

State of California
Seismic Safety Commission

Memo

To: Seismic Safety Commission

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

Date: July 3, 2013

Subject: San Francisco Public Utilities Commission 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 to SFPUC's Hetch Hetchy Water System's Improvement Program within 90 days of receipt of notice of such delays. We received such a notice from the SFPUC on June 28, so the Commission has until September 26th to comment on what the SFPUC has reported to be an additional eight months of delay to the overall program. This will be the seventh review of Program changes conducted by the Commission since 2006.

Summary

For the Commission's last review completed in May this year, Commissioners Emir Macari and Peggy Hellweg participated in an ad hoc committee to review prior delays and develop recommended comments for the full Commission's consideration. Commissioners Tim Strack and Peggy Hellweg also visited the Calaveras Dam site last February. In prior years other Commissioners and staff visited other portions of the Hetch Hetchy system.

Staff Recommendation

The staff recommends that the Commission appoint an ad hoc committee to generate recommended comments on the public safety implications of the latest delays for the full Commission's consideration over the next three months and report back to the Commission at its September meeting.

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.



June 28, 2013

The Honorable Michael Gardner, Chairman
California Seismic Safety Commission
1755 Creekside Oaks Drive, Suite 100
Sacramento, CA 95833-3637

Dr. Ron Chapman, MD, MPH, Director
California Department of Public Health
P.O. Box 997377, MS 0500
Sacramento, CA 95899-7377

**Subject: Wholesale Regional Water System Security and Reliability Act
Notice of Changes to Water System Improvement Program**

Dear Commissioner Gardner and Dr. Chapman:

Pursuant to the reporting requirements of the Wholesale Regional Water System Security and Reliability Act, the San Francisco Public Utilities Commission (SFPUC) respectfully submits this Change Notice, describing changes adopted by the SFPUC Commission (Commission) on April 23, 2013 to the schedule of the Water System Improvement Program (WSIP). Although not required by the Wholesale Regional Water System Security and Reliability Act, the SFPUC is also providing a description of the budget revisions and few project scope changes adopted by the Commission.

The SFPUC has made great progress towards the implementation of the WSIP since the Commission last adopted program-wide revisions to the scope, schedule, and budget for the program in July 2011. Between July 1, 2011 and March 30, 2013, the overall completion of WSIP regional projects increased from 42.4% to 70.9%. With only a few projects remaining in design, the implementation of the program almost exclusively focuses on construction activities. As of March 30, 2013, fifteen (15) regional projects with a total value of \$2,703 million are in construction and twenty eight (28) with a total value of \$575 million are in closeout or have been completed. The remaining four (4) regional projects are in pre-construction, one being a support project that does not contribute directly to the program's levels of service (LOS) goals.

As projects move from planning, to design and eventually to construction, new information becomes available and unexpected challenges are often encountered in the field. Program revisions are necessary to incorporate the project teams' latest knowledge, understanding and analysis.

In early 2013, WSIP Senior Management recognized the need to refine estimates at completion for all active projects based on the latest available information and formally approve program revisions in order to:

Edwin M. Lee
Mayor

Art Torres
President

Vince Courtney
Vice President

Ann Moller Cuen
Commissioner

Francesca Vinter
Commissioner

Auson Moran
Commissioner

Harlan L. Kelly, Jr.
General Manager



- Incorporate the latest project schedule and cost forecasts based on the most recent information available, including the status of change orders, trends, risks and contingencies reported by the various construction management (CM) teams;
- Transfer forecasted project savings to projects with forecasted overruns;
- Secure the additional funding needed to complete all WSIP projects;
- Provide more realistic project baselines for performance measurements; and
- Ensure compliance with the California Water Code (Assembly Bills [AB] 1823 and 2437).

On March 22, 2013, the SFPUC notified the Bay Area Water Supply & Conservation Agency (BAWSCA) that the Commission would be considering changes to the WSIP at a public hearing on April 23, 2013. We also asked BAWSCA to forward the notification to the 26 wholesale agencies it represents and as requested, BAWSCA confirmed the notification was forwarded. This notification was made to comply with the change notice requirements of the Wholesale Regional Water System Security and Reliability Act. In addition, the Notice of Public Hearing and all supporting documents submitted to BAWSCA were posted on the SFPUC Website. On April 23, 2013, following a 30-day review period, the Commission, per Resolution No. 13-0060, adopted the March 2013 Revised WSIP.

In summary, the overall scope of the WSIP essentially remains unchanged and no projects were deleted from the program. The scope of two projects was modified to facilitate their implementation but those changes will not impact the LOS goals to be achieved by the WSIP. These goals also remain unchanged.

A number of project schedules were revised to address construction challenges in the field. The program completion date adopted as part of the March 2013 Revised WSIP is April 11, 2019, which represents an 8-month extension over the last schedule approved by the Commission in January 2013 and a 32-month extension over the schedule adopted as part of the June 2011 Revised WSIP.

All but two (2) projects (Calaveras Dam Replacement and Alameda Creek Recapture projects) will be completed by the mid-2016. Of the 24 WSIP regional projects still active (not including support projects), half have been accelerated or have unchanged schedules, while the other half have extended schedules.

To facilitate distribution, the attached document is also available in the Reports section of the WSIP Web Page at www.sfwater.org/wsip. Please do not hesitate to contact me at (415) 554-1600 if you have questions or need additional information.

Sincerely,



Harlan L. Kelly, Jr.
General Manager

Attachment:

Notice of Change Report

cc: (w/ attachment)

Arthur Jensen - Chief Executive Officer and General Manager, BAWSCA

Richard (Dick) McCarthy - Executive Director, California Seismic Safety Commission

Fred Turner - Structural Engineer, California Seismic Safety Commission

Bruce Burton - Chief of Northern California Drinking Water Field Operations Branch,
California Department of Public Health

Betty Graham - San Francisco District Engineer, Drinking Water Field Operations Branch,
California Department of Public Health

cc: (w/o attachment)

The Honorable Art Torres - President, SFPUC Commission

The Honorable Vince Courtney - Vice President, SFPUC Commission

The Honorable Ann Moller Caen - Commissioner, SFPUC Commission

The Honorable Francesca Vietor - Commissioner, SFPUC Commission

The Honorable Anson B. Moran - Commissioner, SFPUC Commission

The Honorable Assembly Member Adam C. Gray, Chair
California State Assembly - Joint Legislative Audit Committee

The Honorable Assembly Member Ricardo Lara, Vice-Chair
California State Senate - Joint Legislative Audit Committee

The Honorable Mark Pazin, Vice-Chairman, California Seismic Safety Commission

Stefan Cajina, Chief of North Coastal Region, Drinking Water Field Operations Branch,
California Department of Public Health

Irene O'Connell - Chair, BAWSCA

Randy Breault - Vice-Chair, BAWSCA

BAWSCA Member Agencies (distributed by BAWSCA)

