

## **ATTACHMENT 4:**

### **June 2011 Revised WSIP - Explanation of Schedule Changes**



The proposed project schedules in the June 2011 Revised Water System Improvement Program (WSIP) reflect the latest available information on each project based on ongoing implementation efforts. It is standard practice to refine project schedules as more knowledge is gained about project-specific needs and challenges. The extensive schedule forecasting and review efforts undertaken during the last few months have led to more accurate and realistic project-specific schedules. While a number of the proposed schedule changes are related to construction (i.e., issues encountered in the field or new projected construction timeline), other reasons for changes include scope changes during pre-construction, permitting and environmental requirements, required extension of the construction bidding period, and standardization of the project closeout period to 6 months.

Attachment 3: June 2011 Revised WSIP - Summary of Schedule Changes, compares the approved June 2009 and revised June 2011 Construction Notice to Proceed (NTP) and Project Completion dates for all WSIP regional projects. Provided below is an explanation of why the June 2011 completion dates for certain projects have been extended beyond the June 2009 completion dates. Note that this document does not provide explanations for the 15 projects that have been completed (including the Programmatic EIR), the 3 projects that have been accelerated (i.e., the revised June 2011 Project Completion date is earlier than the approved June 2009 Project Completion date), and the 9 projects that have no schedule variances (i.e., the Approved Project Completion date is the same as the Proposed Project Completion date or less than 1 month change).

#### **Projects with Completion Dates Extended Less than 3 Months**

*Crystal Springs Pipeline No. 2 Replacement (2-Month Change):* The schedule has been extended to provide 6 months for project closeout. The Approved Project Completion date is July 18, 2013 and the Proposed Project Completion date is September 25, 2013, resulting in a 2-month extension. This project is in construction and substantial completion is forecasted for November 2012.

*University Mound Reservoir – North Basin (1-Month Change):* Adverse weather delayed the application of the roof coating system and construction completion. The Approved Project Completion date is December 2, 2011 and the Proposed Project Completion date is January 11, 2012, resulting in a 1-month extension. This project is in construction and substantial completion is forecasted for June 2011.

#### **Projects with Completion Dates Extended by 3 to 6 Months**

*Tesla Treatment Facility (6-Month Change):* The previously approved schedule assumed a 3-month early completion and an overlap of the 1-year facility commissioning period and closeout phase. The proposed project schedule extension provides for 3 additional months of construction to match the contract time allowance for final completion and 3 additional months following facility commissioning for an expedited project closeout. A shorter closeout period is appropriate in this case since some closeout activities can be initiated during the commissioning period. The Approved Project Completion date is March 30, 2012 and the Proposed Project

Completion date is September 28, 2012, resulting in a 6-month extension. This project is in construction and substantial completion is forecasted for June 2011.

*Seismic Upgrade BDPL 3 & 4 (4-month Change):* Alameda County Water District (ACWD) water lines will need to be temporary relocated around the articulated box area across Mission Boulevard during construction and permanently installed over the box and over the Bay Division Pipelines after construction. The Union Sanitary District utility relocation and Archeo investigation work will delay Notice to Proceed (NTP) by 2 months. The ACWD construction work will extend the construction phase by another 2 months. The Approved Project Completion date is December 18, 2014 and the Proposed Project Completion date is April 26, 2015, resulting in a 4-month extension. This project is still in pre-construction and construction is forecasted to start in May 2012.

*BDPL Reliability Upgrade – Tunnel (3-month Change):* The bidding period for this project was extended to avoid concurrent bidding periods with other major tunnel projects and maximize bidding competition, and to address contracting issues associated with a bid protest and compliance with Human Rights Commission (HRC) requirements. This in turn delayed the issuance of a NTP for the start of construction activities. The Approved Project Completion date is August 14, 2015 and the Proposed Project Completion date is November 13, 2015, resulting in a 3-month extension. This project is in construction and substantial completion is forecasted for March 2015.

*Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir (5-Month Change):* The bidding period for this project had to be extended to include additional scope items that are essential to the project. This in turn delayed the issuance of a NTP for the start of construction activities. The Approved Project Completion date is July 9, 2013 and the Proposed Project Completion date is December 5, 2013, resulting in a 5-month extension. This project is in construction and substantial completion is forecasted for March 2013.

*Lower Crystal Springs Dam Improvements (4-Month Change):* The schedule has been extended to provide 6 months for project closeout. The Approved Project Completion date is June 13, 2012 and the Proposed Project Completion date is September 27, 2012, resulting in a 4-month extension. This project is in construction and substantial completion is forecasted for November 2011.

### **Projects with Completion Dates Extended by 6 to 12 Months**

*Lawrence Livermore Water Quality Improvements (9-Month Change):* A new sample pump installed in the Coast Range Tunnel failed during the construction phase. Resolution of this problem required redesign and a new installation. Changes to the new facility control system also contributed to the delay of this project. The Approved Project Completion date is December 21, 2010 and the Proposed Project Completion date is September 14, 2011, resulting in a 9-month extension. This project is in close-out phase and construction final completion was achieved in March 2011.

*New Irvington Tunnel (11-Month Change):* Additional time was required to obtain all required environmental permits. The need to initiate eminent domain actions to obtain temporary construction easements also contributed to the delay of this project. The Approved Project Completion date is December 16, 2013 and the Proposed Project Completion date is October 31, 2014, resulting in an 11-month extension. This project is in construction and substantial completion is forecasted for April 2014.

Calaveras Dam Replacement (8-Month Change): Schedule contingency was added to address the risks associated with handling in-situ material containing naturally occurring asbestos during construction. The additional time allowance in the construction schedule accounts for the possibility of work shutdowns or reduced productivity to control airborne contaminants during hot windy days. The Approved Project Completion date is December 4, 2015 and the Proposed Project Completion date is July 29, 2016, resulting in an 8-month extension. This project is still in pre-construction and construction is forecasted to start in August 2011.

