

Memo

To: Seismic Safety Commission

From: Fred Turner, Staff Structural Engineer
California Seismic Safety Commission
1755 Creekside Oaks Drive, Suite 100
Sacramento, CA 95833
Phone: (916) 263-0582 Fax: (916)263-0594 Email: Turner@StateSeismic.com

Date: October 1, 2014

Subject: San Francisco Public Utilities Commission (SFPUC) Water System
Improvement Program Delays

Background

The State's Water Code requires the Seismic Safety Commission to comment to the Joint Legislative Audit Committee on the public safety implications of delays and deletions to SFPUC's Water System's Improvement Program within 90 days of receipt of notice of such delays. We received such a notice on July 1st, 2014, so the Commission has until September 29th to comment. Because the Commission did not meet in September, the Commission staff asked the Joint Legislative Audit Committee for a 15 day extension until October 14th. This will be the eighth review of delays and project deletions.

At its August 12, 2014 hearing, the Commission directed an Ad Hoc Committee of two Commissioners and staff to generate comments on the public safety implications for the full Commission's consideration and to report back at the October 9th hearing. Commissioners Emir Macari and Michael Gardner participated on the Ad Hoc Committee and met once by phone on August 28th to discuss and develop review comments and obtain feedback from SFPUC staff.

Summary of Latest Changes to the Program

The latest delays to seven seismic safety-related projects have the net effect of delaying the program's overall completion an additional one month. Delays for key seismic projects range from two to over five years, extending the Hetch Hetchy system's window of seismic vulnerability beyond that originally estimated in 2002. Some delays on individual projects are more significant than others.

In addition, the SFPUC has removed Phase 3 of the Peninsula Pipelines Seismic Upgrade Project from the Water System Improvement Program. While the SFPUC's Notice of Changes report indicates that this project will reportedly increase the seismic reliability of the Hetch Hetchy regional system up to 40 percent of the system's total post-earthquake capability upon completion, the SFPUC staff believes that the project's

impact is much smaller than 40 percent, but it has not been quantified. Because of financial constraints within the Program, Phase 3 will be funded with another source and managed outside of the Program. The Ad Hoc Committee is proposing to ask the SFPUC to keep CSSC abreast of this critical project's progress even though it is no longer in the Program.

The SFPUC's prior reporting of schedule delays for the Peninsula Pipelines Seismic Upgrade Project were reported in terms of construction completion dates. The SFPUC's most recent Notice of Changes is reporting delays in project closeout dates while overall construction completion dates have remained unchanged.

Since the Commission's last review in September 2013, the SFPUC's Director for the Water Systems Improvement Program has retired and was replaced by Mr. Dan Wade. Mr. Wade will participate at the hearing on October 9th, describe the program and comment on the Ad Hoc Committee's latest draft. The Commission also received review comments from the Bay Area Water Supply and Conservation Agency's (BAWSCA's) Nicole Sandkulla. BAWSCA sponsored the legislation that created the State Water Code requirement for the Seismic Safety Commission and the State Water Resources Control Board to review changes to SFPUC's program.

Attached for your consideration is draft version 6 of the Ad Hoc Committee's recommended review comments for the Commission's consideration as well as a copy of the SWRCB's review.

Staff Recommendation

The staff recommends that the SSC hear from staffmember Fred Turner, Commissioner Macari and Chairman Gardner, consider additional refinements raised by Commissioners and/or SFPUC staff, adopt the attached recommended comments as revised on the public safety implications of the delays and deletions to the Water System Improvement Program, and direct staff to send Commission comments to the Joint Legislative Audit Committee.

