San Francisco
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Services of the San Francisco Public Utilities Commission

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September 9, 2025

Assembly Member John Harabedian- Chair
Senator John Laird - Vice Chair
Joint Legislative Audit Committee
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Sacramento, CA 94249-0041

David Rabbitt, Chair
Debra Garnes, Vice-Chair
Alfred E. Alquist Seismic Safety Commission
3650 Schriever Avenue
Mather, CA 95691

Mr. Stefan Cajina, Chief
North Coastal Section, Division of Drinking Water
State Water Resources Control Board
850 Marina Bay Parkway, Bldg P, Second Floor
Richmond, CA 94804

Subject: Wholesale Regional Water System Security and Reliability Act 2024 Notice of Changes to the San Francisco Public Utilities Commission Water System Improvement Program

Dear Chair Harabedian, Chair Rabbitt, and Chief Cajina,

Pursuant to the reporting requirements of the Wholesale Regional Water System Security and Reliability Act (Water Code § 73500 et seq.), the San Francisco Public Utilities Commission (SFPUC) respectfully submits the attached 2024 Water System Improvement Program (WSIP) Notice of Change Report, describing changes adopted by the SFPUC Commission (Commission) on April 9, 2024 to project schedules, overall program schedule, project budgets, and project scopes of the SFPUC WSIP, referred to herein as the March 2024 Revised WSIP.

We acknowledge that this report is being provided later than anticipated due to internal administrative challenges; we are happy to submit this Notice of Change Report together with the WSIP FY24/25 Annual Report for your review.

The SFPUC last adopted program-wide revisions to the WSIP on April 26, 2022, including revisions to the overall program schedule, and revisions to several projects' scopes, schedules and budgets. The SFPUC has made significant progress towards the implementation of the WSIP since March 2022, including completion and close-out of two regional projects (Calaveras Dam Replacement and WSIP Close-Out Sunol Region) and one support project (Watershed and Environmental Improvement Program).

On April 9, 2024 at a public hearing, the SFPUC Commission adopted program-wide revisions to the WSIP, including changes to three project schedules, two project budgets, two project scopes, the overall program budget, and an extension of the program completion date from February 1, 2027 to June 30, 2032, as detailed below.

Schedule revisions were adopted for three (3) active projects, and the Program Management Project as follows:

1. Regional Groundwater Storage and Recovery Project: Completion date extended by 10 months to December 7, 2027;
2. Alameda Creek Recapture Project: Completion date extended by 96.5 months to June 30, 2032;
3. Bioregional Habitat Restoration: Completion date extended by 39 months to December 30, 2027;
4. Program Management Project: Completion date extended by 65 months to June 30, 2032.

These schedule changes, as adopted, extend the overall WSIP completion date to June 30, 2032, about sixty-five (65) months later than the previously approved program completion date of February 1, 2027.

Budget changes including both budget increases and budget reductions at the project level were adopted. The project with the largest budget increase is Alameda Creek Recapture Project. The March 2024 Revised WSIP Alameda Creek Recapture Project is $5.0M higher than the 2022 approved project budget. The largest budget reduction of $4.3M came from the reconciliation of past minor cost discrepancies resulting from the SFPUC's conversion of financial systems from FAMIS to Peoplesoft. The Regional Water System Improvement Program project increased from $3,803.1M to $3,808.1M; the overall WSIP program budget increased from $4,787.8M to $4,792.8M. The two (2) projects with budget changes, for the Program Management Project, and Inactive Projects Budget Reconciliations are as follows:

1. Bioregional Habitat Restoration: Increased budget by $1.2M for a total of $93.3M.
2. Alameda Creek Recapture: Increased budget by $5.0M for a total of $49.0M.
3. Program Management Project: Increased budget by $4.3M for a total of $121.6M.
4. Inactive (Completed) Projects Budget Reconciliations: Decreased budget by $4.3M.

Scope Changes: The project scopes remain the same as those last approved in April 2022, except for minor scope refinements proposed for the following two (2) projects:

1. CUW35201 Alameda Creek Recapture Project
2. CUW30103: Regional Groundwater Storage and Recovery Project

No regional projects have been deleted from the WSIP since 2018 and there are no project name changes.

