

State of California
Seismic Safety Commission

Memo

To: Seismic Safety Commission

From: Fred Turner, Staff Structural Engineer
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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 (JLAC) 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, 2016, so the Commission has until September 30th to submit comments to the JLAC. This will be our ninth review of delays and project deletions.

At its January 2016 hearing, the Commission directed an Ad Hoc Committee of Commissioner Michael Gardner and staff to generate draft comments on the public safety implications for the full Commission's consideration and to report back at our September 8th hearing.

Summary of Latest Changes to the Program

The latest delays to six seismic safety-related projects have the net effect of delaying the program's overall completion an additional seven months. However, the latest set of delays are administrative in nature and do not appear to substantively impact seismic safety. Cumulative delays for key seismic projects range from one to over six years, extending the Hetch Hetchy system's window of seismic vulnerability beyond that originally estimated in 2002. Some cumulative delays on individual projects are more significant than others.

Attached for your consideration is a final draft of the Ad Hoc Committee's recommended review comments for the Commission's consideration. The Commission has not yet received a copy of the State Water Resources Control Board's parallel review of and comments on delays, but if we receive it before our Commission hearing, your staff will provide copies.

Staff Recommendation

The staff recommends that the SSC hear from staffmember Fred Turner and Commissioner 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 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.