Summary of the San Francisco Public Utilities Commission's Water System Improvement Program (WSIP)

The Hetch Hetchy regional water system provides water to 2.6 million people in San Francisco, Santa Clara, Alameda and San Mateo counties. Eighty-five percent of the water comes from Sierra Nevada snowmelt stored in the Hetch Hetchy reservoir situated on the Tuolumne River in Yosemite National Park. Hetch Hetchy water travels 160 miles via gravity from Yosemite to the San Francisco Bay Area. The remaining 15 percent of water comes from runoff in the Alameda and Peninsula watersheds. This local water is captured in reservoirs located in San Mateo and Alameda counties. Delivering approximately 260 million gallons of water per day, the regional system consists of over 280 miles of pipelines, over 60 miles of tunnels, 11 reservoirs, five pump stations and two water treatment plants.

The WSIP is a \$4.6 billion dollar, multi-year program to upgrade the SFPUC's Regional and Local Water Systems. The program is delivering capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water to its twenty-six (26) wholesale customers and regional retail customers in Alameda, Santa Clara and San Mateo Counties (1.8 million approximate customers), and to 800,000 retail customers in the City and County of San Francisco. The proposed WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability goals through the year 2030, and fulfill water supply objectives until the year 2018.

The Water System Improvement Program (WSIP) reached the peak of construction in 2012 with 18 projects valued at \$2.6B in construction and all major projects launched. Currently, more than two-thirds of the 81 WSIP projects have completed construction. The WSIP is one of the largest water infrastructure programs in the nation and the largest infrastructure program ever undertaken by the City of San Francisco. The program is funded by a bond measure that was approved by San Francisco voters in November 2002 and will be paid for by both retail customers in San Francisco and 26 wholesale customers that serve Alameda, San Mateo and Santa Clara counties.

In recent years, redundant seismically-engineered conduits have or are being installed where the Hetch Hetchy Regional Water System crosses three of the nation's most active earthquake faults to help create more reliable lifelines around the San Francisco Bay. Calaveras Dam is being replaced. A new pipeline is being installed under the San Francisco Bay.

The WSIP objectives include:

- Improve the system to provide high-quality water that reliably meets all current and foreseeable local, State, and Federal requirements.
- Reduce vulnerability of the water system to damage from earthquakes.
- Increase system reliability to deliver water by providing the redundancy needed to accommodate outages.
- Provide improvements related to water supply/drought protection and enhance sustainability

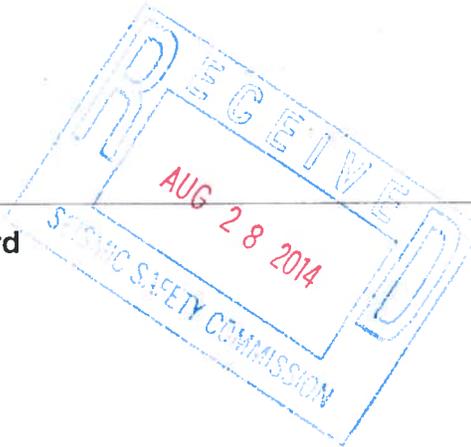
The Wholesale Regional Water System Security and Reliability Act (Section 73502 of the State Water Code) requires the Seismic Safety Commission (SSC) and the State Department of Public Health to "submit written comments with regard to the significance of that change with respect to public health and safety" within 90 days of receiving a notice of changes to the scope or schedule of the previously proposed 2002 SFPUC Capital Improvement Program (CIP) and subsequent changes.



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION



State Water Resources Control Board
Division of Drinking Water

August 27, 2014

The Honorable Assembly Member Adam C. Gray, Chair
Joint Legislative Audit Committee
1020 N Street, Room 107
Sacramento, CA 95814

Mr. Harlan Kelly, General Manager
San Francisco Public Utilities Commission
525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102

Re: Response to June 20, 2014 Wholesale Regional Water System Security and Reliability Act Notice of Changes to Water System Improvement Program

Dear Assembly Member Gray and Mr. Kelly:

In accordance with the 2002 Wholesale Regional Water System Security and Reliability Act (AB 1823) and 2008 amendments (AB 2437), the State Water Resources Control Board (Board) has completed its review of the June 20, 2014 Notice of Changes to the 2005 Water System Improvement Program (WSIP) and 2002 Capital Improvement Program (CIP) for the San Francisco Public Utilities Commission (SFPUC) regional water system. These changes were adopted by the SFPUC on April 22, 2014. The Board received the Notice of Changes on June 30, 2014.