The reasons for the individual project schedule extensions, budget revisions, and minor scope revisions for the projects noted above, are detailed in the attached 2024 Notice of Changes Report.

On March 8, 2024, the SFPUC notified the Bay Area Water Supply & Conservation Agency (BAWSCA) that the Commission would be considering these changes proposed to the WSIP at a public hearing on April 9, 2024. At the SFPUC's request, BAWSCA forwarded the proposal to the 26 wholesale agencies it represents to comply with the change notice requirements of the Wholesale Regional Water System Security and Reliability Act. On March 8, 2024, the SFPUC also posted a Notice of Public Hearing on the proposed changes to the SFPUC website. On April 9, 2024, following a 30-day review period and opportunity for public comment, the Commission, by Resolution No. 24-0089, adopted the proposed schedule, budget, and scope changes. Both the March 2024 Notice of Public Hearing and SFPUC Resolution No. 24-0089 are included as appendices to the attached report.

To facilitate distribution, this report is also available in the Reports section of the WSIP webpage at https://sfpuc.org/construction-contracts/water-infrastructure-improvements.

Please do not hesitate to contact me at (415) 554-1600 if you have questions or need additional information.

Sincerely,

Dennis J. Herrera
General Manager
San Francisco Public Utilities Commission

Attachment: Wholesale Regional Water System Security and Reliability Act

cc: The Honorable Kate H. Stacy, President, SFPUC Commission

The Honorable Joshua Arce, Vice President, SFPUC Commission

The Honorable Avni Jamdar, Commissioner, SFPUC Commission

The Honorable Steve Leveroni, Commissioner, SFPUC Commission

The Honorable Meghan Thurlow, Commissioner, SFPUC Commission

Tom Smegal, Chief Executive Officer and General Manager, Bay Area Water Supply & Conservation Agency

Thomas (Tom) Francis, Water Resources Manager, Bay Area Water Supply & Conservation Agency

Vlad Rakhamimov, Staff Engineer, North Coastal Section, Division of Drinking Water, State Water Resources Control Board

Marco Pacheco, San Francisco District Engineer, Division of Drinking Water, State Water Resources Control Board

Darrin Polhemus, Deputy Director, Division of Drinking Water, State Water Resources Control Board

Daniel Newton, Assistant Deputy Director, Northern California Drinking Water Field Operations Branch, State Water Resources Control Board

Lori Nezhura, Interim Executive Director, Alfred E. Alquist Seismic Safety Commission

Jia Wang-Connelly, Senior Structural Engineer, Seismic Safety Commission

Tom Chambers, Chair, BAWSCA

Louis Vella, Vice-Chair, BAWSCA

BAWSCA Member Agencies (distributed by BAWSCA)

HETCH HETCHY
WATER SYSTEM
IMPROVEMENT
PROGRAM

Wholesale Regional Water System
Security and Reliability Act

Notice of Changes Report
Water System Improvement Program

September 9, 2025

Hetch Hetchy
Regional
Water
System

Services of the San Francisco Public Utilities Commission

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Notice of Changes Report

Water System Improvement Program (WSIP)

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1. INTRODUCTION

The Water System Improvement Program (WSIP) is a multi-billion-dollar, multi-year program to upgrade the San Francisco Public Utilities Commission's (SFPUC) drinking water system. The program has delivered capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara and San Mateo Counties, and to 800,000 retail customers in the City and County of San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and meet water supply reliability goals. Figure 1-1 shows the location along the SFPUC Regional Water System where some of the 87 WSIP projects are located.

