects. EIR Impact HY-9 addresses the project effect on water quality related to the beneficial uses of Lake Merced (EIR pages 5.16-104 through 5.16-120). EIR Impact C-HY-5 addresses cumulative impacts on Lake Merced (EIR pages 5.16-137 through 5.16-139). As discussed, the lake levels modeled for proposed project operations would be approximately 10 feet lower than those modeled without the project. Because the project is predicted to cause Lake Merced water levels to fall below 0 feet City Datum substantially more frequently than is predicted to occur without the project, the resulting water quality changes under the project could fail to meet the established water quality objectives related to warm and cold freshwater habitat (e.g., dissolved oxygen). Changes in dissolved oxygen levels and pH could also exacerbate the conditions responsible for Lake Merced's listing as an impaired water body. While these impacts related to water quality and associated beneficial uses of Lake Merced (for both project effects and the project's contribution to cumulative impacts) would be potentially significant, the impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure M-HY-9, Lake-Level Management for Lake Merced, which consists of an adaptive management approach to mitigating the effects of groundwater pumping on Lake Merced. This measure requires the SFPUC to implement the proposed pumping in a stepwise manner (starting at 1 mgd) to monitor for adverse effects before pumping at the full operational rate, and to use lake-level management procedures to maintain Lake Merced at a specified water level.

In accordance with Mitigation Measure M-HY-9, corrective action is required if project-related lake levels decline below trigger levels identified in the mitigation measure. These corrective actions include adding supplemental water (either SFPUC system water, treated stormwater, or recycled water), if available, and/or altering or redistributing pumping patterns. Implementation of this measure would ensure that any lake-level decline resulting from the project would be temporary, lasting only until corrective actions could be implemented. With the addition of supplemental water and/or the alteration or redistribution of pumping patterns as needed, the project would not result in long-term changes in water quality that would affect the potential beneficial uses of Lake Merced.

In the event that surface water supplies were not available, due to a declared emergency resulting from an earthquake or other disaster, the SFPUC might have to rely more heavily on groundwater to serve its customers, and total groundwater production could temporarily be greater than 3.0 mgd during Phase 1 or greater than 4.0 mgd during Phase 2. However, in accordance with WSIP seismic reliability goals, the regional water system should be restored to normal operation within 30 days (i.e., any outages would not be expected to last longer than 30 days). Once the water system is restored following an emergency, groundwater pumping would return to the levels proposed under the project, and any effect on groundwater levels and associated Lake Merced water levels due to an increased reliance on groundwater during an emergency would be temporary.

The comment from the City of Daly City, Department of Water and Wastewater Resources, which concurs with the EIR impact analysis and refers to coordinated planning with the SFPUC regarding a Lake Management Plan and the Vista Grande Drainage Basin Improvement Project, is noted. The Vista Grande Drainage Basin Improvement Project was included in the EIR as a cumulative project, and the combined effects of the proposed project and the Vista Grande Project were described in relevant sections of the EIR. As discussed on EIR page 5.16-137, the estimated Lake Merced water levels under the cumulative conditions are expected to be higher than existing conditions for much of the modeled period, largely as a result of the Vista Grande Drainage Basin Improvement Project and the Regional Groundwater Storage and Recovery Project.

Regarding portions of Comment HY-7 referring to the policies stated in the SFPUC's Water System Improvement Program (WSIP) and potential impacts of the overall WSIP on Lake Merced and the resources of this area, the San Francisco Planning Department prepared a Program EIR (PEIR) to address the potential environmental impacts of the WSIP, as discussed on EIR page 2-7, paragraph 1, and page 5.1-3. The San Francisco Planning Commission certified the WSIP PEIR on October 30, 2008 (San Francisco Planning Department, 2008; San Francisco Planning Commission Motion No. 17734; State Clearinghouse No. 2005092026). The SFPUC approved the WSIP and made findings pursuant to CEQA, including preparation of a statement of overriding considerations and adoption of a MMRP, for the WSIP. Thus, the PEIR is no longer subject to public comment.

However, for the information of the commenter, the PEIR addressed the potential environmental impacts of constructing and operating the WSIP facility improvement projects as well as the impacts of the proposed systemwide water supply and operations strategy (San Francisco Planning Department, 2008). The PEIR analyzed potential water supply and system operations impacts (separate from the environmental impacts associated with the facility improvement projects) within the following geographic regions: the Tuolumne River, the Alameda Creek and Peninsula watersheds, and the Westside Groundwater Basin. The PEIR also identified the cumulative effects of implementing the WSIP and the associated changes in system operations in combination with other past, present, and reasonably foreseeable future projects within each of these watersheds. The WSIP PEIR analysis included consideration of all impacts at a project level of detail for the water supply components of the WSIP. The PEIR analyzed the impacts of individual facility projects proposed as part of the WSIP at a program level of detail, including the San Francisco Groundwater Supply Project.

The San Francisco Groundwater Supply Project EIR tiers off of the PEIR for the WSIP and analyzes at a project level of detail the direct and cumulative (including applicable WSIP projects) effects of constructing and operating six groundwater wells in western San Francisco, a distribution system, and support facilities at Sunset Reservoir.

Comment HY-8: EIR Impact HY-9 should be expanded to discuss the benefits of the Vista Grande Drainage Basin Improvement Project.

"Impact HY-9, which deals with Lake Merced water levels should be expanded slightly to incorporate probable benefits of the Vista Grande Watershed Project in Daly City. Since that project will overlap this one in terms of Lake Merced water quality and water level, it would seem prudent to briefly discuss it in terms of potential benefits and impacts." (Golden Gate Audubon Society, letter, April 27, 2013)

Response HY-8

The comment indicating that the Vista Grande Drainage Basin Improvement Project should be included in the project impact analysis of effects on beneficial uses of Lake Merced is noted. However, the Vista Grande Drainage Basin Improvement Project has not been approved or constructed and therefore is not part of the existing setting against which project effects must be compared, as required under CEQA. The Vista Grande project was included as a cumulative project and considered in Impact C-HY-5 (EIR pages 5.16-137 through 5.16-139); as described, the contribution of that project and the Regional Groundwater Storage and Recovery Project are expected to increase the water levels of Lake Merced under cumulative conditions. Thus, the probable benefits of the Vista Grande Drainage Basin Improvement Project have been considered in the San Francisco Groundwater Supply Project EIR.

Comment HY-9: Including groundwater in the existing potable water supply would affect water quality.

"… Since the degree of certainty about this conclusion is far less than 100%, it would seem more reasonable to outline adaptive management strategies in the case impacts are found. Impacts C-HY- … and 6 … should be treated the same way." (Golden Gate Audubon Society, letter, April 27, 2013)

"We are residents in Sunset district and have reviewed the ElR. We have following concerns of the project:

1) Only one groundwater sample from each of these wells was analyzed between 2007 and 2011 (page 5.16-23). We feel that this is insufficient sample to warrant the quality and safety of the well water for general public use." (Edmund Chu, Orson Chang, Ellen Chu, Carmen Chu, and Eunice Chue, letter, April 24, 2013)

"2) The Westside Groundwater Basin, inflow or "recharge" components of the groundwater basin include recharge from leakage of sewer and water pipes (page 5.16-27). This poses a

health risk." (Edmund Chu, Orson Chang, Ellen Chu, Carmen Chu, and Eunice Chue, letter, April 24, 2013)

"It is not a good idea. Don't spoil my drinking water. Be considerate of the residents especially the western side of the City.

Please Stop the project. It is not worth it.

Please! God bless America" (Derek Leung, email, March 17, 2013)

"I received the public notice regarding ground water supply project letter. I have several comment regarding to this matter:

1. San Francisco have the best quality water supply from the reservoir, why city want to mix ground water with snow pack water. I have experience with ground water in San Jose, people can't even drink the water." (Bill Wong, email, March 18, 2013)

"For the conclusion, I think the quality of water will definitely suffer cause by mixing ground water and Hetechy water." (Bill Wong, email, March 18, 2013)

Response HY-9

Comment HY-9 indicates that potable water quality would be affected by blending groundwater with existing surface water supplies, and that insufficient groundwater sampling has been conducted to demonstrate that groundwater quality is suitable for potable use. EIR pages 5.16-20 through 5.16-27 discuss the groundwater quality of the North Westside Groundwater Basin. As noted by a commenter, each proposed well location was sampled once between 2007 and 2011. However, in addition to those samples, the South Windmill Replacement well and North Lake well, proposed for conversion to municipal supply wells during Phase 2, were sampled three and four-to-five times, respectively, between 2004 and 2009 to evaluate the suitability of the groundwater as a drinking water source. In addition, the existing monitoring network and program, which includes over 50 monitoring locations (see EIR Table 5.16-9), includes water quality monitoring conducted since 2002. Finally, the State Water Resources Control Board Groundwater Ambient Monitoring and Assessment Program evaluated raw groundwater quality from six wells located in the North Westside Groundwater Basin. The results of these studies and tests indicate that all water quality parameters have been below primary or secondary MCLs, with the exception of chloride, iron, manganese, nitrate, specific conductance, and total dissolved solids at some locations.

EIR Impact HY-11 (EIR pages 5.16-122 through 5.16-125) and Impact C-HY-6 (EIR pages 5.16-139 through 5.16-141) discuss whether the addition of groundwater to the SFPUC system would cause the system water to exceed MCLs after blending as proposed under the project or as a cumulative impact. The discussion concludes that there would be no impact related to compliance with drinking water standards. As discussed, in accordance with the requirements of Title 22, Division 4, Chapter 15 of the California Code of Regulations, the SFPUC would prepare a water quality monitoring plan describing the proposed methods for complying with domestic water quality and monitoring regulations. To meet the water quality goals, the SFPUC would blend (or mix) the groundwater with the SFPUC surface water supply at a target percentage of up to 15 percent. The surface water supply in San Francisco currently is a blend of, on average, 85 percent water from Hetch Hetchy Reservoir and 15 percent water from reservoirs in the SFPUC's Alameda and Peninsula watersheds. The SFPUC intends for blended water quality to surpass the drinking water standards of the California Department of Public Health and of the U.S. Environmental Protection Agency (USEPA) (see Chapter 3, Project Description, Section 3.5.1, Operations). The quality of the water that the SFPUC serves to its retail customers in San Francisco will continue to be published in the state-mandated annual water quality report.

In addition to blending, disinfection would be provided at the Lake Merced and West Sunset well facilities as a contingency to control potential microbial contamination, which would ensure compliance with the USEPA Ground Water Rule (USEPA, 2006). Also, pH adjustment at the Lake Merced well facility and Sunset Reservoir would maintain pH values consistent with the system water pH, which would ensure compliance with the USEPA 1991 Lead and Copper Rule, with subsequent amendments.

EIR pages 5.16-47 through 5.16-49 discuss potentially contaminating activities located within the North Westside Groundwater Basin, including activities and facilities such as sewer collection systems, housing, parks, dry cleaners, surface water, and illegal activities. EIR Impact HY-11 discusses whether groundwater pumping under the proposed project could change groundwater levels or flow directions in a way that could mobilize contaminants from a potentially contaminating activity. As discussed, each proposed potable water well is considered vulnerable to possible contaminating activities that could cause a violation of water quality standards. Therefore, impacts related to violation of water quality standards would be potentially significant. However, this potential impact would be reduced to a less-than-significant level with implementation of Mitigation Measure M-HY-11, Prepare a Source Water Protection Program and Update Drinking Water Source Assessment, because it requires implementation of a source water protection program to prevent contamination of the well facilities, as well as regular updating of the drinking water source assessment for each well. These source water assessments would be referenced in the state-mandated annual water quality report.

Comment HY-10: Proposed use of sodium hypochlorite could result in water quality impacts.

"4) Sodium hypochlorite is on the Special Health Hazard Substance List. It is a strong oxidizer and thus potentially can increase the chance of cancer. A long term health study of drinking water daily with this chemical in 12.5% solution is necessary to eliminate any long term health risk." (Edmund Chu, Orson Chang, Ellen Chu, Carmen Chu, and Eunice Chue, letter, April 24, 2013)

Response HY-10

Sodium hypochlorite is currently used in the SFPUC drinking water system for disinfection, and has a long history of use in San Francisco and throughout the U.S. While the project includes delivery of sodium hypochlorite to the treatment facilities in a 12.5 percent solution, the typical dose that would be used to treat groundwater is 2 parts per million, which is equivalent to 0.0002 percent and is consistent with the sodium hypochlorite percentage in the existing SFPUC water supply (SFPUC, 2013a).

Comment HY-11: The project could result in direct and cumulative groundwater depletion.

"**5. Impact HY-12: Project operation would not have a substantial adverse effect on groundwater depletion in the Westside Groundwater Basin. (Less than Significant).** Daly City concurs with the following caveat. For practical purposes, most of the groundwater in the basin is inaccessible. Comparisons between anticipated groundwater storage changes with the estimated total storage volume of the basin therefore provide little to no information on the significance of the impacts from estimated storage depletions. This is important because conceivably groundwater levels could show significant, unexpected long-term declines before saltwater intrusion action levels or Lake Merced water level thresholds are exceeded. Furthermore, the well interference analysis assumes the project extraction rate is within the perennial yield of the North Westside Groundwater Basin. A more meaningful metric is therefore needed that gives conclusions consistent with the analysis of potential impacts already identified in the DEIR from groundwater depletion and lowered water levels (i.e., seawater intrusion, well interference, land subsidence, and Lake Merced water level declines). For example, rather than compare storage depletion to the total volume of groundwater in the basin, the depletions can be compared to the volume of groundwater accessible to pumping wells based on well-screen depths or the estimated perennial yield of the North Westside Groundwater Basin. These comparisons will more accurately represent potential project impacts on groundwater storage. If these impacts become potentially significant, it seems an adaptive management approach similar to the saltwater intrusion, and Lake Merced water level mitigation including operational proposals envisioned by the North Westside Basin Management Plan should be included.

Thank you, Ms. Jones, for your consideration of our comments. Should you have any questions or require additional information, please do not hesitate to contact me directly." (City of Daly City, Department of Water and Water Resources, letter, April 26, 2013)

"Impact HY-12. We question the conclusion that this project will not have an impact on the Westside Aquifer. We do know that previous pumping from the aquifer has led to impacts. Since the degree of certainty about this conclusion is far less than 100%, it would seem more reasonable to outline adaptive management strategies in the case impacts are found." (Golden Gate Audubon Society, letter, April 27, 2013)

"As project sponsor, can you answer: before beginning implementation, are you doing further study of aquifer's yield and whether aquifer may be overdrawn by the project?" (Steve Lawrence, email, March 18, 2013)

"Will Anderson* determined the aquifer's yield at 10,600 AF/year. He estimated that those south of the county line were taking 8700 AF. That leaves 1900. But SF plans to take about 4500. Seems aquifer may be over-subscribed. But SF plans to intercept 2160 before it flows to ocean. If this was not included in Will's 10,600 yield, then only 440 short; perhaps insignificant, especially given all the monitoring planned. But I don't know that Will's yield did not include intercept. And it's all close. SF says "recharge" per year is 6260; sounds like plenty. But what is recharge vs yield? *Groundwater Master Plan, 2012

Further confusion: sometimes focus is aquifer, sometimes north Westside aquifer (north of line), sometimes south westside aquifer; Will does not know how much cemeteries take; they estimate; they probably do not measure.

Any clarification you can provide appreciated. (I do understand SF "go slow" plan, 1mgd first year. ...)" (Steve Lawrence, email, March 18, 2013)

"Will the Westside aquifer be overdrawn (over-subscribed)? Figures I have seen for current and planned future usage by those south-of-the-line (in northern San Mateo County; see the master plan of July 2012 done by Will Anderson) indicate or suggest usage of all but 2000 acre feet of the aquifer's yield. You plan to take on the order of 4500 acre feet per year, albeit not in the first years. Arithmetic suggests, then, that the aquifer will be overdrawn if the figures are correct. While you plan to intercept water that flows out to the ocean, even that amount (if you can accomplish your aim) is less than the 2500 acre feet difference, leaving a small over-draw. Insignificant? Maybe, given your plans to closely monitor groundwater levels. …. And please consider that the WSIP project, Regional Groundwater Recovery and Supply, plans to slowly fill the aquifer; then, when drought descends, you plan to withdraw 7.2 mgd for up to 7.5 years. This

draw-down could have quite an effect. …. The point is: it is more the SF Groundwater project that may be dispensable. You need to determine now that both projects can be done without harm to the aquifer. Put another way, you should for purposes of this analysis assume that the WSIP groundwater project will go forward.