Section 73502 (d)(3) of the Water Code requires the Board (formerly California Department of Public Health) to comment on changes to the WSIP/CIP within 90 days of notification and to provide those comments to the Joint Legislative Audit Committee and the City and County of San Francisco. The Board's review is carried out by the Division of Drinking Water (Division). The June 2014 Notice of Changes is the eighth change notice that the Division has reviewed. The Division's review focuses on the adequacy of the Notice of Changes to describe project changes and the reasons for these changes, and their significance with respect to the protection of public health regarding the safe and continuous supply of potable water. The Division's review also considers the comments and recommendations issued by the California Seismic Safety Commission (CSSC) and the Bay Area Water Supply and Conservation Agency (BAWSCA).

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

The June 20, 2014, Notice of Changes results in a one month extension of the WSIP completion date to May 24, 2019. In addition, one new project is added and five project scopes are modified to facilitate implementation. The new project is *Project CUW38804: Long Term Mitigation Endowment*. The five modified project scopes include *Calaveras Dam Replacement, Alameda Creek Recapture, New Irvington Tunnel, BDPL Reliability Upgrade – Tunnel, and Bioregional Habitat Restoration*. According to the Notice of Changes cover letter, none of these changes will impact the Level of Service (LOS) goals established for the program. The following items express the Division's comments and concerns regarding this most recent Notice of Changes, in addition to the previous seven change notices.

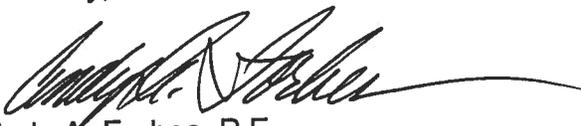
- Change notices extend the WSIP schedule and postpone attainment of the LOS objectives for water delivery and reliability. The Division recognizes that some project delays are inevitable due to the complexity of the program. However, the Division encourages SFPUC to continue taking all reasonable measures to facilitate timely completion of the WSIP projects while maintaining fiscal responsibility to system users.
- The LOS goal established by SFPUC following a seismic event is to deliver approximately 229 million gallons per day (MGD) within 24 hours to 70 percent of the turnouts and to deliver 300 MGD within 30 days. In an extreme emergency, SFPUC intends that all delivered water at least be disinfected. The recent Napa earthquake underscores the importance of ensuring rapid restoration of potable water to system customers following a seismic event. SFPUC should expedite development of the operational work-arounds referred to on Page 45 of the report, which are intended to maintain the aforementioned LOS goals following a seismic event. SFPUC should submit this document to the Division for review and approval as soon as possible, but no later than December 12, 2014.
- Page 6 states that the two fundamental principles upon which the Phased WSIP goals and objectives are founded are: 1) maintain a clean, unfiltered water source, and 2) maintain a gravity-driven system. Statement 1) should reflect SFPUC's intention to maintain an unfiltered water source by complying with the *Criteria for Avoiding Filtration* (Title 22, California Code of Regulations, Section 64652.5). The Division will work closely with SFPUC to sustain these objectives while ensuring that the water delivered to consumers is pure, wholesome and potable at all times.
- The proposed refinement to the Alameda Creek Recapture Project allowing water from Pond F2 to pump to San Antonio Reservoir while simultaneously sending water from Hetch Hetchy Aqueduct to the Sunol Valley treatment plant may result in a potential cross connection between the unfiltered Hetch Hetchy supply and the Alameda Creek supply, which requires filtration treatment.

SFPUC must work closely with Division staff to ensure sufficient protection against potential cross connections between the two types of source water.