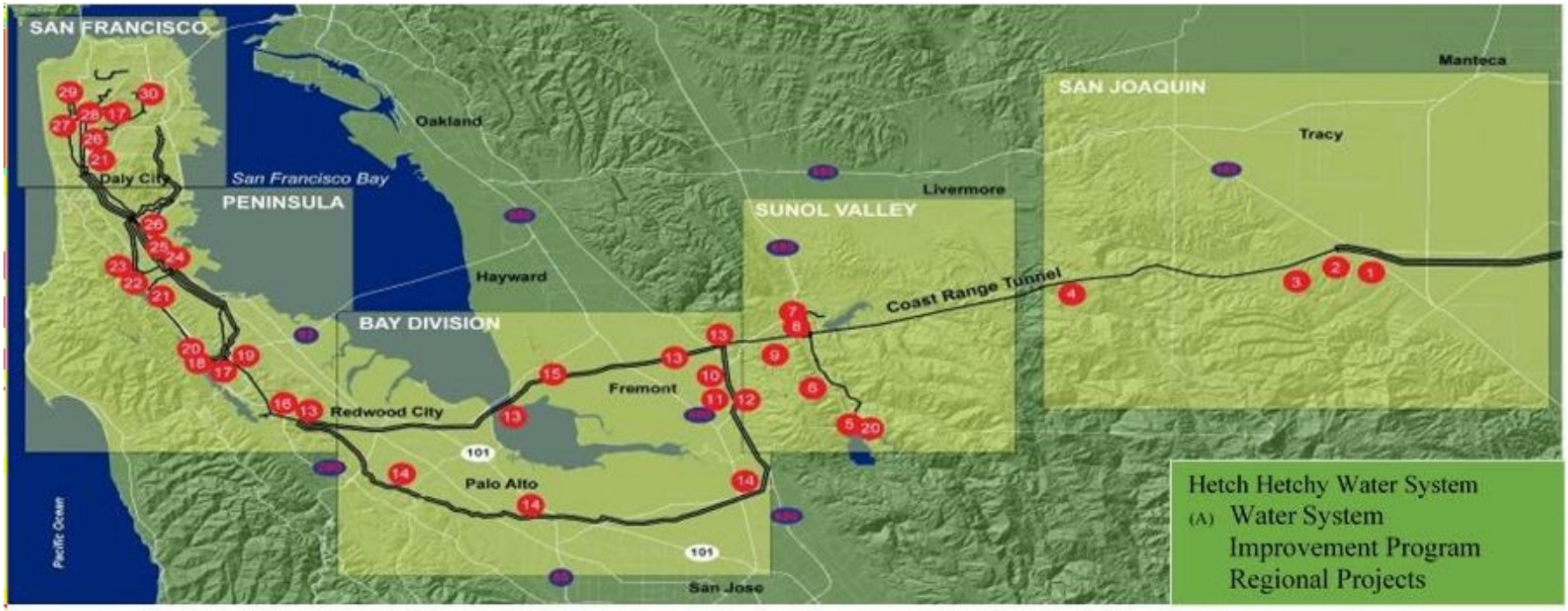
On April 9, 2024 at a public hearing, the SFPUC Commission adopted program-wide revisions to the WSIP, including changes to three project schedules, two project budgets, two project scopes, the overall program budget, and an extension of the program completion date from February 1, 2027 to June 30, 2032. The SFPUC previously adopted revisions to the WSIP on April 26, 2022, including changes to seven project schedules, four project budgets, three project scopes, and an extension of the program completion date to February 1, 2027. This report serves to document the revisions to the WSIP that were adopted on April 9, 2024.

The SFPUC has made significant progress towards the implementation of the WSIP since March 2022, including completion and close-out of two regional projects (Calaveras Dam Replacement and WSIP Close-Out Sunol Region) and one support project (Watershed and Environmental Improvement Program). As of March 31, 2024, two regional projects with a total value of $214M are in construction, one project with a total value of $96M is in close-out, and 48 projects with a total value $3,485M have been completed. One support project, the Long- Term Mitigation Endowment, is ongoing and does not involve construction.

During the first few months of 2024, staff undertook a comprehensive assessment of all remaining WSIP delivery efforts for completion of the program. The objectives of this internal review of active projects were to (1) validate all project schedules and cost forecasts at completion; (2) make an accurate determination of the overall cost and schedule status of the program; and (3) put in place specific measures to further control costs and schedules as the program continues to ramp down.

On March 8, 2024, 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 9, 2024. A copy of the Notice of Public Hearing is included as Appendix A. The SFPUC requested BAWSCA to forward the Notice of Public Hearing to the 26 wholesale agencies it represents; 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 March 8, 2024. On April 9, 2024, following a 30-day review period, the Commission, per Resolution No. 24-0089, adopted the March 2024 Revised WSIP. A copy of the Commission Agenda Item and Resolution are provided as Appendix B and C.