Baden and San Pedro Valve Lot Improvements (11-Month Change): Construction activities on this project have been completed and the upgraded facility operational since March 2011. Final completion of the construction contract was however delayed to allow for the repair of the on-site standby generator enclosure that was accidentally damaged by the contractor. The Approved Project Completion date is August 24, 2011 and the Proposed Project Completion date is August 1, 2012, resulting in an 11-month extension. This project is in construction and as stated above, substantial completion was achieved in March 2011.

Watershed Environmental Improvement Program (12-Month Change): The focus of this project has shifted from implementing specific improvements to protecting watershed lands through conservation easements and/or the purchase of property. This new approach and the challenge of identifying landowners willing to enter into an agreement as part of the watershed protection program have contributed to the 1-year delay. The Approved Project Completion date is June 28, 2013 and the Proposed Project Completion date is June 27, 2014, resulting in a 12-month extension.

Program Management Project (8-Month Change): This project includes the program management support services required through completion of the WSIP. The extension of the schedule is correlated with the last project scheduled to be completed (Calaveras Dam Replacement). The Approved Project Completion date is December 4, 2015 and the Proposed Project Completion date is July 29, 2016, resulting in an 8-month extension.

### **Projects with Completion Dates Extended by Greater than 12 Months**

Upper Alameda Creek Filter Gallery (23-Month Change): This project was placed on hold in early 2009 in order to further assess operational requirements. Upon resumption, additional scope was included and additional time was needed to confirm the project description, operational criteria and permitting requirements. The construction schedule was also extended to procure long-lead items and to account for the seasonal restrictions associated with doing work in Alameda Creek. The Approved Project Completion date is August 22, 2014 and the Proposed Project Completion date is July 15, 2016, resulting in a 23-month extension. This project is still in pre-construction and construction is forecasted to start in September 2014.

San Antonio Backup Pipeline (14-Month Change): The addition of a cutoff wall and quarry pit dewatering system to the project scope required further updates to the Environmental Project Description and an additional Draft Environmental Impact Report (EIR) review cycle. In addition, the San Francisco Planning Department revised thresholds and procedures for air quality analysis. Requirements recently adopted by the Bay Area Air Quality Management District, which apply to this project, also delayed the overall project schedule. The Approved Project Completion date is December 31, 2013 and the Proposed Project Completion date is March 9, 2015, resulting in a 14-month extension. This project is still in pre-construction and construction is forecasted to start in October 2012.

*SFPUC/EBMUD Intertie (43-Month Change):* Actual construction activities on this project have been completed and the facility has been operational since January 2008. The project closeout has been delayed due to construction litigation. The Approved Project Completion date is June 30, 2008 and the Proposed Completion date is December 30, 2011, resulting in a 43 month extension.

*HTWTP Long-Term Improvements (18-Month Change):* The schedule variance reflects a phased construction approach with an extended duration to account for a number of constraints. The construction schedule had to be revised to meet design/operational requirements, the incorporation of limited shutdown windows, implementation of environmental mitigations, restricted site access, and the need to maintain plant operations during construction. The Approved Project Completion date is June 12, 2014 and the Proposed Completion date is December 1, 2015, resulting in an 18-month extension. This project is in construction and substantial completion is forecasted for November 2014.

*Peninsula Pipelines Seismic Upgrade (19-Month Change):* Additional time was needed to locate the secondary seismic faults affecting design, complete the geotechnical evaluations, and confirm the seismic reliability model. The greatest portion of the delay however is due to the scope added to the project. The additional scope, which involved the replacement of pipeline segments subject to liquefaction, will extend the environmental, design and construction phases of the project. The Approved Project Completion date is December 18, 2014 and the Proposed Project Completion date is July 6, 2016, resulting in a 19-month extension. This project is still in pre-construction and construction is forecasted to start in July 2014.

*Regional Groundwater Storage and Recovery (22-Month Change):* The schedule extension is due to the need to conduct additional technical studies, including more extensive modeling to better quantify the effects the project will have on the regional groundwater basin. Comments submitted on the project's Notice of Preparation as part of the environmental review process also triggered a different approach in regards to the test wells. Whereas previously the assumption was made that the test wells would be built in parallel to the environmental review process, that activity in the revised project schedule is now to be completed after EIR certification in 2013. The Approved Project Completion date is September 8, 2014 and the Proposed Project Completion date is June 17, 2016, resulting in a 22-month extension. This project is still in pre-construction and construction is forecasted to start in December 2013.

*System Security Upgrades (51-Month Change):* As part of a new programmatic security approach, this project will now include all remaining WSIP project security work. Installation of security systems typically begins shortly after the construction of a project is substantially completed. The schedule of this project therefore had to be adjusted in accordance to the construction substantial completion of the last WSIP project – the Calaveras Dam Replacement. The Approved Project Completion date is February 24, 2012 and the Proposed Project Completion date is April 29, 2016, resulting in a 51-month delay.

*Bioregional Habitat Restoration (59-Month Change):* The multiple agency reviews of the various sites involved with this project caused some schedule delays during pre-construction. As project EIR's are approved, more restoration requirement and restoration sites are also being identified, which is increasing the project scope and extending the project schedule. However, a major portion of the schedule change (36 months) is the results of the addition of the plant establishment period for each site to the WSIP. It was previously assumed that the activities associated with the required plant establishment process would be handled outside the WSIP, which is no longer the case. The Approved Project Completion date is August 24, 2011 and the Proposed Project Completion date is June 24, 2016, resulting in a 59-month extension.