- The description of the BDPL Reliability Upgrade for the City of Hayward Pipeline No. 2 Bypass is unclear regarding the final outcome. SFPUC must coordinate with the City of Hayward to ensure sufficient water supplies during peak system demands following the BDPL upgrade.

If you have any questions regarding this letter please contact Robert Brownwood, San Francisco District Engineer, at (510) 620-3454.

Sincerely,

A handwritten signature in black ink, appearing to read "Cindy A. Forbes", with a long horizontal flourish extending to the right.

Cindy A. Forbes, P.E.
Deputy Director
Division of Drinking Water

Cc: The Honorable Ricardo Lara
Member, California State Senate
Vice-Chair, Joint Legislative Audit Committee
1020 N Street, Room 107
Sacramento, CA 95814

The Honorable Richard S. Gordon
Member, California State Assembly
State Capitol, Room 3103
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Tim Strack, Chairman
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San Francisco PUC
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State Of California
SEISMIC SAFETY COMMISSION

GOVERNOR EDMUND G. BROWN, JR.

**Comments on the Significance of Changes in the
San Francisco Public Utilities Commission's
Water System Improvement Program (WSIP)
With Respect to Seismic Hazards**

Draft October 2, 2014 Version 6

Introduction

In 2002 the state enacted the Wholesale Regional Water System Security and Reliability Act (AB 1823, Chapter 841, 2002, Section 73502 of the State Water Code). The Act:

- Required the City and County of San Francisco to adopt a “program of capital improvement projects designed to restore and improve the Bay Area regional water system that are described in the capital improvement program report prepared by the San Francisco Public Utilities Commission (SFPUC) dated February 25, 2002”; and,
- Lists nine key improvement projects for the regional water system commonly known as the “Hetch Hetchy” system; and,
- States: “If the city adopts a change in the program that deletes one or more projects from the program, or postpones the scheduled completion dates, the city shall promptly furnish a copy of that change and the reasons for that change to the State Department of Health Services (now the California Department of Public Health) and the California Seismic Safety Commission;” and,
- Required the SFPUC to produce a Program schedule by 2003 showing that “... projects representing 100 percent of the total program cost be completed on or before 2015.” The Act specifically allows the SFPUC to modify the schedule if necessary; and,
- Requires the California Seismic Safety Commission (CSSC) to “submit written comments with regard to the significance of that change with respect to public health and safety” within 90 days of receiving a notice of changes to the scope or schedule of the previously proposed 2002 SFPUC Capital Improvement Program (CIP) and subsequent changes. The purpose of the CSSC’s review is to assess the level of risk to the public health and safety associated with potential interruption of the water supply from seismic events that any such delays may present.

On July 1, 2014, the CSSC received another notice of changes from the SFPUC dated June 20, 2014. This is the CSSC’s eighth review of changes to the Water System Improvement Program. Prior CSSC reviews occurred in 2006, 2008, 2010, 2011, 2012, May and September 2013 in response to changes in the Program in late 2005, 2007, 2009, 2011, 2012, February and September 2013.

Scope and Limitations of these Comments

The CSSC considered changes to the WSIP that the SFPUC made between September 2013 and June 2014 when generating the comments below. Appendix A lists the planned seismic safety projects and their schedule changes from the 2002 CIP to the 2014 WSIP including the nine key projects identified in the Act. In addition, the CSSC considered construction progress to date.

CSSC Commissioners Michael Gardner and Emir Macari and staff prepared this report and made a presentation to the CSSC at its October 9, 2014, meeting. Appendices B and C list the sources of information that CSSC used during this review.

As required by the Act, the CSSC has prepared comments that address schedule delays in the regional WSIP. The Act's comment period only allows for limited review and comments by CSSC staff and commissioners. In addition, although some Commissioners and staff are licensed professionals who are familiar with certain technical aspects of the seismic design of water systems, in their roles of serving the public as Commissioners and staff, they do not perform engineering or other licensed work. Rather, the CSSC's primary mandate is to provide policy advice to the Governor, the Legislature, and the public. Consequently, this effort does not constitute work by licensed professionals on the Commission or its staff. In generating the comments below, the CSSC does not assume responsibility for the integrity or reliability of any aspect of the WSIP. The Commission also does not regulate, certify, approve or disapprove of the WSIP or any of its changes.