FIGURE 1-1: WATER SYSTEM IMPROVEMENT PROGRAM MAP



(A) San Joaquin Pipeline System
(B) Rehabilitation of Existing San Joaquin Pipelines
(C) Tesla Treatment Facility
(D) Lawrence Livermore Water Quality Improvement
(E) Calaveras Reservoir Upgrades
(A) Calaveras Dam Replacement
(B) SVWTP Expansion & Treated Water Reservoir
(C) Alameda Creek Recapture Project
(D) San Antonio Backup Pipeline
8. Alameda Siphon #4
(A) San Antonio Pump Station Upgrade
(B) New Irvington Tunnel
(C) BDPL No. 4 Condition Assessment PCCP Sections
(D) Seismic Upgrade of BDPL Nos. 3 & 4

(A) BDPL Reliability Upgrade – Relocation of BDPL Nos. 1 & 2
(B) BDPL Nos. 3 & 4 Crossovers
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(A) Pulgas Balancing – Modification of the Existing Dechlorination Facility
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(F) San Andreas Pipeline No. 3 Installation
(G) Sunset Reservoir – North Basin
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WSIP Project In Various Locations
Standby Power Facilities – Various Locations Pipeline Repair & Readiness Improvements SCADA System – Phase II
System Security Upgrades
Cross Connection Controls
Programmatic EIR
Bioregional Habitat Restoration
Watershed & Environmental Improvement Program

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1.1 Previous Changes to WSIP

Changes to the WSIP have been carefully documented over time. The following is a summary of the program's evolution since inception; a more detailed description of major program changes can be found in various Notice of Change reports, including most recently in Attachment 8 of the March 25, 2022 Notice of Public Hearing that is included in Appendix A of the 2022 WSIP Notice of Change Report published August 19, 2022.

The SFPUC began development of the Capital Improvement Program (CIP) in the late 1990's. On May 28, 2002, the Commission, per Resolution No. 02-0101, approved a *Long-Term Strategic Plan (LTSP) for Capital Improvements,* a *Long-Range Financial Plan (LRFP)* and a *Capital Improvement Program (CIP) and Appendices*. These reports document the original SFPUC CIP. On November 5, 2002, San Francisco residents approved Proposition A, a $1.6 billion revenue bond measure to fund the CIP. The program at the time contained seventy-seven (77) water infrastructure projects designed to replace or repair and improve the seismic condition of facilities; enhance water quality; and improve water supply reliability. Projects were chosen and ranked based on the need to reduce risk and improve reliability.

On February 26, 2003, in accordance with AB 1823, as codified in Chapter 841 of the California Water Code, Section 73502(a), the SFPUC submitted to the California Department of Health Services (CDHS), now the California Department of Public Health (CDPH), a copy of the SFPUC CIP, including the LRFP and LTSP. The CIP specified the list of projects for the regional water system and local water system with project schedules and cost estimates. The LRFP presented the financing plan for the CIP, while the LTSP presented objectives and performances measures related to the SFPUC's capital improvements.

From October 2004 through January 2005, through a series of public workshops before the Commission, program-specific goals and objectives were developed to ensure the system-wide integration of the projects within the program and that all system improvement needs were addressed by the CIP. In early 2005, the Commission adopted the four (4) following categories of Level of Service (LOS) goals: Seismic Reliability, Delivery Reliability, Water Quality and Water Supply. The scope, schedule and budget of the program were revised based upon the selected LOS goals. The program revisions to meet the newly adopted LOS goals were so significant that the program name was changed from CIP to Water System Improvement Program (WSIP). In February 2005, the SFPUC published its revised program, entitled *Water System Improvement Program Prepared for the Programmatic Environmental Impact Report (PEIR)*, which documented the LOS goals used to define the WSIP for the PEIR.

The Commission, per Resolution No. 05-0176, formally adopted the revised program on November 29, 2005. The revised program is described in *Water System Improvement Program (SFPUC, January 2006)*. This revised version of the program, the first approved by the Commission following the adoption of LOS goals, is referred to as the November 2005 WSIP. Because the adoption of the LOS goals resulted in so many significant changes to the overall scope of the program, which was first provided to the State of California in February 2003, this version of the program (November 2005 WSIP) is used as the original baseline for performance tracking purposes.