(This substantially duplicates a prior email, which may be considered a "comment;" I include it to make sure one is considered, preferably this one.)" (Steve Lawrence, email, April 8, 2013)

Response HY-11

Comment HY-11 notes that local cemeteries (which are located in the South Westside Groundwater Basin) do not meter how much groundwater they use. Because of this, groundwater use by the cemeteries was estimated using a similar methodology as used for the golf clubs in the Lake Merced vicinity, which was described on pages 5.16-17 and 5.16-18 of the EIR. This methodology included consideration of standard irrigation use amounts, as well as the size of irrigated areas.

Comment HY-11 also asks for clarification regarding the terminology used for the Westside Groundwater Basin and the aquifers in the groundwater basin. The EIR uses three terms, as described on page 5.16-3. "Westside Groundwater Basin" is used when the basin is referred to as a whole, including both the portions in San Mateo and San Francisco Counties. "North Westside Basin" is used when referring to the portion of the groundwater basin in San Francisco County and "South Westside Groundwater Basin" is used when referring to the portion of the groundwater basin in San Mateo County. Individual aquifers within the groundwater basin are identified separately, including the "Shallow Aquifer," "Primary Production Aquifer," and "Deep Aquifer," which are discussed on EIR page 5.16-8.

Comment HY-11 states that much of the groundwater in the basin is inaccessible, and that for this reason, any comparison of the change in groundwater storage to the total amount of groundwater in storage provides little information on the significance of groundwater depletion impacts. Also, groundwater levels could be substantially lowered before seawater intrusion action levels and Lake Merced trigger levels are exceeded. Therefore, according to the commenter, groundwater depletion could be compared to the volume of water accessible to pumping wells based on their screen depths, or the estimated perennial yield of the North Westside Groundwater Basin.

There are many ways to estimate the effects of groundwater depletion, and no standard methodology to do so. In order to determine the potential effects of groundwater depletion, the EIR considered whether project-related pumping could reduce groundwater supplies or interfere with groundwater recharge in a manner that would result in a substantial regional deficit in aquifer storage and that the deficit in aquifer storage would lead to insufficient water supply to support existing or planned land uses (see Impact HY-12, EIR pages 6.16-25 through 5.16-128). In considering this impact

threshold, the San Francisco Groundwater Supply Project EIR assesses groundwater depletion based on potential changes in the volume of groundwater stored in the Westside Groundwater Basin. First, the SFPUC determined the existing storage volume in 2009 and then compared that volume to the predicted volume of storage at the end of the 47-year simulation period with project implementation. This analytical approach provides a conservative estimate of the magnitude of project impacts on overall long-term groundwater storage using the modeled data for the 47-year simulation period. A volumetric calculation was performed to estimate the total volume of groundwater present in the basin in June 2009; the volume of water in the aquifer was derived from the Westside Basin Groundwater Model and an estimate of the available pore space (or porosity) within the aquifer to store water. To estimate the effects of project-related pumping on the amount of groundwater in storage, the annual change in storage was estimated using modeled groundwater levels for both phases of the Groundwater Supply Project, which also took into account simulated seasonal variations in hydrologic conditions over the 47-year simulation period. The total estimated change in storage over the simulation period was calculated as the sum of changes in storage volume that were modeled for each year of the simulation period.

The total modeled decrease in groundwater storage under Phase 1 of the Groundwater Supply Project results in a predicted decline of approximately 684 afy more than what is predicted under the modeled existing conditions. Over the 47-year simulation period, the total decline in groundwater storage under Phase 1 is predicted to be 60,170 acre-feet, or a decline of approximately 32,170 acre-feet more than what is predicted under the modeled existing conditions. The total modeled decrease in groundwater storage due to Phase 2 of the Groundwater Supply Project results in a predicted decline of approximately 640 afy more than what is predicted under the modeled existing conditions. Over the 47-year simulation period, the total decline in groundwater storage under Phase 2 is predicted to be 58,080 acre-feet, or a decline of approximately 30,080 acre-feet more than what is predicted under the modeled existing conditions indicated above. The slight differences in estimated storage changes between the phases are attributable primarily to the somewhat greater total basin pumping rate of 12.75 mgd in Phase 1 (14,282 afy) compared to 12.61 mgd in Phase 2 (14,125 afy). These predicted project-related declines represent only about 3 percent of the estimated total groundwater volume of 1,076,000 acre-feet in the entire onshore portion of the Westside Groundwater Basin. While it is acknowledged that the recoverable volume would be less than the total volume of the basin, as further described in the analysis of Impact HY-6, existing land uses that are dependent on groundwater and that could be affected by the Groundwater Supply Project, including Pine Lake, the Edgewood Development Center (Edgewood School), San Francisco Zoo, and golf courses in the vicinity of Lake Merced, would still be able to provide enough water to meet their peak demand, even with the predicted well interference effects from the project wells.

Because the projected groundwater storage loss would be relatively small after 47 years of operations, and existing groundwater-dependent land uses would still be able to meet

their peak demands, the deficit in aquifer storage would not lead to insufficient water supply to support existing or planned land uses. Therefore, the impact of project operations on groundwater depletion in the Westside Groundwater Basin would be less than significant.

As described above, the analysis presented under Impact HY-6 considers project effects related to well interference and identifies those wells in the vicinity of the project that could be affected by project-related pumping (EIR Table 5.16-9). As discussed in that impact analysis, the existing groundwater-dependent land uses would still be able to meet their peak demands under the proposed project. The analysis of Impact HY-6, which considers the completion details of each existing well (such as well screen depths), shows that under the proposed project even the pumping capacity after reduction due to well interference is predicted to remain greater than the peak demand for each existing well. Therefore, the project would not make substantially less groundwater available to those wells. The maximum reduction in well capacity would be 11.2 percent, and remaining well capacities after reduction due to project-related pumping would remain up to 1.33 million gallons per day greater than the peak demand, as shown in Table 5.16-10 of the EIR. Therefore, no mitigation measures are required for impacts related to well interference or groundwater depletion, and potential impacts related to groundwater depletion would remain less than significant based on the amount of water accessible to other groundwater wells, as concluded on pages 5.16-127 and 5.16-128 of the EIR.

Perennial yield is generally defined as the amount of groundwater that can be withdrawn from a groundwater basin annually without producing an undesired result (Todd, 1959). As described in Section 5.16.1, Setting, groundwater depletion may have other negative effects on the groundwater basin; therefore, the San Francisco Groundwater Supply Project EIR also evaluates impacts on groundwater resources relative to subsidence, seawater intrusion, groundwater/surface water interactions, and water quality (Impacts HY-7 through HY-11) and includes mitigation measures to avoid these adverse effects as necessary.

Comment HY-11 questions whether groundwater production under the proposed project is within the sustainable yield of the Westside Groundwater Basin, as estimated in the *South Westside Basin Groundwater Management Plan* (the "master plan of July 2012 done by Will Anderson" as referred to by Steve Lawrence). Note that the basin yield presented in the *South Westside Basin Groundwater Management Plan* is the estimated amount of groundwater that can be withdrawn by existing wells while maintaining current groundwater levels, which is a different analysis from that presented in the EIR, which considers whether project-related pumping could reduce groundwater supplies or interfere with groundwater recharge in a manner that would result in a substantial regional deficit in aquifer storage and that the deficit in aquifer storage would lead to insufficient water supply to support existing or planned land uses. As discussed above, the well interference analysis presented in Impact HY-6 on EIR pages 5.16-80 through 5.16-84 shows that the remaining pumping capacity, even after reduction predicted to

result from well interference under the proposed project, would remain greater than the peak demand for each existing well. Therefore, the project would not make substantially less groundwater available to existing land uses, and impacts related to groundwater depletion remain less than significant based on the amount of water accessible to other groundwater wells, as concluded on pages 5.16-127 and 5.16-128 of the EIR. Further, the project's contribution to cumulative impacts related to well interference would not be cumulatively considerable (see Impact C-HY-2, ERI pages 5.16-132 to 5.16-133).

9.4.7 Alternatives

Comment AL-1: Consider implementing the Sunset Boulevard pipeline alternative.

"I would like to suggest that there's an -- in the EIR, there's an alternate -- alternative pipeline location for Sunset Boulevard. I would like that the Commission look at that or whoever -- maybe the SFPUC looks at that.

I know that one of the concerns was traffic during construction on Sunset Boulevard. But the construction would only -- it would be little bit at a time, like one block, probably one lane, that would need to be closed off. And like I said it, it would take a long time to build that." (Tim Kennedy, Public Hearing Transcript, April 18, 2013)

Response AL-1

Comment AL-1 suggests that the SFPUC consider approval of EIR Alternative 4: Pipeline Location Alternative. In response to this comment, it is noted that the SFPUC may consider approval of the project or an alternative of the project. The Pipeline Location Alternative (EIR pages 7-36 through 7-38) would construct portions of the proposed pipeline along Sunset Boulevard rather than along 40th and 41st Avenues. The potential impacts associated with the Pipeline Location Alternative would mostly be similar to those of the proposed project. However, residential receptors along the relocated pipeline alignment on Sunset Boulevard would be subjected to lower noise levels because they would be located farther from construction activities, and impacts associated with construction-related noise (Impact NO-1) would be less intense than under the proposed project. While construction-related noise effects would be less intense, implementation of this alternative could result in increased impacts associated with traffic, temporary impacts related to disruption of the footpath along Sunset Boulevard, potential utility conflicts, and tree removal, all of which could be reduced to a less-than-significant level with implementation of mitigation measures similar to those specified for the proposed project.

9.5 DEIR Revisions

The following changes to the text of the Draft EIR are made in response to comments on the Draft EIR or are included to clarify the Draft EIR text. For each change, new language is double underlined, while deleted text is shown in ~~strikethough~~.

9.5.1 Acronyms, Abbreviations, and Glossary

In response to Comment GC-4, page xvii has been revised to include the following:

> **Adaptive management.** The iterative process of learning from experience and adjusting management practices based on the feedback received through monitoring.

9.5.2 Summary

City staff has revised EIR page 1-7, paragraph 1, bullet 3:

*
- Construction of a pH adjustment facility at Sunset Reservoir as an addition to ~~within~~ an existing reservoir building and a chlorine analyzer/sample station at the reservoir.

City staff has revised EIR page 1-9, paragraph 2:

* **Sunset Reservoir Facilities.** A chlorine analyzer and sample station would be constructed at the northwest corner of Sunset Reservoir and a pH adjustment facility would be constructed as an addition to ~~included within~~ an existing Sunset Reservoir building, along with piping between the pH adjustment facility and the North and South basins of the Sunset Reservoir.

9.5.3 Project Description

City staff has revised EIR page 3-3, paragraph 1, bullet 3:

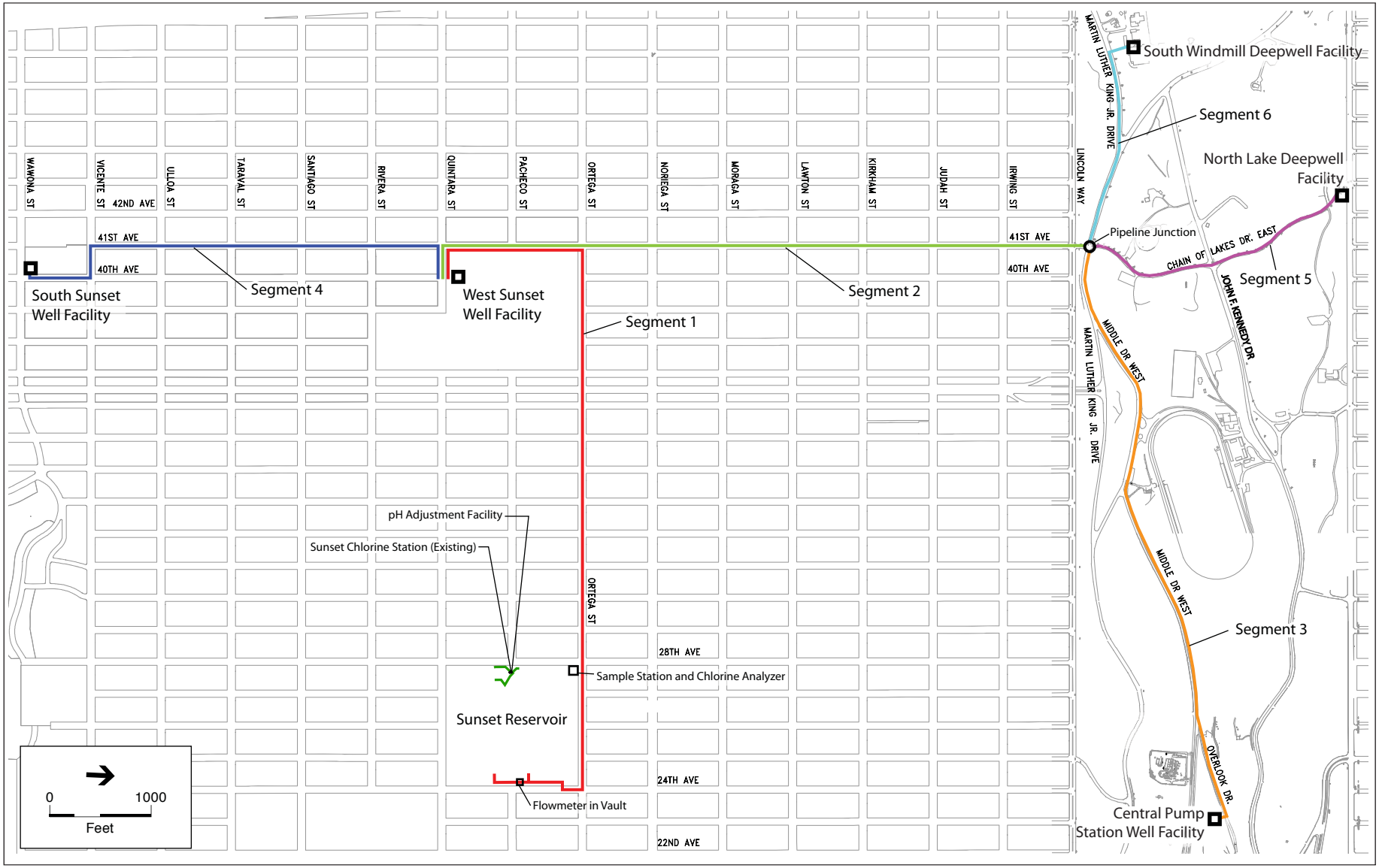
*
- Construction of a pH adjustment facility at Sunset Reservoir as an addition to ~~within~~ an existing reservoir building and a chlorine analyzer/sample station at the reservoir.

* City staff has revised EIR page 3-12, Figure 3-8 to revise Sunset Reservoir facilities (see following page).

City staff has revised EIR page 3-14, paragraph 3:

*
3.3.4 Sunset Reservoir Facility Location

As described in Section 3.3.3, Pipeline Locations, the groundwater distribution pipeline would extend along 24th Avenue before entering the Sunset Reservoir facility (see Figure 3-1). The pipeline would terminate in both the north and south basins of Sunset Reservoir, where the groundwater would be blended with the water in storage and then



SOURCE: SFPUC, 2010; ESA

San Francisco Groundwater Supply Project EIR

Figure 3-8 (Revised)
Pipeline Segments

distributed to customers throughout much of San Francisco. A chlorine analyzer and sample station would be constructed at the northwest corner of Sunset Reservoir, where the incoming groundwater would be tested for chlorine levels. In addition, a pH adjustment facility would be ~~included within~~constructed as an addition to an existing Sunset Reservoir building, along with chemical injection piping between the pH adjustment facility and the north and south basins of the Sunset Reservoir. In addition, a concrete vault would be constructed west of the south basin to provide installation and maintenance access for a proposed reservoir surface water inlet flow meter.