Notwithstanding the foregoing, in the interest of assisting the SFPUC and serving the public, the CSSC has included additional comments and recommendations that it believes are relevant to public health and safety.

The Original Capital Improvement Program in 2002 and Major Changes in 2005

The SFPUC's water transmission system serves 26 wholesale customers in addition to delivering water to the San Francisco City Distribution Department's retail system. Together these 27 retail distribution systems (including San Francisco) serve approximately 2.5 million users. In 2002, the seismic upgrade component of the CIP was composed of a collection of projects intended to limit the loss of service to the SFPUC's wholesale customers following major earthquakes. The 2002 CIP was prepared and evaluated in an intuitive manner without the benefit of specific seismic performance objectives, quantitative analysis of alternatives, or a schedule that allowed for a programmatic environmental impact review (PEIR). The CIP was renamed the Water System Improvement Program and the SFPUC adopted more specific Levels of Service Goals and significant changes to the scope of the program in 2005.

Progress in the Water System Improvement Program as of April 2014

Reportedly 79 percent of construction and design has been completed for the 48 regional projects currently in the Program. The most significant changes from the September 2013 to the April 2014 schedules were various delays to seven projects as well as a delay to the program's overall completion of an additional 1 month which is a cumulative delay of 38 months compared to the initial schedule in 2002. Of the nine key seismic safety projects listed in State Water Code, all have been delayed significantly with respect to the 2002 schedule:

**Seismic Safety Projects
Referenced in the Water Code**

**Scheduled Delay (Months) Constr.
Relative to 2002 Schedule Status***

New Irvington Tunnel*	79	In Progress
Crystal Springs to San Andreas Reservoir Transmission Upgrade	48	In Progress
Bay Division Pipelines 1 and 2 Repairs	See BDPL Reliability Upgrade	
Bay Division Pipeline (BDPL) Reliability Upgrade Tunnel	37	In Progress
BDPL Reliability Upgrade Pipeline	26	In Progress
Seismic Upgrade Bay Division Pipelines 3 and 4	64	In Progress
Alameda Siphon #4 Upgrade	46	Completed
New Crystal Springs Bypass Tunnel	39	Completed
Bay Division Pipelines 3 and 4 Crossover/Isolation Valves	10	Completed
Calaveras Dam Projects*	120	In Progress

*Projects that the SFPUC indicates have secondary roles in providing the system with seismic reliability

**Other Seismic Safety Projects with
Primary Roles in the System’s Seismic Reliability**

Standby Power Facilities	35	Completed
Bay Division Pipeline Nos. 3 and 4 – Crossovers	17	Completed
Harry Tracy Water Treatment Plant Short Term Improvements	-28(Early)	Completed
Harry Tracy Water Treatment Plant Long Term Improvements	-2(Early)	In Progress
Crystal Springs/San Andreas Transmission Upgrade	47	In Progress
Crystal Springs Pipelines No. 2 Replacement	-16(Early)	Completed
San Andreas Pipeline No. 3 Installation	-27(Early)	Completed
Baden & San Pedro Valve Lots Improvements	17	Completed
Peninsula Pipelines Seismic Upgrade (**Initiated 2009, including Phase 3)	42**	In Progress

The State Water Code provides that the SFPUC may change projects and schedules in the Water System Improvement Program without the State’s permission, but that if San Francisco deletes or delays projects, the CSSC must be informed. Appendix A presents the adopted changes to the Water System Improvement Program schedule since its original adoption by San Francisco in 2002.