On January 19, 2006, a change notice report, *AB1823: Notice of Changes to Water System Improvement Program (SFPUC, January 2006)*, was submitted to the State of California, along with the January 2006 program description document. The Change Notice described in detail, changes to the program since the previously adopted program in May 2002 (and submitted to the State of California in February 2003), including development of the LOS goals and subsequent project descriptions. Appendix A to that report (Seismic Risk Profile Comparison) was revised in response to clarifications requested by the California Seismic Safety Commission (CSSC) and the change notice report with the revised Appendix A was resubmitted to the State on March 8, 2006.

On October 30, 2008, the San Francisco Planning Commission certified the PEIR for the WSIP as required under the California Environmental Quality Act (CEQA). On the same day, the SFPUC Commission, per Resolution No. 08-0200, approved the Phased WSIP, including the Goals and Objectives, and adopted the CEQA findings. The Phased WSIP is a variant of the originally proposed WSIP and includes full implementation of the WSIP facility projects to ensure that the public health, water quality, seismic safety and delivery reliability goals are achieved, with phased implementation of the water supply portion of the program. Under the Phased WSIP, the SFPUC will establish an interim, mid-term implementation horizon of 2018. The Phased WSIP includes water supply delivery to wholesale and retail customers through 2018.

The Phased WSIP goals and objectives are founded on two (2) fundamental principles pertaining to the existing regional water system: (1) maintain a clean, unfiltered water source from the Hetch Hetchy system; and (2) maintain a gravity-driven system.

The overall goals of the Phased WSIP for the Regional Water System are the same as for the originally proposed WSIP, and are to:

- Maintain high-quality water and a gravity-driven system;
- Reduce vulnerability to earthquakes;
- Increase delivery reliability;
- Meet customer water supply needs;
- Enhance sustainability; and
- Achieve a cost-effective, fully operational system.

On November 28, 2023, the SFPUC approved Amended and Updated Water Enterprise Level of Service Goals and Objectives; the Agenda Item from the November 28, 2023 meeting and the Resolution are included in Appendix C. The 2023 amendments and updates to the LOS are similar and not in conflict with the goals and objectives that were approved on October 28, 2008 as part of the Phased WSIP.

Since the early years of the WSIP, over time new information has developed about project design details, environmental compliance and permitting needs, right-of-way (ROW) challenges, and facility shutdown and construction sequencing requirements. This has resulted in the need to periodically determine and adopt changes to the WSIP, in compliance with AB1823. Since 2003, program and project changes have been formally adopted by the SFPUC as noted in the table documenting revisions below, with the most current revision reported herein as the March 2024 Revised WSIP.

Program Revision	Commission Approval	Budget ($Million)	Schedule *
2003 (Original)	03/01/ 03	$3,628	03/15/16
2005 (Baseline)	11/29/05	$4,343	06/30/14
2007 (Revised)	2/26/08	$4,392	12/18/14
2009 (Revised)	07/28/09	$4,586	12/04/15
2011 (Revised)	07/12/11	$4,586	07/29/16
2013 (Revised)	04/23/13	$4,640	04/11/19
2014 (Revised)	04/22/14	$4,765	05/24/19
2015 (Revised)	12/8/15	$4,765	05/24/19
2016 (Revised)	04/26/16	$4,845	12/20/19
2017 (Revised)	02/14/17	$4,845	12/20/19
2018 (Revised)	04/10/18	$4,788	12/30/21
2020 (Revised)	04/14/20	$4,788	05/05/23
2022 (Revised)	04/26/22	$4,788	02/01/27
2024 (Revised)	04/09/24	$4,793	06/30/32

* Final Program Completion Date

1.2 Summary of Latest Approved Changes

The overall scope of the WSIP remains unchanged. The most significant change to the WSIP in 2024 is the extension of the overall program completion date from February 1, 2027 to June 30, 2032. There have been changes to the forecasted cost of regional projects from $3,803.1M to $3808.1M and to the program budget from $4,787.8M to $4792.8M. The detailed changes are included in Appendix A, March 8, 2024 Notice of Public Hearing.