City staff has revised EIR page 3-47, paragraph 5:

*

3.4.3 Sunset Reservoir Construction

The project facilities to be located at Sunset Reservoir would be within or attached to existing buildings, with the exception of the chlorine analyzer and sample station, and ~~the~~ chemical injection piping, a vault, and an electrical conduit, which would be below grade ~~and within the alignment of existing underground chemical and sample piping~~. After piping installation, surface conditions along the alignment would be restored to their general preconstruction conditions. Tree removal would not be required. Construction of the ~~groundwater distribution pipeline connection, chlorine analyzer, pH adjustment facility, and chemical injection piping at~~ Sunset Reservoir facilities ~~are~~is described below.

City staff has revised EIR page 3-48, paragraph 1, through page 3-49, paragraph 4:

*

Construction Activities

Construction activities at Sunset Reservoir would include:

- Installation of two 12-inch flow meters within vaults located on the east side of Sunset Reservoir.
- Installation of a concrete pad and a chlorine analyzer and sample station at the northwest corner of Sunset Reservoir.
- Modification of ~~an interior room within~~ the existing Sunset Chlorine Station located west of the west side of the reservoir's north and south basins. Modifications would include the addition of a pH adjustment facility on the northeast side of the existing chlorine station. The facility would be approximately 15 feet long by 11 feet wide and approximately 11 feet high. The existing Sunset Chlorine Station is approximately 32 feet long by 17 feet wide and is approximately 13 feet high. The proposed facility would include two ~~installation of a~~ sodium hydroxide storage tanks and two chemical metering pumps, ~~installation of a low concrete berm within the room to provide~~ including secondary chemical containment features, ~~installation of a removable skylight, installation of~~ and an emergency shower/eyewash~~, and relocation of an existing electrical box to the northwest building exterior~~.
- Installation of ~~300~~approximately 350 feet of chemical injection piping below grade between the building and the north and south basins of the reservoir. Some of the

piping would be installed along the side of an existing culvert; however, approximately 95 feet of the piping would be installed via an excavated trench.

- Installation of a concrete vault west of the south basin, near the existing fence along 28th Avenue, which would provide installation and maintenance access for a proposed reservoir surface water inlet flow meter. The vault would be approximately 5 feet wide, 5 feet long, and 25 feet deep.

- Installation of approximately 165 linear feet of electrical conduit that would connect the proposed flow meter to the existing Sunset Chlorine Station.

* Excavation and Stockpiling of Soils

Trench excavations for the proposed chemical injection piping would be 1.25 to 2.25 feet deep by 1.25 feet wide, and trench excavations for the proposed electrical conduit would be 2 feet deep by 1.25 feet wide. Approximately 355 cubic yards of soil would be excavated for construction of the Sunset Reservoir facilities, and this ~~The excavated~~ soil would be used as the primary source of backfill material. The excavated materials would be~~,~~ supplemented as necessary with approximately 20 cubic yards of structural fill material (e.g., imported sand and aggregate subbase). ~~Approximately 20 cubic yards of soils would be excavated, and up to 20 cubic yards of structural fill could be required.~~

* Spoils Disposal

Construction of the Sunset Reservoir facilities could generate approximately 100 cubic yards of excess spoils. ~~Chemical injection piping could generate up to approximately 20 cubic yards of excess spoils.~~ At the end of each day, excavated soil that is not reused for grading or~~in a~~ trench backfill would be stockpiled for reuse as part of the project or disposed of at an appropriate landfill. Most of the spoils material is expected to be Class III non-hazardous waste. If any soil contaminated with hazardous materials were encountered, it would be characterized, transported, and disposed of at an appropriate landfill in compliance with applicable federal, State, and local regulations.

* Dewatering

~~As described above, t~~The chemical injection piping would be within and in the vicinity of ~~within the alignment of~~ existing underground chemical and sample piping and culverts, and the pH adjustment facility would be immediately adjacent to the existing Sunset Chlorine Station. Given the presence of existing piping, culverts, and structures, it is not expected that near-surface groundwater would be encountered during construction of the Sunset Reservoir facilities. However, construction of the flow meter access vault would require excavation that is slightly over 25 feet deep, and near-surface groundwater could be encountered. ~~However, i~~If water were to accumulate in an open construction pit or trench as a result of groundwater seepage or precipitation, dewatering of the construction work area would be required. Dewatering typically involves pumping water out of the trench/pit and, following appropriate onsite treatment, discharging the water over land or

into a nearby sewer or open channel. Discharge to the San Francisco combined sewer system would require a permit from the SFPUC Wastewater Enterprise, and most of the proposed project sites would be subject to these requirements. Discharge to an open channel or over land must be performed in accordance with municipal stormwater permits and the requirements of the Statewide General Construction Permit for Stormwater Discharges Associated with Construction Activity issued by the State Water Resources Control Board. Permit requirements and mandatory best management practices are discussed in Section 5.16, Hydrology and Water Quality.

City staff has revised EIR page 3-50, Table 3-7:

*

TABLE 3-7
EQUIPMENT USAGE FOR SUNSET RESERVOIR CONSTRUCTION ACTIVITIES

	Construction Usage		
	Number of Each Equipment Type	**Duration of Use (weeks)[a]**	**Daily Use (hours/day)**
Backhoe Loader	1	~~2~~3	6
Forklift	1	~~4~~8	2
Telescopic Crane	1	1	4
Hauling Trucks	~~1~~2	~~4~~8	2
Manual Compactor	1	~~2~~4	6
Pickup[b]	3	~~16~~32	1
Bobcat Compact Excavator	1	~~2~~3	6
Excavator	1	1	6

[a] Weeks are composed of five-day work weeks.
[b] Pickup use for short-haul trips at construction areas. Does not include use for worker commuting.

SOURCE: SFPUC, 2012b

City staff has revised EIR page 3-50, paragraph 2:

*

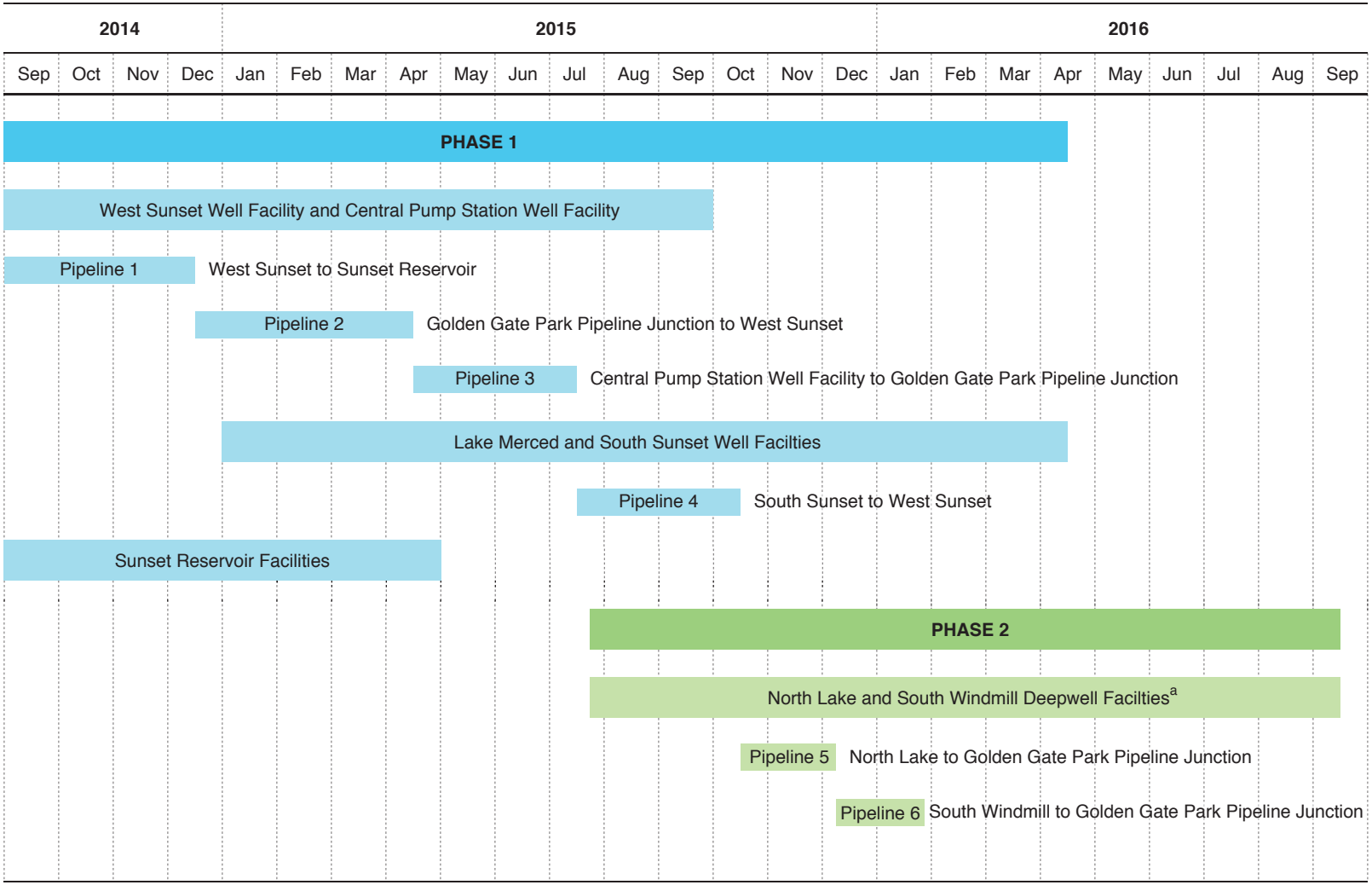
Table 3-8 provides the approximate duration of construction work necessary at each well facility site and for the Sunset Reservoir facilities, as well as the installation rate for the pipeline system. Well facilities construction would require approximately 15 to 18 months at each site. Construction activities are proposed to occur primarily

* City staff has revised EIR page 3-51, Figure 3-15 to update the construction period for the Sunset Reservoir facilities (see following page).

City staff has revised EIR page 3-52, Table 3-8, line 12:

*

Sunset Reservoir Facilities – Total Construction	**~~4~~8 months**



NOTE:
a Construction of the North Lake and South Windmill Deepwell facilities would only occur after approval of the San Francisco Westside Recycled Water Project.

SOURCE: SFPUC; ESA

San Francisco Groundwater Supply Project EIR

Figure 3-15 (Revised)
Construction Phasing

9.5.4 Environmental Setting and Impacts, Overview

City staff has revised EIR page 5.1-37, Table 5.1-6, line 3 and page 5.1-38, Table 5.1-6, line 1:

*

~~None~~	~~San Francisco Planning Department~~	~~North Westside Basin Groundwater Management Plan~~	~~The SFPUC intends to meet the requirement of AB3030 (Sections 10750-10756 of the California Water Code) by preparing and adopting the North Westside Basin Groundwater Management Plan to ensure the protection of the groundwater basin. The plan is not anticipated to provide for additional development of groundwater in the North Westside Basin. In general the plan would have the following goals:~~	~~**Long term:** Impacts on aesthetics, recreation resources, biological resources hydrology and water quality, hazards and hazardous materials,~~	~~Not applicable~~	~~Westside Groundwater Basin.~~	~~**Status of environmental review:** None~~
~~None cont.~~			~~• Protect groundwater resources in the North Westside Basin to maintain groundwater quality and avoid long-term overdraft of the basin.~~ ~~• Protect interrelated surface water resources.~~ ~~• Ensure that existing and future uses of groundwater in the North Westside Basin would not cause adverse effects such as seawater intrusion or inelastic land subsidence.~~ ~~• Establish monitoring protocols that are designed to measure groundwater pumping and to detect changes in groundwater levels, groundwater quality and surface water affected by groundwater pumping.~~				

9.5.5 Land Use

City staff has revised EIR page 5.2-10, paragraph 4:

*

Impacts on the existing land use character in the project vicinity could result if the Groundwater Supply Project were to result in a long-term change in land use that would be incompatible or conflict with established land uses. The proposed project would be constructed entirely within lands zoned for public uses that the CCSF owns. Although the proposed project would result in temporary disruption of activities in the project vicinity as

a result of construction staging, excavation, and pipeline installation activities, once construction is complete, all proposed pipelines would be installed below ground and would not be visible upon completion of construction. Sunset Reservoir facilities would be adjacent to or near~~within an~~ existing ~~building~~reservoir structures and buildings~~, with the exception of the small chlorine analyzer structure~~. Therefore, operation of the new pipelines and Sunset Reservoir facilities would not substantially alter the existing character of the project area.

9.5.6 Aesthetics

City staff has revised EIR page 5.3-25, paragraph 1:

* less than significant at pipeline segments outside Golden Gate Park. Construction activities associated with the pH adjustment facility at Sunset Reservoir would be northeast of an existing building that is sited between the proposed construction area and public areas to the west along 28th Avenue~~would primarily occur within the existing Chlorine Sampling Station building~~; however, equipment and construction vehicles would be visible from adjacent roadways and reservoir lawn areas available to the public. Nevertheless, the construction area would be within a fenced portion of the reservoir facility, in the vicinity of storage sheds, waste receptacles, and other structures associated with the reservoir. Because construction activities would be temporary, and most construction activities would be within an existing building, construction impacts on aesthetic resources would be less than significant at this site.

City staff has revised EIR page 5.3-42, paragraph 5:

* **Pipelines**

Upon completion of construction, pipelines would be below ground, and the sites would be returned to their general preexisting conditions. A proposed sample station and chlorine analyzer would be located on the northwest corner of Sunset Reservoir (see Photo 23 in Figure 5.3-8). This facility would be a small utility box on the sidewalk, similar to other utility boxes scattered throughout the Sunset District. The proposed pH adjustment facility would be located to the northeast of the existing Sunset Chlorine Station. The proposed facility would be smaller in size and height than the existing chlorine station, which would screen views of the proposed facility as seen from public areas to the west. The access vault would be at grade, and piping/electrical conduits would be below ground. While the visual quality of this area is high relative to other areas of the Sunset, the sample station, ~~and~~ chlorine analyzer, and pH adjustment facility would be a minor addition and is therefore not likely to be negatively perceived by the viewing public. For these reasons, the scenic resources and visual character impact of pipeline locations would be less than significant.

City staff has revised EIR page 5.3-45, paragraph 3:

* Projects that could have a cumulative aesthetic impact in combination with the Lake Merced well facility, given their proximity to it, include:

- Significant Natural Areas Resource Management Plan
- Harding Park Recycled Water Project
- Lake Merced Pump Station Essential Upgrade
- Parkmerced Project
- ~~North Westside Groundwater Basin Management Plan~~
- Daly City Vista Grande Basin Improvement Project
- Regional Groundwater Storage and Recovery Project

City staff has revised EIR page 5.3-46, paragraph 2:

* ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the groundwater basin through adaptive management measures, with a goal of protecting surface water resources that are interrelated to the groundwater basin.~~ Daly City's proposed Vista Grande Drainage Basin Improvement Project involves the addition of stormwater to maintain Lake Merced levels. The SFPUC's proposed Regional Groundwater Storage and Recovery project would operate with reduced groundwater pumping during above-average rainfall years and increased groundwater pumping during drought years (see "Approach to Analysis" in Section 5.16, Hydrology and Water Quality for an explanation of cumulative operational scenarios considered in the modeling conducted for the proposed project). With operation of the identified cumulative projects, the estimated Lake Merced water levels are expected to be mostly higher than under existing conditions projected to occur without operation of the cumulative projects. However, during some years, Lake Merced water levels would likely be less than levels that would be expected to occur without operation of the cumulative projects. Under cumulative conditions, Impound Lake would likely be substantially reduced during the design drought, reducing the visual quality of that lake as seen from the paved pedestrian path around the lake perimeter and the picnic areas on John Muir Drive and Lake Merced Boulevard. While Lake Merced water level conditions would be naturally reduced under modeled existing conditions, groundwater pumping associated with the proposed project and the Regional Groundwater Storage and Recovery Project would worsen the hydrologic conditions and the scenic qualities of Lake Merced, which would likely be substantially degraded under cumulative conditions at the end of the design drought. Therefore, cumulative impacts on Lake Merced, as a scenic resource, and on the visual character and quality of the Lake Merced area would be significant. However, the contribution to this cumulative aesthetic impact would be reduced to a less-than-cumulatively considerable (less-than-significant) level with implementation of **Mitigation Measure M-HY-9, Adaptive Management Program for Lake Merced**, which requires the SFPUC to implement lake level management procedures to maintain Lake Merced at water levels similar to conditions predicted to occur without the project. Therefore, Lake Merced would be maintained at conditions similar to that which would be expected without project-related pumping. Therefore, the Groundwater Supply Project's contribution to significant cumulative impacts on aesthetic resources at Lake Merced would not be cumulatively considerable.