Comments within the Scope of the Act

1. **Schedule Changes.** The latest delays affect compliance with the seismic reliability Level of Service goals for the WSIP including the goal of meeting average-day demands of up to 300 million gallons per day within thirty (30) days after major earthquakes occur in the San Francisco Bay Region.

Revised estimates of completion dates for the projects originally identified as key for seismic safety are expecting cumulative delays at worst ranging from two to over five years compared to the 2002 schedule. The effect of delays is a forestalling of seismic safety reliability for the regional water system. The additional delays will increase the window of vulnerability in which major earthquakes may occur before critical seismic safety portions of the upgrade are completed.

The CSSC notes that the SFPUC has incrementally reported delays in 2005, 2007, 2009, 2011, 2012, February and September 2013 in addition to this latest set of delays. The additional delay reported for the Peninsula Pipelines Seismic Upgrade Phase 3 stems from an inconsistency in the SFPUC’s prior reporting of its construction completion date compared to the April 2014 reporting of its later project closeout date.

2. **Project Scope Changes.** There were no projects deleted. However, Phase 3 of the Peninsula Pipeline Seismic Upgrade Project has been moved out of the WSIP Program and will be funded from a source other than the WSIP. The CSSC is aware that the SFPUC is considering options for water delivery in the areas serviced by Phase 3 of the Peninsula Pipeline Seismic Upgrade Project.

While past SFPUC's Notice of Changes reports (refer to Appendix L) indicate that completion of this project will provide a large improvement to seismic performance and reliable water delivery in the event of major earthquakes on the San Andreas, Hayward, or Calaveras faults, the SFPUC's staff believes that the impact is relatively small, and they do not intend to correct Appendix L. The SSC will reconsider the matter if a correction is generated.

Conclusions and Recommendations

The SFPUC continues to make progress and refinements to its Water System Improvement Program. However, it is behind the SFPUC's original 2002 program schedule submitted to the State in 2003 that showed 100 percent completion of the seismic portions of the projects by 2015. The CSSC recognizes that the SFPUC has the authority to delay progress that projects have been added, and the scope of the Program has evolved since then. Major schedule delays since 2002, including the most recent delays, continue to adversely impact the Program with respect to public health and safety should major earthquakes occur before completion of the Program.

The CSSC respectfully requests that the SFPUC continue to report to CSSC regarding the seismic safety related activities undertaken for Phase 3 of the Peninsula Pipeline Seismic Upgrade Project since it appears to have a large impact on the seismic performance and reliable water delivery of the overall system.

Appendix A

Water System Improvement Program

Seismic Reliability Projects and Schedule Comparisons

The San Francisco Public Utilities Commission is undertaking a \$4.6 billion Water System Improvement Program to enhance the Hetch Hetchy water transmission system with an anticipated 2019 completion of seismic projects. The table below summarizes the major seismic reliability projects and compares schedules between the 2002 Program and subsequent changes in 2005, 2011, 2012, Feb. and Sept. 2013.