Since the prior program revision in March 2022, three projects were completed and closed out:

1. Calaveras Dam Replacement;
2. WSIP Closeout Sunol; and
3. Watershed and Environmental Improvement Program

The March 2024 Revised WSIP includes schedule extensions for three (3) active projects, and the Program Management Project as follows:

1. Regional Groundwater Storage and Recovery Project: Extend completion by 10 months to December 7, 2027;

2. Bioregional Habitat Restoration Project: Extend completion by 39 months to December 30, 2027;
3. Alameda Creek Recapture Project: Extend completion by 96.5 months to June 30, 2032;
4. Program Management Project: Extend completion by 65 months to June 30, 2032.

The project with the longest forecast schedule extension is the Alameda Creek Recapture Project at 96.5 months. The last project forecast to complete in the March 2024 Revised WSIP is also the Alameda Creek Recapture Project.

The March 2024 Revised WSIP budget revisions include a mix of budget increases and budget reductions at the project level. The project with the largest budget increase is Alameda Creek Recapture Project. The projected cost variance for that project is $5.0M higher than the 2022 approved project budget. The largest budget reduction is due to the cost reconciliation of completed projects, with budget reduction of $4.3M. The three (3) projects with major budget changes and the budget change for the Program Management Project are as follows:

1. Bioregional Habitat Restoration: Increase budget by $1.2M for a total of $93.3M;
2. Alameda Creek Recapture Project: Increase budget by $5.0M for a total of $49.0M;
3. Reconciled Completed Projects: Decrease budget by $4.3M; and,
4. Program Management Project: Increase budget by $4.3M for a total of $121.6M.

No regional projects were deleted from the WSIP since program-wide revisions were last approved in 2018, and there are no project name changes. Most project scopes remain the same as those previously approved by the SFPUC. Two (2) projects have scope modifications as follows:

1. Project CUW35201 Alameda Creek Recapture Project
2. Project CUW30103: Regional Groundwater Storage and Recovery

2. PROJECT STATUS

There has been steady progress on the implementation of the WSIP since March 2022. As of March 2024, construction was completed on forty-eight (48) of the WSIP's fifty-two (52) regional projects; one (1) project was in close-out, and construction was ongoing on two (2) regional projects. There are no (0) regional projects remaining in pre-construction. One (1) project, the Long-Term Mitigation Endowment, does not involve construction. Table 2-1 summarizes the status of the WSIP regional projects as of March 31, 2024.

Table 2-1: March 2024 Revised WSIP – Project Status

Projects Not Initiated		
Project No.	**Project Name**	**Project Start Date**
	None	
Projects in Pre-Construction		
Project No.	**Project Name**	**Notice-to- Proceed (NTP) Date**
CUW38804	Long Term Mitigation Endowment (1)	N/A
Projects in Construction		
Project No.	**Project Name**	**Construction Phase Completion Date**
CUW35201	Alameda Creek Recapture Project	06/30/31
CUW30103	Regional Groundwater Storage and Recovery (2)	12/12/26
Projects in Closeout		
Project No.	**Project Name**	**Project Completion Date**
CUW38802	Bioregional Habitat Restoration (3)	12/30/27