9.5.7 Cultural and Paleontological Resources

City staff has revised EIR page 5.5-30, paragraph 2:

* **Sunset Reservoir**

Project connections to Sunset Reservoir would be made on 24th Avenue (south of Pacheco) where the pipeline would enter the reservoir at a subterranean level. The project would also include a sample station and chlorine analyzer in the northwest corner of the reservoir property. This cabinet-sized facility would be installed on a new concrete pad within the landscaped, park-like area adjacent to the intersection of Ortega Street and 28th Avenue. A small stream of water from the groundwater pipeline would be routed to the sample station to test chlorine content and ensure levels are acceptable before blending the water into the Sunset Reservoir supply at the 24th Avenue location. In addition, a pH adjustment facility would be ~~included~~located ~~within an~~to the northeast of the existing Sunset ~~Reservoir building~~Chlorine Station, along with ~~300 linear feet of~~ chemical injection piping between the pH adjustment facility and the north and south basins of the Sunset Reservoir and an electrical conduit between an access vault located near the existing fence along 28th Avenue and Pacheco Street and the existing Sunset Chlorine Station. Finally, a new flow meter in a subterranean vault would be installed behind the reservoir fence line near 24th Avenue. These activities would not result in physical changes to the Sunset Reservoir structure~~, with the exception of the addition of a skylight to the Sunset Chlorine Station and relocation of an existing electric panel to the building exterior~~. All pipeline connections and electrical conduits surrounding the reservoir and connecting to it would be located below ground, and the landscaped ground surface would be restored to pre-project conditions. During the survey, no historic-period materials were observed within the C-APE adjacent to Sunset Reservoir (ESA, 2011).

City staff has revised EIR page 5.5-32, paragraph 5:

* If the ERO determines that an archeological resource may be present within the project site, the SFPUC shall retain the services of a~~n~~ qualified archeological consultant, based on standards developed by the Planning Department archeologist~~archeological consultant from the pool of qualified archeological consultants maintained by the Planning Department archeologist or an alternate archeological consultant upon approval of the ERO~~. The archeological consultant shall advise the ERO as to whether the discovery is an archeological resource that retains sufficient integrity and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource and make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require specific additional measures to be implemented by the SFPUC.

City staff has revised EIR page 5.5-33, paragraph 5:

* **M-CP-2b:** Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially

significant adverse effect from the proposed project on buried historical resources. The project sponsor shall retain the services of a qualified archeological consultant, based on standards developed by the Planning Department archeologist~~an archeological consultant from the pool of qualified archeological consultants maintained by the Planning Department archeologist or an alternate archeological consultant upon approval of the Environmental Review Officer (ERO)~~. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sect. 15064.5 (a)(c).

City staff has revised EIR page 5.5-41, paragraph 3:

* Specific additional proposed and existing projects that would affect lake levels were considered in this Lake Merced operational cumulative impact analysis. As described in greater detail in Section 5.1.5, Overview of Groundwater Modeling Approach, these include the SFPUC's proposed Regional Groundwater Storage and Recovery project and Daly City's proposed Vista Grande Drainage Basin Improvement project. The former would affect Lake Merced water surface elevations most directly through groundwater pumping and non-pumping periods, and the latter through direct hydrologic input of stormwater to the lake. ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the groundwater basin through adaptive management measures, with a goal of protecting surface water resources that are interrelated to the groundwater basin.~~ With operation of the identified cumulative projects, the estimated Lake Merced water levels are expected to be mostly higher than under existing conditions projected to occur without operation of the cumulative projects. However, during some years, Lake Merced water levels are predicted to be less than levels that are predicted to occur without operation of the cumulative projects as a result of groundwater pumping under the proposed project and the

9.5.8 Transportation and Circulation

City staff has revised EIR page 5.6-18, paragraph 4:

* As described in Chapter 3, Project Description, the project would be implemented in two phases. The first phase would involve the construction and operation of four new well facilities, facilities at the Sunset Reservoir, and Pipeline Segments 1, 2, 3, and 4 to deliver

groundwater from the new well facilities to the existing municipal water supply system. The second phase, which would be contingent upon approval and implementation of the SFPUC's proposed Westside Recycled Water Project (Case No. 2008.0091E), would involve the conversion and operation of two existing irrigation wells, the demolition of existing structures and construction of new well facility structures, and the extension of pipelines along Segments 5 and 6 to those converted wells to enable delivery of additional groundwater from those wells. Construction of the well facilities would occur in stages and during varying periods of time. It is expected that Phase 1 would begin in fall 2014 and conclude in spring 2016, and that Phase 2 would begin in summer 2015 and conclude in fall 2016. Within these time periods, pipeline installation would be expected to take between 7 and 16 weeks for each planned pipeline segment, well facilities would be expected to be constructed/converted and operational within approximately 15 to 18 months at each site, and construction of the proposed Sunset Reservoir facilities would be expected to take about ~~4~~8 months (see Table 3-8 in Chapter 3).

City staff has revised EIR page 5.6-20, paragraph 1:

* per well facility site and pipeline route. As described in Chapter 3, the construction of the facilities at the Sunset Reservoir could generate up to approximately ~~20~~100 cubic yards of excess spoils~~, which would either be reused as part of the project or disposed of at an appropriate landfill~~; the work at the Sunset Reservoir also could require up to approximately 20 cubic yards of structural fill. Construction truck traffic would be required to follow City-designated truck routes to the project sites (e.g., Sunset Boulevard, Lincoln Way, and Fulton Street), as well as other streets that provide the most direct route to the work site and minimize the use of local streets.

City staff has revised EIR page 5.6-20, paragraph 3:

* As shown in Figure 3-15, the majority of scheduled construction activities would occur during Phase 1, specifically between fall 2014 and spring 2016. During that period, the West Sunset well facility and Central Pump Station well facility would be completed. Pipeline Segments 1, 2, 3, and 4 would also be completed. Additionally the Lake Merced and South Sunset well facilities would be constructed, with completion scheduled for spring 2015. The Sunset Reservoir facilities would also be completed. Based on the estimated amount of traffic generated by each project component during Phase 1, concurrent construction activities for these Phase 1 project components, could result in up to 52 workers and ~~12~~13 haul trucks per day traveling to and from the work sites, resulting in up to ~~64~~65 vehicles (~~128~~130 one-way trips) per day. It is expected that construction activities would occur primarily during the weekday daytime hours (7:00 a.m. to 5:00 p.m.). Worker trips to the work sites would occur prior to the a.m. peak traffic hour, but trips from the work sites would likely occur during the p.m. peak traffic hour. Haul truck trips would be spread over the course of the day. The highest concentration of vehicle trips traveling to and from the well facility sites would be on the roads that provide direct access to the sites (e.g., on Quintara Street for the West Sunset well facility site and Lake Merced Boulevard

for the Lake Merced well facility site). However, not all of the four well facilities, four pipelines, and Sunset Reservoir associated with Phase 1 are located near each other, and it is reasonably assumed that workers' residences would be spread among Bay Area cities, and that project trips would be dispersed on different roads. On that basis, the estimated daily vehicle trips associated with concurrent construction activities would represent less than one percent of existing traffic volumes on regional roads (e.g., SR 35 and SR 1), and similarly would not substantially alter the existing operations of local roads (e.g., 41st Avenue). Construction activities associated with other (less trip-generation-intensive) project components would have less of an effect on area roadways than the above-described concurrent project components. Therefore, this impact related to temporary increases in traffic volume associated with construction vehicle traffic would be a minor lessening of their traffic-carrying capacities due to the slower movement and larger turning radii of trucks, which could affect traffic and transit operations. However, due to its temporary nature and limited magnitude, the effect of this

City staff has revised EIR page 5.6-21, Table 5.6-3, line 10:

*

Sunset Reservoir Facilities			
Total construction	3 to 5	~~3~~11	3

9.5.9 Noise

City staff has revised EIR page 5.7-17, paragraph 3:

*

Sunset Reservoir

Construction at the Sunset Reservoir would include installing a concrete pad and chlorine analyzer at the northwest corner of Sunset Reservoir. However, the majority of the Sunset Reservoir activities would occur in the vicinity of Pacheco Street and 28th Avenue where a pH adjustment facility would be ~~included~~located ~~an~~to the northeast of the ~~within an~~ existing Sunset ~~building~~Chlorine Station ~~Reservoir building~~, along with ~~300 linear feet of~~ chemical injection piping between the pH adjustment facility and the north and south basins of the Sunset Reservoir. Finally, a new vault would be installed behind the reservoir fenceline near 28th Avenue, along with an electrical conduit between the vault and the existing Sunset Chlorine Station. The nearest noise-sensitive receptor to this area is 155 feet to the west.

9.5.10 Air Quality

* City staff has revised EIR page 5.8-14, Figure 5.8-5 to update the Sunset Reservoir facilities (see following page).

SOURCE: ESRI, 2010; CCSF, 2004; BAAQMD, 2010

San Francisco Groundwater Supply Project EIR

Figure 5.8-5 (Revised)

Project Location - Sunset Reservoir

City staff has revised EIR page 5.8-28, Table 5.8-6:

*

TABLE 5.8-6
AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS – PHASE 1
(pounds/day)[a]

Emission Source	ROG	NOx	Exhaust PM_{10}[b]	Exhaust $PM_{2.5}$[b]
Pipeline Construction and Installation of Facilities at Sunset Reservoir	~~1.38~~1.43	~~15.61~~16.09	~~0.67~~0.69	~~0.59~~0.61
Well Facility Installation	1.58	16.67	0.59	0.54
Total	**~~2.96~~3.01**	**~~32.28~~32.76**	**~~1.25~~1.27**	**~~1.13~~1.15**
Significance Thresholds	54	54	82	54
Significant Impact?	No	No	No	No

[a] Emissions were modeled using Tier 2 emissions factors and biodiesel B20 emission reduction rates, and assume the equipment inventory described in the project description.
[b] Significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust. Fugitive construction dust impacts would be regulated by the construction dust ordinance.

NOTES:
ROG = reactive organic gases; NOx = nitrogen oxides; PM_{10} and $PM_{2.5}$ = particulate matter.

SOURCE: ESA, 2012.

City staff has revised EIR page 5.8-28, Table 5.8-7:

*

TABLE 5.8-7
AVERAGE DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS – PHASES 1 AND 2
(pounds/day)[a]

Emission Source	ROG	NOx	Exhaust PM10[b]	Exhaust PM2.5[b]
Pipeline Construction and Installation of Facilities at Sunset Reservoir	~~1.44~~1.48	~~16.94~~17.31	~~0.73~~0.74	~~0.65~~0.67
Well Facility Installation	1.85	**19.81**	0.70	0.64
Total	**~~3.29~~3.33**	**~~36.75~~37.12**	**~~1.42~~1.44**	**~~1.29~~1.31**
Significance Thresholds	54	54	82	54
Significant Impact?	No	No	No	No

[a] Emissions were modeled using Tier 2 emissions factors and biodiesel B20 emission reduction rates, and assume the equipment inventory described in the project description.
[b] Significance thresholds for PM_{10} and $PM_{2.5}$ apply to exhaust emissions only and not to fugitive dust. Fugitive construction dust impacts would be regulated by the construction dust ordinance.

NOTES:
ROG = reactive organic gases; NOx = nitrogen oxides; PM_{10} and $PM_{2.5}$ = particulate matter.

SOURCE: ESA, 2012.

9.5.11 Recreation

City staff has revised EIR page 5.11-29, paragraph 2:

* Specific additional proposed and existing projects that would affect lake levels were considered in this Lake Merced operational cumulative analysis. ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the groundwater basin through adaptive management measures, with a goal of protecting surface water resources that are interrelated to the groundwater basin.~~ As described in greater detail in Section 5.1.5, Overview of Groundwater Modeling Approach, these include the SFPUC's proposed Regional Groundwater Storage and Recovery Project and Daly City's proposed Vista Grande Drainage Basin Improvement Project. The former would affect Lake Merced water surface elevations most directly through groundwater pumping and non-pumping periods, and the latter through direct hydrologic input of stormwater and baseflow from the Vista Grande Canal to the lake. With operation of the identified cumulative projects, the estimated Lake Merced water levels are expected to be higher than under the modeled existing conditions for much of the 47-year simulation period, largely as a result of the Vista Grande Drainage Basin Improvement Project and the Regional Groundwater Storage and Recovery Project (see Figures 5.11-2 and 5.11-3) (Kennedy/Jenks, 2012a).

9.5.12 Utilities and Service Systems

City staff has revised EIR page 5.12-9, paragraphs 1 and 2:

* 1,990 cubic yards of excess soils from pipeline construction activities. In addition, demolition of the two existing well facilities would also require disposal of approximately 240 cubic yards of materials and approximately ~~20~~100 cubic yards would require disposal from excavation at Sunset Reservoir, resulting in a total excess spoils volume of ~~3,040~~3,180 cubic yards with a 20 percent expansion factor accounted for. Excavated soil that is not reused would be stockpiled daily at appropriate staging areas for future reuse or would be taken to an appropriate facility for recycling, reuse, or disposal. As described in Chapter 3, Project Description, most of the spoils material is expected to be nonhazardous waste.[7] However, if contaminated soils are encountered, the waste would be trucked to the closest facility that accepts the type of contaminated soils encountered. Refer to Section 5.17, Hazards and Hazardous Materials, for information regarding disposal of hazardous materials.

* In compliance with the San Francisco Construction and Demolition Ordinance (Ordinance No. 27-06), spoils would be taken to one of the registered facilities that reuse or recycle C&D materials.[8] Two registered facilities in San Francisco would accept project waste. Each

[7] Nonhazardous wastes are materials that are not contaminated and do not pose a threat to water quality once disposed. Class III waste disposal facilities are permitted to receive such wastes.

[8] Facilities are registered and approved by the San Francisco Department of the Environment.

of these facilities is required to divert a minimum of 65 percent of the C&D materials it receives. As a result, the receiving landfill would receive up to ~~1,065~~1,115 cubic yards of C&D materials over the construction period. Therefore, the project's contribution to the receiving landfill would be equal to less than 0.01 percent of the remaining capacity of each of the landfills that may receive the waste (Altamont and/or Corinda Los Trancos). Because adequate capacity exists at the landfills to accept the project's construction waste, potential impacts related to exceeding permitted landfill capacity would be less than significant.

9.5.13 Biological Resources

In response to Comment BI-3, EIR page 5.14-23, Table 5.14-2, line 5 has been revised:

Bank swallow *Riparia riparia*	–/CT	Colony nester on sandy cliffs near water, marshes, lakes, streams, the ocean. Forages in fields.	**Low potential.** No suitable nesting habitat present~~, although~~ However, this species nests nearby and ~~occasionally forages at~~ Lake Merced is an important foraging ground for bank swallows nesting at Fort Funston.

In response to Comment BI-3, EIR page 5.14-24, Table 5.14-2, new line 11 has been added:

Tricolored blackbird *Agelaius tricolor*	–/* (nesting colony)	Colonial nester in freshwater marshes. Nests over or near the water, typically in emergent vegetation.	**Low potential.** Although the species has been observed at Lake Merced during the nonbreeding season, no known nesting colonies are present.

In response to Comment BI-3, EIR page 5.14-25, Table 5.14-2, line 6 has been revised:

Double-crested cormorant *Phalacrocorax auritus*	–/–	Nests along coast on isolated islands or in trees along lake margins.	**High potential.** There ~~is a colony of~~ are three double-crested cormorant~~s~~ rookeries at Lake Merced (SF Field Ornithologists, 2003).

