

ATTACHMENT 7:

June 2011 Revised WSIP - Explanation of Major Scope Changes



Because most Regional WSIP projects are currently in construction, there are very few projects that have had modifications to scopes significant enough to potentially affect the WSIP's ability to comply with Levels of Service (LOS) goals for the program. Most project scopes remain the same as those last approved by the San Francisco Public Utilities Commission (SFPUC) on July 28, 2009 (referred to as "2009 Revised WSIP - Project Descriptions"). The scope elements of some projects have been refined slightly as indicated in the latest WSIP project descriptions (refer to Attachment 8: June 2011 Revised WSIP – Project Descriptions).

There are four (4) projects that had modifications to scopes that were significant enough to warrant careful reviewed by the WSIP System Engineering Division of the Engineering Management Bureau (EMB) and the WISP Management Team to assure that projects and the program still comply with all Levels of Service (LOS) goals, and that modifications were necessary and beneficial to achieve the project objectives. The scope modifications to these projects are detailed below.

PROJECTS WITH MAJOR SCOPE CHANGES:

CUW35302 Seismic Upgrade of BDPL Nos. 3 & 4

This project provides a seismically reliable pipeline crossing of the Hayward Fault in response to the Seismic Reliability LOS goals. Bay Division Pipelines (BDPL) Nos. 3 and 4 cross the Hayward Fault near the intersection of Mission Blvd and Interstate 680 (I-680). The maximum credible seismic event will cause a strike-slip displacement that will result in probable failure of both pipelines. The previous project scope included replacement of about 2,300 feet of BDPL No. 3, and improvements to BDPL No. 4 at Hayward Fault Traces B and C to facilitate the failure of BDPL No. 4 in a controlled manner that does not cause subsequent failure of BDPL No. 3.

As part of final design efforts, modeling was performed to assure the design components would perform as anticipated in a design seismic event. During this analysis, it was determined that BDPL No. 4 may be susceptible to failure at Hayward Fault Trace A, located under freeway I-680. This type of failure was deemed to be unacceptable, and thus, the project design has incorporated features to protect BDPL No. 4 against failure at Trace A. In addition to this scope change, the project refined the details for relocation of several existing utilities in the area, including two Alameda County Water District water pipelines, one Union Sanitary District sewer pipeline, one conduit of AT&T phone lines, and one six-inch diameter PG&E gas pipeline. Care is being taken to assure that the design of relocated facilities is compatible with the seismic reliability goals of the system.

CUW39501 Peninsula Pipelines Seismic Upgrade Project

This project was created in response to the system's Seismic Reliability LOS goals. The San Andreas Pipeline No. 2 (SAPL2), San Andreas Pipeline No. 3 (SAPL3), and Sunset Supply Branch Pipelines (SSBPL) are three drinking water transmission pipelines that deliver water from the Harry Tracy Water Treatment Plant (HTWTP) to customers within the service area of the Regional Water System and City of San Francisco. Portions of these pipelines traverse the Serra Fault, a "secondary" fault along the Peninsula in San Mateo County that may experience fault rupture during a large seismic event on the San Andreas Fault. During geotechnical investigations performed for the HTWTP Long-Term Improvement Project, it was determined that fault offset on the Serra Fault during a design San Andreas event may be capable of causing pipeline failure at the fault crossings. Failure of these pipelines may prevent delivery of water required to meet post-seismic LOS goals.

The scope of this project previously included geotechnical investigations to characterize the Serra Fault in the vicinity of the pipelines and to confirm assumptions about sub-surface conditions along the length of the pipelines (SAPL2 and SAPL3 from HTWTP to San Pedro Valve Lot, SSBPL from HTWTP to Capuchino Valve Lot, and Sunset Supply Pipeline [SSPL] from Capuchino Valve Lot to San Pedro Valve Lot). In addition, hydraulic modeling was performed to review system/facility requirements to meet system goals. The objectives of the investigations were: (1) to determine the potential fault offset at the Serra Fault crossings and the potential response from the three pipelines to these offsets, and (2) to determine potential for pipeline rupture due to displacement from liquefaction, landslides, and other seismically-triggered hazards along the pipeline alignments.

The extensive geotechnical and modeling analyses performed to date have been carefully reviewed to identify specific project recommendations. The refined project scope currently includes the following components:

- Replacement of about 1,200 feet of SAPL2 at the Serra Fault Crossing;
- Replacement of about 1,050 feet of SAPL3 at the Serra Fault Crossing;
- Replacement of about 900 feet of SSBPL at the Serra Fault Crossing; and
- Replacement of about 1,150 feet of SAPL2 at two locations in the Colma Creek area in sites where there is potential for liquefaction hazard.

CUW38802 Bioregional Habitat Restoration Project (previously Habitat Reserve Program)

The former Habitat Reserve Program was created to provide a coordinated and consolidated approach to compensate for habitat impacts that may result from implementation of the WSIP projects in the San Joaquin, Sunol Valley, Bay Division, and Peninsula Regions of the Regional Water System. The previously approved scope of the Habitat Reserve Program would include projects to preserve, enhance, restore, or create approximately 1,435 acres of tidal marsh, vernal pools, white alder riparian forest, sycamore alluvial woodland, arroyo willow riparian habitat, oak woodland and savannah, sage scrub habitat, serpentine grasslands, coastal live oak woodland, annual grasslands, and oak riparian forest.

Current determinations of project compensations by regulating agencies have resulted in changes and refinements to the project scope. The project's name has been changed to Bioregional Habitat Restoration Project to better reflect the objectives of the project. The

updated project description includes development of compensation sites to preserve, enhance, restore, or create approximately 2,375 acres of tidal marsh, vernal pools, sycamore and oak riparian woodland, oak woodland and savannah, and serpentine and annual grasslands. The project includes design, environmental permitting, construction, construction management, maintenance and performance monitoring during a 3-year plant establishment period, and establishment of a long-term maintenance endowment account.

The wide variety of the types of impacts from WSIP projects resulted in the need for development of 20 compensation sites on SFPUC property and contracting with 7 property owners to secure compensation on property outside the Alameda and Peninsula watersheds. There are 9 compensation sites on SFPUC property in the Alameda watershed with an average size of 225 acres, demonstrating a significant commitment to the continued protection of species habitat. Although the average size of the 11 Peninsula compensation sites is 15 acres, the projects have been strategically placed to best benefit the San Francisco garter snake. The increase in the quantity of habitat compensation lands planned in 2011 versus 2007 includes over 900 acres. The significant increases are in Tidal Marsh (+301 acres), Oak Woodlands (+205 acres), Riparian Woodlands (+26 acres) and Grasslands (+427 acres).

CUW39401 Watershed & Environmental Improvement Program

The Watershed Environmental Improvement Program (WEIP) includes the comprehensive identification of critical watershed lands and ecosystem restoration needs within the hydrologic boundaries of the Alameda Creek, Peninsula (San Mateo and Pilarcitos Creeks) and Tuolumne River watersheds, and prioritizes the protection and/or restoration of these lands. This program will manage watershed activities and resources to protect source water quality, native species and their habitat; and identify critical watershed lands, key ecosystem restoration needs and restoration priorities.

In 2007, two potential projects were identified: Repair or Replacement of Niles Gage on Alameda Creek and Watershed Road Management Plan and Improvements. After extensive project research and planning, the project's focus has shifted away from these two potential projects, and instead towards permanently protecting Alameda Creek watershed lands through conservation easements and/or fee title purchase of property from willing landowners. Under the new approach, there will be no construction work to be funded under this project.