Water System Improvement Program Seismic Projects	Project Closeout Dates Estimated					2002 to June 2014 Variance (Months)
	2002	2005	2011	Sep 2013	June 2014	
Standby Power Facilities	Nov 2013	Dec 2010	Dec 2010	Dec 2010	Dec 2010	-35
New Irvington Tunnel	Aug 2009	Sep 2013	Oct 2014	May 2016	Mar 2016	+79
Alameda Siphon #4 Upgrade**	**	Apr 2011	Jun 2012	June 2013	June 2013	+46
Pipeline Repair & Readiness	Sep 2004	Mar 2007	Apr 2009	Apr 2009	Apr 2009	+55
Calaveras Dam Projects	May2009	June 2012	Jul 2016	Sep 2018	May 2019	+120
Bay Division Pipelines 3&4 Crossover/ Isolation Valves	N/A	Sep 2008	Jul 2009	July 2009	July 2009	+10
Seismic Upgrade Bay Div. Pipelines 3&4	Aug 2010	Oct 2012	Apr 2015	Sept 2015	Dec 2015	+64
Bay Division Pipeline (BDPL) Reliability Upgrade Tunnel	Feb 2013	Jan 2014	Nov 2015	Nov 2015	Mar 2016	+37
BDPL Reliability Upgrade Pipeline	Feb 2013	Jan 2014	Mar 2013	Apr 2014	Apr 2015	+26
Bay Division Pipelines (BDPL) Nos. 3 & 4 Crossovers***	Jan 2013	N/A	May 2013	Sept 2013	June 2014	+17
New Crystal Springs Bypass Tunnel	May2009	Oct 2010	Mar 2012	Aug 2012	Aug 2012	+39
Harry Tracy Water Treatment Plant Short Term Improvements	Nov 2012	Sep 2010	Jul 2010	July 2010	July 2010	-28
Harry Tracy Water Treatment Plant Long Term Improvements	Mar 2016	Apr 2014	Dec 2015	Jan 2016	Jan 2016	-2
Capuchino Valve Lot Improvements	Mar 2016	Jul 2009	Aug 2008	Aug 2008	Aug 2008	-91
Crystal Springs/San Andreas Transmission Upgrade	Jul 2011	Apr 2014	Apr 2014	Jan 2015	June 2015	+47
Crystal Springs Pipeline No.2 Replacement	Nov 2015	Apr 2012	Sep 2013	Sept 2013	July 2014	--16
San Andreas No.3 Pipeline Installation	Nov 2014	June 2011	Nov 2011	Aug 2012	Aug 2012	-27
Baden & San Pedro Valve Lots Improvements	^	Oct 2011	Aug 2012	Mar 2013	Mar 2013	+17^
Sunset Reservoir North Basin	Oct 2014	May 2009	Sep 2010	Sept 2010	Sept 2010	-49
Peninsula Pipelines Seismic Upgrade (Including Phases 1,2, and later 3)	^^	Dec 2014^^	Jul 2016	Nov 2017	July 2016 (Ph1&2) June 2018 (Ph 3)	+19^^ 42^^
Bay Div Pipelines (BDPL) 1 & 2 Repairs***	Jan 2013	N/A	N/A	N/A	N/A	N/A
Overall WSIP Completion	Mar 2016	Jun 2014	July 2016	Apr 2019	May 2019	38

Footnotes: For delays in 2007 and 2009 please refer to the Seismic Safety Commission's prior reviews in 2008, 2010, or 2011. Projects in bold are listed in CA Water Code Section 73502(b) added by AB 1823 (Chapter 841, Statutes of 2002).

** The Alameda Siphon Upgrade is now a separate project that was previously combined with the New Irvington Tunnel.

*** The SFPUC removed these projects from the WSIP since they are not required to achieve the new Levels of Service Goals. Refer to the Bay Division Pipeline Reliability Upgrade Project for BDPL 1 and 2 Repairs.

^ Completion date established in 2005; ^^ in 2009, and note that Phase 3 of the PPSU has been removed from the WSIP

Appendix B

List of Documents Received/Reviewed/Generated

Notice of Changes to Water System Improvement Program by the San Francisco Public Utilities Commission (SFPUC), June 20, 2014, received July 1, 2014.

SFPUC Staff Response to CSSC's Revised Preliminary Issues

Prior CSSC reviews since 2006.

Additional Schedule Change regarding Peninsula Pipelines Upgrade Phase 3 received from SFPUC staff on August 21, 2014

Fiscal Year 2013-2014 Annual Report, Water System Improvement Program, SFPUC, received Sept 2, 2014.

Appendix C

Meetings with the CA Seismic Safety Commission (CSSC), its Ad Hoc Committee and CSSC Staff

August 28, 2014 Teleconference of CSSC Ad Hoc Committee, CSSC Staff, SFPUC Staff, and [California State Water Resources Control Board Staff](#)

October 9, 2014 CSSC Hearing, minutes available at www.seismic.ca.gov