In response to Comment BI-4, EIR page 5.14-44, Mitigation Measure M-BI-1a, bullet 4 is revised as follows:

- During project activities, excavations deeper than ~~2 feet~~ 6 inches shall be covered overnight or an escape ramp of earth or a wooden plank at a 3:1 rise shall be installed; openings such as pipes where California red legged frogs or western pond turtles might seek refuge shall be covered when not in use; and all trash that may attract predators or hide California red-legged frogs or western pond turtles shall be properly contained on a daily basis, removed from the worksite, and disposed of regularly. Following construction, the construction contractor shall remove all trash and construction debris from work areas.

City staff has revised EIR page 5.14-49, paragraph 2:

* **Mitigation Measure M-BI-3: Plant Replacement Trees.** The SFPUC shall replace the trees removed within SFRPD-managed lands with trees of equivalent ecological value (i.e., similar species) at a 1:1 ratio. If planting trees of equivalent ecological value at a 1:1 ratio is not feasible or such trees are not available, removed trees shall be replaced at a ratio of 1 inch for every 1 inch of the removed tree's diameter at breast height. If the project site does not have adequate room for replanting trees, the SFPUC shall coordinate with SFRPD to identify acceptable replanting locations in the vicinity of the project site. The ~~SFRPD~~SFPUC shall monitor tree replacement plantings annually for a minimum of three years after completion of construction to ensure the plantings have become established and, if necessary, shall replant to ensure the success of the replacement plantings.

City staff has revised EIR page 5.14-71, paragraph 2:

* Not all projects listed in Table 5.1-6 and shown in Figure 5.1-1 would affect Lake Merced lake levels and the biological resources supported by the Lake and its surrounding habitats. Specific additional proposed and existing projects that would affect lake levels were considered in this Lake Merced operational cumulative analysis. ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the groundwater basin through adaptive management measures, with a goal of protecting surface water resources that are interrelated to the groundwater basin.~~ As described in greater detail in Section 5.1.5, Overview of Groundwater Modeling Approach, these include the SFPUC's proposed Regional Groundwater Storage and Recovery project and Daly City's proposed Vista Grande Drainage Basin Improvement project. The former would affect Lake Merced water surface elevations most directly through groundwater pumping and non-pumping periods, and the latter through direct additions of stormwater and baseflow in the Vista Grande Canal to the lake.

9.5.14 Hydrology and Water Quality

City staff has revised EIR page 5.16-65, paragraph 5:

* The SFPUC prepared the final draft of the *North Westside Groundwater Basin Management Plan* (SFPUC, 2005) in April 2005. The document was not adopted, but was circulated for public review. The SFPUC plans to prepare an updated groundwater management plan in accordance with Water Code Section 10753 that ~~w~~could incorporate the monitoring and adaptive management requirements related to the implementation of the Groundwater Supply Project as well as additional elements that would consolidate and highlight existing programs that CCSF administers to ~~strengthen the~~ protect~~ion of~~ groundwater resources in the North Westside Basin. The updated groundwater management plan would specify the management objectives for the North Westside Groundwater Basin and would address:

City staff has revised EIR page 5.16-104, to include a new paragraph added to follow Mitigation Measure M-HY-8c:

* Mitigation Measures M-HY-8a through M-HY-8c could be incorporated into the SFPUC's North Westside Basin Groundwater Management Plan. The Groundwater Management Plan would be submitted to the Planning Department prior to the operation of the San Francisco Groundwater Supply Project for review of consistency with the mitigation requirements for this project.

City staff has revised EIR page 5.16-120, to include a new paragraph added to follow Mitigation Measure M-HY-9:

* Mitigation Measure M-HY-9 could be incorporated into the SFPUC's North Westside Basin Groundwater Management Plan. The Groundwater Management Plan would be submitted to the Planning Department prior to the operation of the San Francisco Groundwater Supply Project for review of consistency with the mitigation requirements for this project.

City staff has revised EIR page 5.16-125, to include a new paragraph added to follow Mitigation Measure M-HY-11:

* Mitigation Measure M-HY-11 could be incorporated into the SFPUC's North Westside Basin Groundwater Management Plan. The Groundwater Management Plan would be submitted to the Planning Department prior to the operation of the San Francisco Groundwater Supply Project for review of consistency with the mitigation requirements for this project.

City staff has revised EIR page 5.16-131, paragraph 2:

* The geographic scope for the analysis of cumulative impacts on groundwater and surface water resources encompasses the entire Westside Groundwater Basin. ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the basin through adaptive management measures, to achieve goals of protecting groundwater resources in the basin to maintain groundwater quality and avoid long-term overdraft of the groundwater basin, protect surface water resources that are interrelated to the groundwater basin, and ensure that existing and future uses of groundwater in the basin would not cause adverse effects such as seawater intrusion and land subsidence.~~ The potential cumulative projects in the groundwater basin ~~also~~ include the SFPUC Regional Groundwater Storage and Recovery Project as well as the potential buildout of the Holy Cross Cemetery and the Daly City Vista Grande Drainage Basin Improvement Project, which are described in Section 5.1.5, Overview of Groundwater Modeling Approach. Because the Vista Grande Drainage Basin Improvement Project includes the addition of stormwater to Lake Merced, this project would directly raise lake levels in Lake Merced.

9.5.15 Hazards and Hazardous Materials

City staff has revised EIR page 5.17-28, paragraph 1:

* ~~The North Westside Groundwater Basin Management Plan would include monitoring and managing of the groundwater basin through adaptive management measures, with a goal of protecting surface water resources that are interrelated to the groundwater basin.~~ Specific additional proposed and existing projects that would affect lake levels were considered in the Lake Merced operational cumulative analysis. As described in greater detail in Section 5.1.5, Overview of Groundwater Modeling Approach, these include the SFPUC's proposed Regional Groundwater Storage and Recovery Project and Daly City's proposed Vista Grande Drainage Basin Improvement Project. The former would affect Lake Merced water surface elevations most directly through groundwater pumping and non-pumping periods, and the latter through direct hydrologic input of stormwater and baseflow from the Vista Grande Canal to the lake. With operation of the identified cumulative projects, the estimated Lake Merced water levels are expected to mostly be higher than under modeled existing conditions (i.e., those that are projected to occur without operation of the cumulative projects). However, during some dry years, Lake Merced water levels are predicted to be less than those that would occur without operation of the cumulative projects (source). In the event of a major disaster (i.e., catastrophic earthquake), Lake Merced water could be pumped into the city's drinking water distribution system to maintain firefighting, basic sanitary (i.e., toilet flushing), and other critical needs. Decreased lake levels could result in less available water for firefighting and sanitation purposes, thereby resulting in a significant cumulative impact. However, similar to the project-specific impact, the project's contribution to this impact would be reduced to a less-than-cumulatively considerable (less-than-significant) level with implementation of Mitigation Measure M-HY-9, Lake Level Management for Lake Merced, which requires the SFPUC to implement lake level management procedures to maintain Lake Merced at water levels similar to conditions that are predicted to occur without the project. Therefore, Lake Merced would be maintained at conditions similar to those expected without project-related pumping. As a result, the Groundwater Supply Project's contribution to significant cumulative hazards impact related to reliance on Lake Merced water in an emergency would not be cumulatively considerable.

9.6 References

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San Francisco Public Utilities Commission (SFPUC), *2013 Water Availability Study for the City and County of San Francisco*, May 2013b.

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ATTACHMENT A
DEIR Comment Letters

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State of California – The Natural Resources Agency
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EDMUND G. BROWN JR., *Governor*
CHARLTON H. BONHAM, *Director*

May 2, 2013

Mr. Tim Johnston
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103-2479

Dear Mr. Johnston:

Subject: San Francisco Groundwater Supply Project, Draft Environmental Impact Report, SCH #2009122075, City and County of San Francisco

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Environmental Impact Report (EIR) for the San Francisco Groundwater Supply Project (Project), proposed by the San Francisco Public Utilities Commission (SFPUC). The Project consists of the construction and operation of six potable groundwater well facilities: two that would be converted from existing irrigation well facilities and four that would be newly constructed. Each facility would include a groundwater production well and a pump station. Included in the Project is construction of a distribution system, including pipelines and connection points, that would connect five of the well facilities to Sunset Reservoir; the sixth well would connect to the existing Lake Merced Pump Station and require a short length of distribution piping to make this connection. The SFPUC would also construct a pH adjustment facility at Sunset Reservoir within an existing reservoir building and a chlorine analyzer at the reservoir.

CDFW is identified as a Trustee Agency pursuant to the California Environmental Quality Act (CEQA) Section 15386, and is responsible for the conservation, protection, and management of the state's biological resources. Pursuant to Fish and Game Code Section 1801, it is the policy of the state to encourage preservation, conservation, and maintenance of wildlife resources, including perpetuation of all species of wildlife for their intrinsic and ecological values. In addition, pursuant to Fish and Game Code Section 1802, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. CDFW is submitting comments on the draft EIR to inform the Lead Agency of our concerns regarding sensitive resources which could potentially be affected by the Project, and provide guidance to the SFPUC to ensure that biological resources are protected.

GC-7

Biological Resources

Mitigation Measure M-BI-1a: Avoidance and Minimization Measures for California Red-Legged Frog and Western Pond Turtle

M-BI-1a states that prior to disturbing California red-legged frog (CRLF) and western pond turtle (WPT) habitat, the SFPUC will provide environmental awareness training for all construction workers, install exclusion fencing along the work area boundaries one week prior to work activities at each site, a qualified biologist shall survey the excluded work area within 48 hours before onset of initial ground-disturbing activities as well as be present during initial vegetation clearing and ground-disturbing activities, and provide overnight cover or escape ramps for any excavations deeper than two feet. If frogs or turtles are found, the SFPUC will halt construction and contact the U.S. Fish and Wildlife Service (USFWS) and CDFW for instruction on how to proceed and only resume construction after approval by both agencies.

CDFW recommends that it would be more efficient as well as protective of the species for the SFPUC to develop contingency plans for CRLF and WPT should an individual of either species be found rather than rely on consultation after the fact. A relocation plan should identify a specific area or areas where WPT and CRLF can be relocated, a protocol for how injured individuals will be handled, and provide a protocol for retention and documentation of dead individuals. Please note, CRLF is a federally threatened species, and authorization from the USFWS is required for relocation activities.

Additionally, given the possible presence of WPT on the Project sites, CDFW recommends any excavated, steep-walled holes or trenches more than six inches deep are provided cover at night or one or more escape ramps constructed of earth fill or wooden planks at a 3:1 slope (run:rise) and be inspected by a qualified biologist each morning prior to work activities.

BI-4

Mitigation Measure M-BI-3: Plant Replacement Trees.

M-BI-3 states that the SFPUC shall replace trees removed with trees of equivalent ecological value (i.e., similar species) at a 1:1 ratio, or if that is not feasible, at a ratio of one-inch for every one-inch removed at the tree's diameter at breast height (dbh); and that tree replacement plantings shall be monitored annually for a minimum of three years, and if necessary, replanted to ensure success of the replacement plantings.

CDFW recommends replacing trees and non-native vegetation with native trees and native vegetation that will attain similar height and canopy cover. Replacement vegetation and trees should be monitored for a minimum of 5 years. Trees should have a 60% success rate at the end of 5 years.

BI-1

Pages 5.14-44 and 5.14-45 of the draft EIR indicates a potential for impacts to bird nests by vegetation, tree removal and project activities. CDFW recommends the methodologies discussed for nest avoidance in this section be incorporated into a mitigation measure that also includes mitigation, such as additional tree plantings, for any potential significant effects.

CDFW appreciates the opportunity to comment on the San Francisco Groundwater Supply Project. CDFW staff is available to meet with you to further clarify our comments and provide technical assistance on any changes necessary to protect resources. If you have any questions, please contact Ms. Jeanne Chinn, Environmental Scientist, at (707) 944-5523 or jeanne.chinn@wildlife.ca.gov; or Mr. Craig Weightman, Senior Environmental Scientist, at (707) 944-5577. BI-2

Sincerely,

Scott Wilson
Acting Regional Manager
Bay Delta Region

cc: State Clearinghouse

Mr. Ryan Olah
U.S. Fish and Wildlife Service
Ryan_Olah@fws.gov

CITY OF DALY CITY

Department of Water and Wastewater Resources
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Daly City, CA 94015
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Patrick Sweetland, Director

April 26, 2013

Sarah Jones
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Subject: San Francisco Groundwater Supply Project

Dear Ms. Jones:

The City of Daly City welcomes the opportunity to comment on the Draft Environmental Impact Report for the San Francisco Groundwater Supply Project. The comments provided have been coordinated with Daly City's groundwater consultant, HydroFocus Inc. of Davis, CA. Daly City and San Francisco have a well established track record of mutual cooperation aimed at preserving the Westside Groundwater Basin as a potable drinking water supply. These efforts include securing grant funding to drill a series of groundwater sentinel wells, activities to construct and distribute recycled water, creating a fully vetted groundwater aquifer model, and ongoing semi-annual groundwater monitoring among basin users. It is from that vantage Daly City offers the following comments.

1. **Impact HY-6: Project operations would not decrease the production rate of existing nearby wells as a result of localized groundwater drawdown within the Westside Groundwater Basin such that existing or planned land use(s) would not be supported. (Less than Significant).** Daly City concurs. In "Approach to Analysis: Groundwater Pumping Operations," the DEIR indicates that groundwater-level changes in the North Westside Groundwater Basin were modeled using the Westside Basin Groundwater-Flow Model Version 3.1, supplemented by a spreadsheet-based Lake Merced lake-level model. However in the "Approach to Analysis: Well Interference" section, the DEIR indicates that groundwater level changes in existing pumping wells due to project operations (well interference effects) were determined with a different model developed specifically for the EIR analysis. There is no explanation of why the publically available, peer-reviewed Westside Basin Groundwater-Flow Model was rejected for use in favor of the new model. Comparisons between simulated drawdown at specified well locations indicated that the DEIR's Well Interference Model simulated 2 to more than 10 feet greater drawdown than the Westside Basin Groundwater-Flow Model, indicating that the DEIR analysis is conservative (i.e., expected drawdowns due to project pumping are less than simulated with the DEIR Well Interference Model). HY-1

2. **Impact HY-7: Project operations would not result in substantial land subsidence due to decreased groundwater levels in the Westside Groundwater Basin. (Less than Significant).** Daly City concurs. The subsidence analysis provides reasonable results given the HY-3

tools and data available. However, in "Approach to Analysis: Subsidence," the DEIR states that "typical soil compressibility values for the Merced Formation" were used to calculate potential subsidence. No measured values for soil compressibility are available for Westside Basin sediment deposits, and the values used in the analysis are therefore assumed. Furthermore, plans are being made to significantly increase groundwater extractions from the deepest parts of the aquifer system (the "deep" aquifer), which is beneath the thickest and most extensive continuous clay bed identified in the basin (the "W-clay"). These factors introduce uncertainty in the subsidence analysis results and its conclusion of no significant impact. It is prudent therefore to establish baseline land surface elevation information from which future data can be compared to reliably conclude whether or not subsidence occurs. The South Westside Basin Groundwater Management Plan specifies similar actions to collect evidence of active subsidence should basin water levels decrease below historic levels.

HY-3 cont.

3. **Impact HY-8: Project operations would possibly result in seawater intrusion due to decreased groundwater levels in the Westside Groundwater Basin. (Less than Significant with Mitigation).** Daly City concurs. The seawater intrusion analysis concluded that the project "could result in the landward migration of the seawater/freshwater interface to a greater degree than would occur under existing conditions." Existing (background) chloride concentrations in coastal monitoring wells typically range from 30 to 50 mg/L, and the DEIR relies on the "slow" movement of the seawater/freshwater interface to design its mitigation strategy. The recommended strategy allows chloride concentrations in coastal monitoring well samples to increase, and employs the San Francisco Bay Region Basin Plan's water quality objective for agricultural water supply (142 mg/L) as the action level for implementing increased monitoring; increased monitoring is intended to project if groundwater quality continues to degrade to the secondary chloride MCL (250 mg/L) within 3 years. However, the Basin Plan specifies background as the primary groundwater objective, and the proposed action level and threshold concentrations are 3 to 5 times greater than background chloride concentrations. Therefore, it would be helpful to stipulate these levels are being monitored from the City's sentinel wells located closer to the ocean and some distance away from the potable production wells.

HY-5

4. **Impact HY-9: The proposed project would possibly have a substantial, adverse effect on water quality that could affect the beneficial uses of Lake Merced. (Less than Significant with Mitigation).** Daly City concurs. Modeled lake levels are predicted to be approximately 10 feet lower than predicted under the existing condition scenario. Corrective actions are proposed that include adding supplemental water (either SFPUC system water, treated storm-water, or recycled water), if available, and/or altering or redistributing pumping patterns. Daly City is working in conjunction with San Francisco on a Lake Merced Management Plan as part of its efforts associated with the Vista Grande Drainage Basin Improvement Project.

HY-7

5. **Impact HY-12: Project operation would not have a substantial adverse effect on groundwater depletion in the Westside Groundwater Basin. (Less than Significant).** Daly City concurs with the following caveat. For practical purposes, most of the groundwater in the basin is inaccessible. Comparisons between anticipated groundwater storage changes with the estimated total storage volume of the basin therefore provide little to no information on the significance of the impacts from estimated storage depletions. This is important because conceivably groundwater levels could show significant, unexpected long-term declines before saltwater intrusion action levels or Lake Merced water level thresholds are exceeded. Furthermore, the well interference analysis assumes the project extraction rate is within the

HY-11

perennial yield of the North Westside Groundwater Basin. A more meaningful metric is therefore needed that gives conclusions consistent with the analysis of potential impacts already identified in the DEIR from groundwater depletion and lowered water levels (i.e., seawater intrusion, well interference, land subsidence, and Lake Merced water level declines). For example, rather than compare storage depletion to the total volume of groundwater in the basin, the depletions can be compared to the volume of groundwater accessible to pumping wells based on well-screen depths or the estimated perennial yield of the North Westside Groundwater Basin. These comparisons will more accurately represent potential project impacts on groundwater storage. If these impacts become potentially significant, it seems an adaptive management approach similar to the saltwater intrusion, and Lake Merced water level mitigation including operational proposals envisioned by the North Westside Basin Management Plan should be included.

HY-11 cont.

Thank you, Ms. Jones, for your consideration of our comments. Should you have any questions or require additional information, please do not hesitate to contact me directly.

Sincerely,

Patrick Sweetland
Director of Water and Wastewater Resources

L13-054

cc: Greg Bartow, SFPUC
John Fio, HydroFocus, Inc.
Timothy Johnston, SF Planning (via email)

Edwin M. Lee, Mayor
Philip A. Ginsburg, General Manager

June 11, 2013

Sarah Jones, Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

RE: RPD Comments on Draft Environmental Impact Report for the San Francisco Groundwater Supply Project

Dear Ms. Jones:

Thank you for providing the San Francisco Recreation and Park Department (RPD) with the opportunity to review the Draft Environmental Impact Report (DEIR) for the San Francisco Groundwater Supply Project.

The proposed project would involve construction of new groundwater well facilities at three RPD properties: West Sunset Playground, South Sunset Playground, and Golden Gate Park. In addition, two existing well facilities in Golden Gate Park would be replaced (the existing irrigation well facilities would be demolished, and new groundwater wells of similar size would be constructed in the same locations).

A fourth new groundwater well facility would be built at Lake Merced on land owned by the project sponsor, the San Francisco Public Utilities Commission (PUC). This facility would be located adjacent to RPD-owned and managed lands surrounding Lake Merced, and the operation of this well could also potentially affect RPD's recreational boating programs at the lake.

RE-2

Staff from the RPD Capital and Planning Division worked with the PUC on the planning and design of the proposed project from 2006 to 2010, and provided written comments to PUC stating general conditions for the construction of facilities at RPD properties. We are pleased to see that the proposed project as presented and analyzed in the DEIR is consistent with the feedback provided by RPD staff through our earlier correspondence with the PUC, thereby minimizing potential adverse impacts on recreational uses and facilities. Specifically, the proposed new well facilities are generally small in footprint and designed to be compatible with adjacent recreational uses and open space. In the case of Golden Gate Park and Lake Merced, the new pump facilities are located adjacent to existing utility and/or maintenance facilities and therefore are not expected to affect prominent locations or actively used recreational areas within the parks.

RE-1

The following topics identified in the DEIR are of particular interest to RPD:

- Water Levels at Lake Merced,
- Special-Status Species in Golden Gate Park and at Lake Merced, and
- Tree Removal

RE-2
BI-1
BI-5

RPD staff plans to work with the PUC to ensure that the mitigation measures proposed in the DEIR are fully and successfully implemented. In particular, we request that the PUC coordinate closely with RPD's Natural Areas Program staff on the mitigation measures relating to biological resources at Lake Merced and Golden Gate Park, in order to ensure protection of the special-status species that are identified in the DEIR. Additionally, we request that the PUC coordinate with RPD's Planning Unit and/or Recreation Programs staff to ensure that changing water levels at Lake Merced do not negatively affect recreational boating programs and activities.

We also wish to note the following important considerations for successful implementation of the proposed project:

- Implementation and construction of the proposed facilities should be coordinated closely with our Operations Division and recreation program staff to ensure that work does not disrupt public access to the park facilities.

- Renovations are planned at the West Sunset Playground through the 2012 Clean and Safe Neighborhood Parks Bond. It is anticipated that construction on these park improvements will begin in May 2015 and be completed in August 2016. All work proposed at the West Sunset Playground as part of the proposed project should be planned and carried out in close coordination with RPD and the bond-funded renovation work.

- The facilities at South Sunset Playground will need to be constructed entirely from the street side of the park in order to avoid interruptions to the field programming.

- These projects have been presented to the Recreation and Park Commission as informational items only. The project details for each proposed location, including final design, scope and schedule, will need to be brought before to the Commission formally for their approval.

- Per City Charter requirements, the proposed new Central Pump Station Well Facility in Golden Gate Park will require approval from the Board of Supervisors.

PD-8

Finally, RPD recommends that the PUC conduct thorough community outreach with nearby residents, park users, and other concerned stakeholders as the proposed projects moves through the planning and approval process, in order to identify and address any potential concerns.

Thank you for considering our comments and we look forward to further collaboration with the project sponsor as the project moves forward.

GC-4

Sincerely,

Karen Mauney-Brodek
Deputy Director for Park Planning
San Francisco Recreation and Park Department

2945 Ulloa St.
San Francisco, CA 94116
murphsf@comcast.net
April 27, 2013

Tim Johnston
San Francisco Planning Department
650 Mission St., Suite 400
San Francisco, CA 94103-2479

Re: Case #: 2008.1122E
San Francisco Ground Water Supply Project; Draft Environmental Impact Report.

Mr. Johnson:
The Golden Gate Audubon Society (GGAS), representing about 4000 members in the Bay Area, is pleased to give it's support to the proposed ground water supply project with some limited reservations. Most of our comments and concerns regard Lake Merced.

In the introductory glossary we think it would be wise to add "adaptive management". It is a critical aspect of this project and it should be defined.

GC-5

We are concerned with the following "Systemwide Operation Strategy":
"Dry-year transfer from the Modesto and/or Turlock Irrigation Districts of about 2 mgd coupled with the Westside Groundwater Basin conjunctive-use project to meet the drought year goal of limiting rationing to no more than 20 percent on a systemwide basis."

Our concern here is with Lake Merced water levels and water quality during drought cycles. Should lake levels drop significantly, or should water quality decline, particularly to the level the lake no longer can support a fishery, adaptive management strategies need to be implemented. Those measures should be outlined here.

In non drought cycles we urge that Lake Merced levels be monitored and assessed to determine if draw by wells associated with this project impact the lake. Should they do so adaptive management measures should be implemented. Those measures should be identified as part of the overall plan for this project so triggers can be established that would require the implementation of adaptive management measures. They should include reducing draw from specific wells, discontinuing the use of specific wells, drilling wells deeper, or drilling additional wells at a point in the aquifer that will have less of an impact on Lake Merced.

HY-7

We agree with the "Systemwide Operation Strategy" of "Development of 20 mgd of conservation, recycled water and groundwater within the SFPUC service area (10 mgd in the retail service area and 10 mgd in the wholesale service area)."

An additional potentially significant but mitigable WISP water supply and System operations impact is on the Lake Merced fishery and biological resource. The fishery is almost entirely recreational, but it should be protected and enhanced. Adaptive management and mitigation measures should be in place in the event of negative impacts. The natural biological resources, both terrestrial and marine are a significant matter of concern as well. Lake Merced hosts about 50 nesting species of birds annually. Through the course of the year, 150 or more species are seen there with many dependent on it's resources for spring or fall migration or for winter

HY-7

residence. The marsh around the lake is natural and should be protected. Native plants, invertebrates and residual vertebrates reside at the lake and merit consideration here. We could go into listed species here, but in San Francisco we should make every effort to protect and enhance the habitat for all our wildlife and natural resources. We urge that mitigable impacts on these resources be included in the EIR.

HY-7 cont.

We realize Impact RE-3 deals with our concerns, at least in part. Impact BI-1 should be expanded to include monitoring of Tri-colored Blackbird (fall and winter in marsh roosts) and "San Francisco" Common Yellowthroat (year round resident in marsh). Both are species of concern.

BI-3

GGAS agrees with and supports the project objectives:
- Expand and diversify the SFPUC's water supply portfolio to increase system reliability
- Increase the use of local water supply sources
- Reduce dependence on imported surface water

In addition, the project would provide potable groundwater for emergency supply in the event of an earthquake or other major catastrophe (SFPUC, 2009).

PD-6

Impact HY-9, which deals with Lake Merced water levels should be expanded slightly to incorporate probable benefits of the Vista Grande Watershed Project in Daly City. Since that project will overlap this one in terms of Lake Merced water quality and water level, it would seem prudent to briefly discuss it in terms of potential benefits and impacts.

HY-8

Impact HY-12. We question the conclusion that this project will not have an impact on the Westside Aquifer. We do know that previous pumping from the aquifer has led to impacts. Since the degree of certainty about this conclusion is far less than 100%, it would seem more reasonable to outline adaptive management strategies in the case impacts are found. Impacts C-HY-5 and 6 should be treated the same way.

HY-11

HY-7
HY-9

Construction timing should be geared toward starting projects in sensitive areas like woodlands, grasslands, marshes, etc., prior to the nesting season so as to reduce impacts on nesting birds. The nesting season in and around San Francisco begins as early as January for a very few species. The most likely to be impacted would be Great Blue Heron, Great Horned Owl and Anna's Hummingbird. The nesting season for the bulk of our nesting species begins in mid February, peaks in late April, fledging occurs through May and early June, and most nesting is completed by mid July. However, depending on various other variables the season can continue into August or later. Surveys are necessary to determine if nesting birds are present.

BI-2

Mitigation for vegetation destruction at project sites should include replanting with native vegetation when possible or with habitat appropriate non-native vegetation if necessary. Under no circumstances should weeds be allowed to take over areas near any of the project sites. Should additional mitigation be necessary, it would be beneficial to remove non-native, invasive vegetation from the shoreline of Lake Merced and replant it with native vegetation.

BI-1

Though we agree there is a low potential for impacts on Bank Swallows, it is incorrect to state they occasionally forage at Lake Merced (Table 5.14-2). The hundreds of Bank Swallows that utilize the nesting colony at Fort Funston depend almost entirely on Lake Merced for foraging. Since they forage on flying insects, there little chance this project will have any impact on them.

BI-3

As stated above, Tri-colored Blackbird and "San Francisco" Common Yellowthroat should be discussed in this document. Both occur at Lake Merced, but given the proposed project sites

BI-3

there would seem to be a low potential for impacts on either species. The same would be true for unusual migrant species, some of which may be listed, that might occur at any of the project sites during fall migration.

BI-3 cont.

Double-crested Cormorants do not nest in a single colony at Lake Merced. There are 3 colonies, none of which are located near a project site. It is questionable if there will be any impact on this species from project construction.

BI-3

One thing we did not see in this document is reference to aquifer recharge. Admittedly, our focus in reading the EIR was focused on Lake Merced and impacts on birds. So if our concern has been addressed we apologize for having missed it. If it is not addressed it should be. Groundwater recharge is becoming a more significant issue in San Francisco with each passing day. The problem is that many property owners are paving open space on their property with impervious materials such as concrete, artificial grass, and plastic with river rocks on top. The solution is two-fold. First, an education program should be developed and presented. It would be wise to include information about the use of water gardens and other infrastructure that can be used to decrease runoff. Second, zoning regulations requiring open ground on all lots should be strictly enforced. Third, all existing and new public and private parking lots, paved open space areas, and commercial buildings that require covering large areas of ground should be required to construct infrastructure on their property that would capture and retain rain water that could percolate into the ground.

Thank you for the opportunity to comment on this document. GGAS looks forward to the successful conclusion of this project and the integration of groundwater into the water system in San Francisco. If you have questions or if there is anything GGAS can do to provide more information please feel free to contact us.

GC-6

Very truly yours,

Dan Murphy
Conservation Committee

Ms. Sarah B. Jones
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Email Address: sarah.b.jones@sfgov.org

April 27, 2013

Dear Ms. Jones,

Re: Sunset Ground Water Project:2008.1122E

We have a concern on the Sunset Ground Water Project 2008.1122E because of the distribution of the ground water to almost the entire city, yet not everyone in the city has received mailings of this project. We, residents in the Sunset district and the undersigned, are the ones who were not informed of such project. Reliance on posting on the internet in your web site is not an acceptable notification.

Hence, project of this magnitude because of its impact should inform all residents concerned (basically entire city) to bring to their awareness and let them voice their opinions.

GC-3

Sincerely,

Carmen Chu Carmen Chu, 2269 17th Avenue, San Francisco, CA 94116

Orson Chang, 2190 22nd Avenue, San Francisco, Ca 94116

Ellen Chu, 2190 22nd Avenue, San Francisco, Ca 94116

Norman Chu, 1755 17th Ave SF, CA 94122

Ms. Sarah B. Jones
Acting Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

April 24, 2013

Dear Ms. Jones,

Re: Sunset Ground Water Project:2008.1122E

We are residents in Sunset district and have reviewed the EIR. We have following concerns of the project:

1) Only one groundwater sample from each of these wells was analyzed between 2007 and 2011 (page 5.16-23). We feel that this is insufficient sample to warrant the quality and safety of the well water for general public use. — HY-9

2) The Westside Groundwater Basin, inflow or "recharge" components of the groundwater basin include recharge from leakage of sewer and water pipes (page 5.16-27). This poses a health risk. — HY-9

3) The North Westside Groundwater Basin is susceptible to seawater intrusion under certain conditions. The Shallow Aquifer is in direct hydraulic connection with the Pacific Ocean between Lincoln Park and the San Francisco Zoo area, indicating a potential for seawater intrusion to occur in the Shallow Aquifer in this area (page 5.16-31).

   There are gaps in the "-100-foot" clay layer south of the proposed South Sunset well facility, including one between the Taraval and San Francisco Zoo coastal groundwater monitoring locations. At these gaps the Shallow and Primary Production Aquifers could be hydraulically connected (page 5.16-32). — HY-4

   This potential seawater intrusion poses a risk in degradation of groundwater quality and thus would make the groundwater potentially unsuitable for its identified use.

4) Sodium hypochlorite is on the Special Health Hazard Substance List. It is a strong oxidizer and thus potentially can increase the chance of cancer. A long term health study of drinking water daily with this chemical in 12.5% solution is necessary to eliminate any long term health risk. — HY-10

Sincerely,

Edmund Chu 2245 39th Ave. San Francisco, CA 94116

Orson Chang 2190 22nd Ave. San Francisco, CA 94116

Ellen Chu 2190 -22nd Ave S F, CA 94116

Carmen L. Chu CARMEN L. CHU 2269-17th Ave S.F, CA 94116

Eunice M. Chue Eunice M. Chue 1826 Kirkham St., SF., CA 94122

To: Sarah Jones, Acting Environmental Review Officer, San Francisco Planning Department

From: Megan Kennedy
2587 41st Ave.
San Francisco, CA. 94116

Re: Case No: 2008.1122E, San Francisco Groundwater Supply Project

I am writing this letter to voice my concerns in regards to the Draft Environmental Impact Report for the San Francisco Groundwater Supply Project. I am a homeowner and resident of the Sunset District. I have a number of problems with this Draft Environmental Impact Report.

First off, pumping water out of the ground in an area where the houses are built on sand dunes is going to cause subsidence. There are already subsidence problems throughout the Outer Sunset District. Disturbing what lies beneath these sand dunes will cause severe damage to the foundations of the houses and buildings in the area. Is the city going to take responsibility for any damage to my home's foundation? Where is the proof that subsidence will not occur? HY-2

Secondly, how does the city plan on replenishing the North Westside Groundwater Basin? There is nothing in the Draft EIR that explains how this aquifer will be replenished. The Outer Sunset District is covered by concrete. How is the aquifer going to be recharged? Lake Merced is already low. What are the city's plans for replenishing the aquifer? GC-6

Thirdly, with regards to the South Sunset Well Location and the West Sunset Well Location, why is the city building a well in a residential area without a discharge surge tank. Discharge surge tanks relieve stress on pipelines from sudden changes is pressure and flow. They prevent damage and pipeline rupture. Does the city not understand that discharge surge tanks in residential areas are common practice? Is the city not concerned with property damage and pipeline rupture? PD-1

Finally, as a resident of 2587 41st Avenue, I am concerned with the pipeline location of the South Sunset Well project. The city plans to have a vertical turbine pump (without a discharge surge tank) pump north for one block to 40th Ave and Vicente, then take a 90 degree turn west for one block to 41st Ave and Vicente, then make another 90 degree turn north on 41st Ave. This is not a good idea and may cause pipeline ruptures, especially at those 90 degree turns. Why not go north on 40th Avenue until the West Sunset Well Location? This would call for only one 90 degree turn instead of two in such a short distance. PD-1

Sincerely,

Megan Kennedy

Megan Kennedy
Homeowner and Concerned Resident

From: Zhang, Yin Lan
To: Johnston, Timothy
Subject: FW: DEIR SF Groundwater
Date: Tuesday, March 19, 2013 9:42:20 AM

I believe that even though he sent this to us as "project sponsor" this is a comment on the DEIR and will be addressed in the responses.

YinLan Zhang
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave, Suite 600
San Francisco, CA 94102
Voice: 415-487-5201; Fax: 415-934-5750

-----Original Message-----
From: Steve Lawrence [mailto:splawrence@sbcglobal.net]
Sent: Monday, March 18, 2013 6:34 PM
To: Zhang, Yin Lan
Subject: DEIR SF Groundwater

As project sponsor, can you answer: before beginning implementation, are you doing further study of aquifer's yield and whether aquifer may be overdrawn by the project? — HY-11

The documents are lengthy. — GC-2

Will Anderson* determined the aquifer's yield at 10,600 AF/year. He estimated that those south of the county line were taking 8700 AF. That leaves 1900. But SF plans to take about 4500. Seems aquifer may be over-subscribed. But SF plans to intercept 2160 before it flows to ocean. If this was not included in Will's 10,600 yield, then only 440 short; perhaps insignificant, especially given all the monitoring planned. But I don't know that Will's yield did not include intercept. And it's all close. SF says "recharge" per year is 6260; sounds like plenty. But what is recharge vs yield? *Groundwater Master Plan, 2012

Further confusion: sometimes focus is aquifer, sometimes northwestside aquifer (north of line), sometimes southwestside aquifer; Will does not know how much cemeteries take; they estimate; they probably do not measure.

Any clarification you can provide appreciated. (I do understand SF "go slow" plan, 1mgd first year....)

HY-11

Steve Lawrence

From: Steve Lawrence
To: Zhang, Yin Lan; Johnston, Timothy
Subject: San Francisco Groundwater Supply -- Draft EIR -- comments three
Date: Monday, April 08, 2013 6:37:28 PM

> Will the Westside aquifer be overdrawn (over-subscribed)? Figures I have seen for current and planned future usage by those south-of-the-line (in northern San Mateo County; see the master plan of July 2012 done by Will Anderson) indicate or suggest usage of all but 2000 acre feet of the aquifer's yield. You plan to take on the order of 4500 acre feet per year, albeit not in the first years. Arithmetic suggests, then, that the aquifer will be overdrawn if the figures are correct. While you plan to intercept water that flows out to the ocean, even that amount (if you can accomplish your aim) is less than the 2500 acre feet difference, leaving a small over-draw. Insignificant? Maybe, given your plans to closely monitor groundwater levels. Please report the quantities you *actually* intercept (prevent from flowing to the ocean), and how you measure this. And please consider that the WSIP project, Regional Groundwater Recovery and Supply, plans to slowly *fill* the aquifer; then, when drought descends, you plan to withdraw 7.2 mgd for up to 7.5 years. This draw-down could have quite an effect. Hopefully Lake Merced stays reasonably full, land does not subside, and salt sea water does not intrude. But if these or some of them do happen, likely it will be during a drought emergency. It seems hardly likely that you would stop withdrawing water, absent very serious consequences. The point is: it is more the SF Groundwater project that may be dispensable. You need to determine now that *both* projects can be done without harm to the aquifer. Put another way, you should for purposes of this analysis assume that the WSIP groundwater project *will* go forward.

(This substantially duplicates a prior email, which may be considered a "comment;" I include it to make sure one is considered, preferably this one.)

HY-11
HY-4
HY-2
HY-4
HY-7

> The Ocean Beach Master Plan (SPUR, 2012) embraces a "managed retreat" strategy. This may result in the ocean re-opening a water pathway to Lake Merced, I have heard. If re-opening occurs, how is the aquifer affected? The ocean is rising (about two inches every three years in the near term, according to a recent estimate). Absent a plan to prevent the ocean's intrusion, you should plan for foreseeable intrusion. Eventually an El Nino winter storm at high tide will assault Ocean Beach; that is foreseeable. You may believe that the Lake is not connected with the underlying aquifer, but others disagree. What happens if salt water comes to pollute the Lake and aquifer? Is that something that can be dealt with without major expense and environmental consequence?

HY-4
HY-6

> FWIW, your EIRs are too long, and too technical. This one, as one example, is not reasonably aimed at the decision-makers: the Commissioners. Real world non-expert people make these important decisions. How can they make them with best information if they will not be able to read and comprehend what you provide? Driving nearly blind, they approve. The process has become a formality.

GC-2

Steve Lawrence

From:	D L
To:	Zhang, Yin Lan; Johnston, Timothy
Cc:	Tang, Katy
Subject:	San Francisco Ground Water Supply Project
Date:	Sunday, March 17, 2013 9:09:47 PM

All,

It is not a good idea.
Don't spoil my drinking water.
Be considerate of the residents especially the western side of the City.

Please Stop the project. It is not worth it.

Please!
God bless America !

HY-9

Derek Leung.
1974 29th Ave
San Francisco, Ca 94116

cc
Case # 2008.1122E
www.sfplanning.org
www.sfwater.org

From: Zhang, Yin Lan
To: Johnston, Timothy
Subject: FW: San Francisco ground water supply
Date: Monday, March 18, 2013 3:59:58 PM

YinLan Zhang
Bureau of Environmental Management
San Francisco Public Utilities Commission
525 Golden Gate Ave, Suite 600
San Francisco, CA 94102
Voice: 415-487-5201; Fax: 415-934-5750

-----Original Message-----
From: biwong14@gmail.com [mailto:biwong14@gmail.com]
Sent: Monday, March 18, 2013 3:59 PM
To: Zhang, Yin Lan
Subject: San Francisco ground water supply

Ms. Yin Lan,

I received the public notice regarding ground water supply project letter. I have several comment regarding to this matter:

1. San Francisco have the best quality water supply from the reservoir, why city want to mix ground water with snow pack water. I have experience with ground water in San Jose, people can't even drink the water. — HY-9

2. The area going to be the drilling site is not the best due to the high traffic. Do you realize how many truck and school bus use 41st ave. as their main traffic lane. The weight of heavy traffic will damage the water pipeline in the long run. — PD-1

3. Underneath this area were sand support the housing. Drilling in this area will cause structure settlement problem as the water table under the sand is extract. Who is going to pay for the damage? You can drive around and observe the structure settlement problem already happening. — HY-2

4. Putting a pump station on 40th Ave and Quintrar street will only create parking problem. During weekend and summer, The parking lot is always occupy full. With pump station at the location, it will going force more parking problem in the neighborhood. — TR-1

For the conclusion, I think the quality of water will definitely suffer cause by mixing ground water and Hetechy water. — HY-9
Residence settlement will become a big problem because the reduction of water table under the sunset area. — HY-2

Sent from my iPad

ATTACHMENT B
DEIR Hearing Transcript

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BEFORE THE

SAN FRANCISCO PLANNING COMMISSION

ITEM NO. 7 - 2008.1122E

SFPUC GROUNDWATER DISTRIBUTION SYSTEM

PUBLIC HEARING ON THE

DRAFT ENVIRONMENTAL IMPACT REPORT

12:00 P.M.

Thursday, April 18, 2013

Commission Chambers - Room 400

City Hall, 1 Dr. Carlton B. Goodlett Place

San Francisco, California

REPORTED BY: DEBORAH FUQUA, CSR #12948

APPEARANCES:

SAN FRANCISCO PLANNING COMMISSION

President: RODNEY FONG

Vice President: CINDY WU

Commissioners: MICHAEL ANTONINI, GWYNETH BORDEN, RICH HILLIS, KATRIN MOORE and HISASHI SUGAYA

Acting Secretary: JONAS P. IONIN

Planning Commission Staff:

Timothy Johnston, Environmental Planner
Jeffrey Gilman, Project Manager

Alisa Moore, Environmental Sciences Associates, Consultant

--o0o--

Thursday, April 18, 2013 1:28 o'clock p.m.

---o0o---

P R O C E E D I N G S

SECRETARY IONIN: Commissioners, that will place you under Item 7 for Case No. 2008.1122E, the SFPUC Groundwater Distribution System, public hearing on the Draft Environmental Impact Report. Please note that written comments on the Draft EIR will be accepted at the Planning Commission until 5:00 p.m. on April 27th, 2013.

TIM JOHNSTON: Good afternoon, President Fong and Members of the Commission. I'm Tim Johnston with the Environmental Planning section of the Planning Department, and I'm the EIR coordinator for SFPUC's proposed San Francisco groundwater supply project. This project is one of several that comprise the SFPUC's larger Water System Improvement Program or WSIP.

Here with me today is Jeff Gilman, who is the SFPUC's project manager for the proposed project. Mr. Gilman will briefly describe some of the main features of the proposed project. I will follow his presentation with request to open the Draft EIR hearing to public comment.

And Jeff will have his PowerPoint up and ready

in a second.

JEFF GILMAN: Good afternoon, Commissioners. I'm Jeff Gilman, I'm the project manager for the proposed San Francisco Groundwater Supply Project. I work in the San Francisco Public Utilities Commission's Water Enterprise, Water Resources Division. And I'd like to provide you with an overview of the project today.

Today, most of San Francisco drinks a blend of treated surface water from both the Hetch Hetchy Reservoir and from our local water supply reservoirs. We currently don't use any local or San Francisco source of drinking. And while local groundwater is pumped, it's used to irrigate Golden Gate Park and also for nonpotable uses at the San Francisco Zoo not for drinking.

I want to take a moment to talk about the San Francisco Public Utilities Commission's Water System Improvement Program, or WSIP for short, because the San Francisco Groundwater Supply Project is part of that program. WSIP is a bond-funded program approved by San Francisco voters in November 2002. And the San Francisco Planning Department certified the Program EIR for WSIP in October 2008.

The adopted WSIP has a water supply strategy. And under that strategy, San Francisco has a limitation

on the imported surface water we can get from our watersheds. We also made a commitment to diversify the water supply portfolio by maximizing conservation and by developing new water supplies.

The proposed project would develop a new local source, a new local water supply source for drinking, and this additional water supply source would increase the overall reliability of our water system.

Local groundwater has been used for drinking in Daly City and other cities in northern San Mateo County for over 60 years. It's not something new. Over 80 percent of people in California obtain part or all of their water supply from groundwater.

And another and quite major benefit of a local supply source is as an emergency source of drinking water in a major earthquake.

The San Francisco Groundwater Supply Project proposes to pump groundwater from wells in the West-side Groundwater Basin, or sometimes that's referred to as the West-side Basin aquifer.

There are two other proposed projects in the West-side Basin that are interrelated with the San Francisco Groundwater Supply Project. And those are also currently undergoing environmental review.

The first is the Regional Groundwater Storage

and Recovery Project. That's a San Francisco Public Utilities Commission project that would provide water supply during multiple dry years. The Planning Department released the Draft EIR for that project on April 10th, and you will have a public hearing on that next month.

Another project is the Vista Grande Drainage Basin Improvement Project. That's a Daly City project that would, part of that, provide a supplemental source of water to maintain Lake Merced. And Daly City released a notice of preparation for an EIR/EIS for that project on February 28th. So that is currently also under review and public can comment on that.

This map shows the extensiveness of the groundwater monitoring program that we have in place throughout the West-side Basin. And since the 1990s, when San Francisco Public Utilities Commission prepared a Groundwater Master Plan, we've recognized the importance of developing a better understanding of groundwater conditions in the West-side Basin so the basin can be managed in a sustainable manner.

In cooperation with our partner agencies in the northern San Mateo County, we've been conducting groundwater monitoring in the basin for over a decade. To monitor the San Francisco part of the basin, we have

41 monitoring wells at 17 locations. Many of the locations have wells at multiple depths.

And in San Francisco, our primary focus of the monitoring program is along Pacific Coast and in the vicinity of Lake Merced. We think those are the two places where the groundwater basin is most vulnerable to over-extraction. And, again, I said our goal is to manage this basin in a sustainable manner.

So through over a decade of groundwater monitoring, we've developed a strong technical understanding of the groundwater basin.

This slide summarizes the major aspects of the proposed San Francisco Groundwater Supply Project. And I want to take a moment to go over it. The proposed project would pump up to 4 million gallons a day of groundwater for potable or drinking use in San Francisco. The project facilities include six wells constructed in two phases. The four Phase 1 wells are shown as orange circles. And the two Phase 2 wells are shown as yellow triangles.

The project also proposes about five miles of pipelines which would convey the groundwater from the well facilities to Sunset Reservoir, where it will be blended with the regional water system.

The Lake Merced well facility, the

southernmost one on that map, that would be connected by a short length of pipeline to the existing Lake Merced pump station where the blended water would be pumped to both the Sunset Reservoir and the Sutro Reservoir using existing pipelines.

After the groundwater is blended, it would then be distributed to customers throughout about 60 percent of San Francisco. And this distribution area is shown as the blue area on the map. So although most of the well facilities are on the west side, the people receiving the water and the blend would be throughout San Francisco.

This blended water that's delivered to customers would continue to exceed all drinking water standards, which is fits our standard and our objective today with our water system.

Now, for a more detailed overview of the well facilities and pipeline routes, first, I'll start with the Sunset District, and then a little bit later, I'll look at the proposed well facilities in Golden Gate Park.

The well facility buildings would be relatively small one-story buildings ranging -- with a footprint ranging from about 800 to 1500 square feet. And the building heights would range between 12 feet

and 19 1/2 feet.

The new pipelines would be installed in city streets underground, and also along existing roadways in Golden Gate Park. Construction of the well facilities would consist of minor grading, some localized trenching for underground utilities and concrete construction for foundations and the building shell.

The duration would be about 15 to 18 months per facility. Some more extensive soil improvement work would be conducted at the Lake Merced well station to prevent liquefaction. Construction of the pipelines would mainly use the cut-and-cover or trenching method, which would progress at a rate of about 300 to 600 feet per week or up to about two weeks per city block.

And trenchless excavation, the auger-boring method, would be used at the two intersections of 41st Avenue and the Muni Light Rail lines at Judah and Taraval Street to avoid disrupting the rail service. The duration at each of these two intersections is is estimated to be about four weeks.

Also the project proposes to construct a pH adjustment facility at an existing utility building on the west side of our Sunset Reservoir property near the intersection of 28th Avenue and Pacheco Street.

Now to go through each well facility in a little more detail, this shows the overall site plan for the West Sunset well facility. It would be located in the northeast corner of the parking lot near the intersection of 40th Avenue and Quintara Street.

The parking lot is associated with the West Sunset Playground athletic fields. However, the area of the parking lot is not currently used for parking, and the only existing park space we would end up taking would be for our new handicapped parking space.

We'd also be providing some concrete dividers to the Recreation and Park Department so they can create some storage bins for the field materials. Now they're stored in mainly just some stockpiles in this general area. And this well would also serve as an emergency drinking water supply and has some design components to achieve that.

The South Sunset well facility would be located in the southeast corner of the South Sunset Playground property. And that's an area that's currently an earthen berm near the intersection of 40th Avenue and Wawona Street. This area is not used for recreation currently; it's outside of the actual field of play and bleachers and such. One room of this facility is designed to be used by the San Francisco

Recreation and Park Department for equipment storage.

The Lake Merced well facility would be located along the access road to the existing Lake Merced pump station. This is San Francisco Public Utilities Commission property. And it's near the southeastern part of Lake Merced. This area is not generally accessible to the public. The well facility design includes an overlook along Lake Merced Boulevard, which would include benches facing west towards Lake Merced and an interpretive display panel.

Now, the three facilities we propose in Golden Gate Park. As part of Phase 1 of the project, we would construct the central pump station well facility -- that's the one on the far right on the map -- and a little more than one mile of pipeline.

And Phase 2 of the project would include converting the existing North Lake and South Windmill replacement irrigation well facilities and a little less than one mile of pipeline.

The central pump station well facility would be located in the central part of Golden Gate Park, south of Overlook Drive and east of the Middle Drive West-Overlook Drive intersection. This area is directly adjacent to the central pump station, which is Golden Gate Park's main pump station and reservoir

storage for their irrigation system. And that general facility also includes their wood waste composting yard. Landscaping, all the new pavements and paved areas and a new access road would primarily utilize permeable materials. And because this facility is located near Golden Gate Park central pump station, it can serve as a future backup water supply to the park.

The South Windmill Replacement well facility would be located in the southwestern part of Golden Gate Park, north of Martin Luther King Jr. Drive in an area that's currently used for storage of logs and construction debris. This facility would involve conversion of an existing irrigation well and replacement of the existing building. We would utilize the existing access road to the existing facility with grading improvements. The facility would be designed so it can serve also as a backup irrigation supply to the park.

In Phase 2 of the project, though, the primary irrigation supply would be recycled water rather than groundwater as it currently is now.

The North Lake well facility would be located in the northwestern part of Golden Gate Park near the intersection of Fulton Street and 42nd Avenue. The well facility components and overall landscape design

are nearly identical to the South Windmill replacement well site. One important addition is that the North Lake well facility would also serve as an emergency drinking water source and would have design components to it to achieve that capability.

Now to spend a few minutes on how the project would operate. The project would normally operate to supplement San Francisco's water supply. And under normal operations, wells would pump daily. The average annual groundwater production would be up to 4 million gallons a day for Phase 2 or at full build-out of the project, and up to 3 million gallons a day for Phase 1 only.

The wells have excess capacity which allows pumping to be redistributed among the six wells, meaning we can shift the pumping around as needed to avoid adverse effects of pumping.

In a catastrophic emergency, the wells would produce up to 6 million gallons a day from all six wells on a short-term basis for up to 30 days, and two of the wells, as I previously mentioned -- West Sunset and North Lake -- are designed to operate on emergency power. So they are truly emergency supply -- water supply facilities. And power would be furnished by a portable generator.

So just to wrap up the presentation, I'd like to highlight the key project objectives again: project facilities, project operations.

Our project objectives are to diversify our San Francisco water supply system and provide a local drinking water source. The project facilities, which would be constructed in two phases, include six well facilities and five miles of groundwater pipeline connecting to Sunset Reservoir.

The project operations would be, under normal operations, to pump up to 4 million gallons a day of groundwater. And in an emergency, we could pump up to 6 million gallons a day of groundwater for up to 30 days.

Blended water, the groundwater would be blended in the reservoirs, and the blended water would be distributed throughout San Francisco.

Thank you. And I'd like to answer any questions that you might have.

SECRETARY IONIN: Okay.

PRESIDENT FONG: Thank you. We might have questions for you in a bit.

TIM JOHNSTON: Thanks, Jeff.

I would now like to state that this is a hearing to receive comments on the environmental impact

report for Case No. 2008.1122E, which assesses the impacts on the environment that could result from implementation of the San Francisco Groundwater Supply Project.

This Draft EIR was published on March 13th, 2013 and delivered to you shortly thereafter. Staff is not here today to respond to comments on the environmental analysis. Such comments will be transcribed and responded to in writing in a responses to comments document which will respond to all verbal and written comments received during the public comment period and may include revisions made to the Draft EIR as appropriate.

This is not a hearing to consider approval or disapproval of the project. That hearing will be held by the SFPUC following certification of the Final EIR.

Comments today should be directed toward the adequacy and accuracy contained in the Draft EIR. Commenters are asked to speak slowly and clearly so that the court reporter can produce an accurate transcript. Commenters should also state their name and address so that they can be sent a copy of the response to comments document when completed.

After comment from the general public, we'll also take any comments on the Draft EIR from the

Planning Commission. The public comment for this project began on March 13th, 2013, and it extends to 5:00 p.m. on Monday, April 29th, 2013.

Since this is a local San Francisco project, this is the only hearing on the Draft EIR being held. So unless members of the Commission have any questions, I recommend that the public hearing be opened.

PRESIDENT FONG: Okay. Opening it up to public comment, I do have one speaker card, we have one speaker card. Tim Kennedy?

TIM KENNEDY: Hello. My name is Tim Kennedy. I live at 2587, 41st Avenue, San Francisco, California 94116.

I've come in here today because I am a certified distribution operator and a certified treatment operator. I have nine years in the water industry. And my concern today is as a resident of 41st Avenue.

My primary concern is not with the idea of groundwater wells. I think it's a great idea, especially for -- in cases of emergency such as earthquakes, give us a local water source.

My primary concern is with the pipeline location and particularly with the South Sunset well location.

PD-1

In the EIR, it says that the well is located on 40th and Wawona, and then the pipeline will go north on 40th; it will make a 90 -- goes up one block north, makes a 90-degree angle; goes one block west, makes another 90 degree angle, and then goes north.

That's going to cause a -- when a well runs, it's like a pump. It's like a vertical turbine pump. It's going to cause a lot of stress on those 90-degree angles. I think that's going to cause problems for the residents and the homeowners in that area. It could case main breaks.

PD-1 cont.

My other concern is that, on the two wells at both South Sunset and West Sunset, in the -- around homeowners, there's no surge tanks. Normally when you run a well, there should be a surge tank following the discharge side of a well that absorbs the initial impact of the well coming on or the pump coming on and creates less stress on any of the pipelines.

PD-1

I would like to suggest that there's an -- in the EIR, there's an alternate -- alternative pipeline location for Sunset Boulevard. I would like that the Commission look at that or whoever -- maybe the SFPUC looks at that.

AL-1

I know that one of the concerns was traffic during construction on Sunset Boulevard. But the

construction would only -- it would be little bis at a time, like one block, probably one lane, that would need to be closed off. And like I said it, it would take a long time to build that.

As a homeowner I'm concerned with the 90s and the fact that there could be some pipeline rupture without surge tanks. Thank you.

PRESIDENT FONG: Thank you. Is there any other public comment? Seeing none, the public comment portion is closed.

Commissioner Antonini?

COMMISSIONER ANTONINI: Well, I have a number of comments and questions. To preface, I've been a resident of western San Francisco for almost 40 years now. And I remember the late '90s in particular with the Lake Merced water level getting precipitously low. In fact, at some times it was below seal level, and there was a lot of fears of influx of saltwater.

And fortunately, a couple of changes were made in the early part of the century. I understand that under the direction of then-Supervisor Tony Hall and Supervisor Sean Elsbernd, where -- I think my understanding was that almost all the irrigation for Harding Park was being done out of groundwater at that time. And one thing, we started using more of

AL-1 cont.

PD-1

HY-7

Hetch Hetchy to keep the water level higher.

And then the other thing that was done, with an agreement with Daly City, was to use the water from the Aqua Vista -- Vista Grande canal and put that water back into Lake Merced instead of it going into the ocean, which it was before.

And I guess my question is, if you were kind of at a line where we were losing -- now we're not quite up to the level it was historically, but it's pretty good. I'm not quite sure how we're going to take 4 million gallons per day out of the aquifer and not have that lake sink again.

HY-7 cont.

TIM JOHNSTON: Which is a scenario contemplated by the EIR. So we do have a mitigation for that, which is mitigation HY8 -- or HY9, sorry, that requires a lake level management plan.

This mitigation measure contemplates that the PUC would add supplemental water from the system when available. It will also take advantage of water from the Vista Grande drainage canal as well as storm water from the surrounding areas such as may become available from the Park Merced project, for example. And so that will be the first option.

The second option would be for the PUC to alter pumping, pumping rates, of the surrounding -- of

the wells -- the well at Lake Merced. And then another step would be to stop pumping at Lake Merced and increase pumping at the other wells, all the while monitoring lake levels and thereby, in a stepwise fashion, eventually reduce pumping if need be to allow the lake to recover.

SECRETARY IONIN: Could I have a point of order here? Isn't this properly handled through the response document instead of having it provided publicly?

DIRECTOR RAHAIM: I think what Tim is doing is just responding to what's in the EIR. But we need to clarify that with the Commissioner's questions, and it will be responded to in writing in the Final EIR document. So we shouldn't get into a lot of detail about what the actual EIR has.

TIM JOHNSTON: Sorry for going on too much.

COMMISSIONER ANTONINI: Okay. Thank you. No, I'm not saying it isn't within the document. I just was raising that concern publicly so people would realize that they have to read the documents, pay attention to it, and hopefully then there will be responses -- comments and responses.

And another comment, which is a question, I guess, regarding the lakes in Golden Gate Park, particularly Chain of Lakes, which are naturally

GC-7

PD-7

occurring lakes. I think they're the only ones in Golden Gate Park which are naturally occurring. In recent years, they seem to be virtually stagnant, you know, overgrown and not in very good shape. And I'm wondering if your plan addresses the needs of these lakes to have enough water supply and movement in the water, even though these are Rec Park facilities, I understand, but they're dependent upon water that's come from their pumping at Golden Gate Park which will be somewhat affected by your groundwater pump.

PD-7 cont.

So, I mean, you don't have to necessary reply, but that's -- you know.

Finally, the other thing is probably we're seeing only part of the picture here because you did allude to the fact we're going to see in a few weeks a storage facility planned on the Peninsula, which is a separate project. But I think the answer to our quandary which we're in, we have a -- I think it's 280 million gallons per day sort of is the point that we need. And we have to -- you know, we can only take so much out of the Tuolumne. And we're trying to find other sources.

GC-1

But I think your biggest solution -- I'm not against these sources as emergency sources, but the biggest solution will be storage, to -- years are

wetter and drier, and population is going to grow, and with water needs are going to grow.

So I would hope -- the third question I want to ask, and you didn't have to answer it today, but are we addressing in this report -- it may be in here -- the intra-city pipeline conditions? Because we're going to be putting in new pipelines -- although it isn't part of this project -- there may be changes in pressure that were alluded to by the speaker that spoke from the public, and making sure that we don't have any recurrences of situations that happened at 15th and Wawona and analyzing what effects, if any, this new water supply might have on the pressures within the existing pipes, many of which are fairly old.

And then my final question will be are we going to utilize the two windmills that we have at the end of Golden Gate Park, which I think are operational, to help with this whole process because it would make sense to use -- there's a lot of wind out there, and it probably would be a good way to -- that's a different site from where your wells are going to be, but it would be good if we could figure out a way to use what's already there.

PRESIDENT FONG: Commissioner Sugaya?

COMMISSIONER SUGAYA: Just a quick comment on

GC-1 cont.

PD-1

PD-2

PD-3

Figure 3-13A, which is the South Windmill replacement well facility figure. It shows in green proposed native grass. But the site that you're going to be proposing the building and the rest of the construction and the pipelines and everything are sitting in an area which currently is void of a lot of vegetation.

And I think some of it is being used as a trash dump or something -- or used to be. But the magenta line, the limit of ground disturbance, doesn't take into consideration this whole -- I don't know if it was a quarry at one time or something. Whatever it was -- doesn't encompass the rest of the area.

And I think that it behoove the PUC and Rec Park to take a look at that area, as long as work is going to proceed, to see if it can't be -- if the vegetation program, whether it's native grasses or trees, couldn't be expanded somewhat to include re-vegetating that entire area.

PD-3 cont.

And also, if you're going to be constructing new pipelines, I assume trenching would -- may effect the trees between the current and existing road, which is Martin Luther King, and your well site. So I would hope that any kind of vegetative disturbance would be replaced in kind or that there would be a vegetation program for that area as well. That means between the

BI-1

well site and the road.

And one last comment to the gentleman who testified earlier, our only person who testified, you can of course submit written comments on this if you want to expand on your ideas or concerns or whatever. You don't have to -- you don't have to just do it here. You can write a letter to the PUC on your concerns.

PRESIDENT FONG: Commissioner Moore?

COMMISSIONER MOORE: I find the entire story about the San Francisco's water supply extremely fascinating. I am concerned that the addition of new wells in strategic locations makes these wells highly visible. And what are we considering for these facilities becoming vulnerable, which is very important part when you have visible water supply facilities.

A second part of that question is when you combine potable and recycled water in one project, what do we do about absolutely being sure about cross-connections. Those would be two questions I would like to see specifically answered.

PRESIDENT FONG: Commissioner Antonini?

COMMISSIONER ANTONINI: I think I have another question that, again, could come in comments and responses.

As reported in the DEIR, and we've we had this

BI-1 cont.

GC-7

PD-4

PD-5

GC-1

throughout the entire water -- we know that -- I think the figure was 265 million gallons per day total system. I may be off, but I think that's what's stated. And of that, 184- is wholesale, and 81- is retail -- "retail" being City and County of San Francisco, couple of other exceptions. Castlewood Country Club or something. But retail is basically City of San Francisco.

Then the wholesale is all our customers who buy water from SFPUC, which is important because we make revenue out of it. It makes a lot of sense. One of the few parts of the City that actually has a positive cash flow.

But I think that the biggest probably increase in demand or bigger increase in demand may come from our wholesale side or from the retail side -- although we've seen a lot of growth in San Francisco recently, and we're going to have an increase there.

But I'm not against this project for groundwater. But I'm wondering if you're exploring sources on the peninsula in land you own, in the Livermore Valley, particularly around Pleasanton, where you historically have had a lot of really good water supply there. And I know there's still a lot of pumping going on out there. And if we can expand some

GC-1 cont.

of the pumping in those areas -- because much of what we're pumping into the system will be used for wholesale customers. So we probably should utilize their aquifers also to meet our demand.

So that's question for responses and for another day. But I think it's an important one to answer.

PRESIDENT FONG: Okay. Thank you.

(Whereupon, the proceedings concluded at 2:03 o'clock p.m.)

GC-1 cont.

STATE OF CALIFORNIA)
) ss.
COUNTY OF MARIN)

I, DEBORAH FUQUA, a Certified Shorthand Reporter of the State of California, duly authorized to administer oaths pursuant to Section 8211 of the California Code of Civil Procedure, do hereby certify that the foregoing proceedings were reported by me, a disinterested person, and thereafter transcribed under my direction into typewriting and is a true and correct transcription of said proceedings.

I further certify that I am not of counsel or attorney for either or any of the parties in the foregoing proceeding and caption named, nor in any way interested in the outcome of the cause named in said caption.

Dated the 14th day of June, 2013.

DEBORAH FUQUA

CSR NO. 12948