Table 2-1 – Project Status		
Projects Completed		
Project No.	**Project Name**	**Actual Project Completion Date**
CUW36101	Pulgas Balancing - Inlet/Outlet Work	05/11/06
CUW37402	Calaveras Reservoir Upgrades	07/28/06
CUW36601	HTWTP Short-Term Improvements (Demo Filters)	11/14/06
CUW35701	Adit Leak Repair - Crystal Springs/Calaveras	07/31/08
CUW36901	Capuchino Valve Lot Improvements	08/19/08
CUW39301	BDPL No. 4 Condition Assessment PCCP Sections	02/06/09
CUW37001	Pipeline Repair & Readiness Improvements	04/16/09
CUW36501	Cross Connection Controls	04/30/09
CUW35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves	07/31/09
CUW36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2	05/28/10
CUW36102	Pulgas Balancing - Discharge Channel Modifications	07/28/10
CUW36603	HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters	07/30/10
CUW35801	Sunset Reservoir - North Basin	09/10/10
CUW35501	Standby Power Facilities - Various Locations	12/22/10
CUW38601	San Antonio Pump Station Upgrade	06/29/12
CUW35601	New Crystal Springs Bypass Tunnel	08/17/12
CUW37901	San Andreas Pipeline No. 3 Installation	08/30/12
CUW35401	Lower Crystal Springs Dam Improvements	12/28/12
CUW36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement	12/28/12
CUW36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility	03/20/13
CUW37201	University Mound Reservoir - North Basin	03/29/13
CUW39101	Baden and San Pedro Valve Lots Improvements	03/29/13
CUW36301	SCADA System - Phase II	05/28/13
CUW35902	Alameda Siphon #4	06/28/13
CUW36401	Lawrence Livermore Water Quality Improvement	07/31/13
CUW38901	SFPUC/EBMUD Intertie	03/20/14
CUW38001	BDPL Nos. 3 & 4 Crossovers	06/30/14
CUW37302	Rehabilitation of Existing San Joaquin Pipelines	10/31/14
CUW38101	SVWTP Expansion & Treated Water Reservoir	10/31/14
CUW37801	Crystal Springs Pipeline No. 2 Replacement	12/31/14
CUW38401	Tesla Treatment Facility	01/30/15
CUW37101	Crystal Springs/San Andreas Transmission Upgrade	06/30/15
CUW36802	BDPL Reliability Upgrade - Pipeline	03/31/16

Table 2-1 – Project Status Projects Completed Cont'd		
Project No.	**Project Name**	**Actual Project Completion Date**
CUW37301	San Joaquin Pipeline System	03/31/16
CUW37403	San Antonio Backup Pipeline	06/30/16
CUW38803	Vegetation Restoration of WSIP Construction Sites	06/30/16
CUW36702	Peninsula Pipelines Seismic Upgrade	07/06/16
CUW36801	BDPL Reliability Upgrade / Tunnel	08/30/16
CUW36701	HTWTP Long-Term Improvements	12/30/16
CUW35901	New Irvington Tunnel	03/31/18
CUW35302	Seismic Upgrade of BDPL Nos. 3 & 4	07/30/18
CUW36302	System Security Upgrades	04/09/19
CUWBDP0101	WSIP Closeout - Bay Division	03/31/21
CUWSJI0101	WSIP Closeout - San Joaquin	03/31/21
CUWPWI0101	WSIP Closeout - Peninsula	12/30/21
CUW37401	Calaveras Dam Replacement	03/31/22
CUW39401	Watershed and Environmental Improvement Program	06/30/22
CUWSVI0101	WSIP Closeout - Sunol Valley	12/31/22

(1) The Long Term Mitigation Endowment (LTME) fund is to provide a secure source of funds for perpetual monitoring and maintenance of the Bioregional Habitat Restoration sites constructed in the SFPUC watershed. The LTME fund does not involve construction activities.

(2) Project currently active in multiple phases. Project classified according to the phase in which a majority of the work is taking place.

(3) The Bioregional Habitat Restoration Project includes 9 construction contracts.

3. GENERAL PROJECT CHANGES

Overall, the March 2024 Revised WSIP is similar to the March 2022 Revised WSIP. Changes for the March 2024 Revised WSIP include two (2) existing projects with scope refinements.

Project Name Changes

There are no project name changes.

Projects Eliminated

There are no projects to be eliminated.

Projects Modified

Two (2) projects, as follows, have scope refinements:

- CUW35201: Alameda Creek Recapture Project
- CUW30103: Regional Groundwater Storage and Recovery

Projects Added

There are no projects added.

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4. SCOPE CHANGES

The scopes of all but two (2) projects remain the same as those last approved by the SFPUC on April 26, 2022. Scope refinements are for the following projects: Alameda Creek Recapture Project, and Regional Groundwater Storage and Recovery. The scope refinements and additions are described below. The project descriptions for the March 2024 Revised WSIP are found in Appendix A, Attachment 8 of the March 8, 2024 Notice of Public Hearing.

CUW35201 Alameda Creek Recapture Project

In April 2023 the SFPUC terminated the project's construction contract WD-2825R due to concerns regarding worsening pond slope erosion, anticipated facility operating and maintenance complexity, and excessive change orders to redesign the facility to accommodate erosive slope conditions. The project is being re-evaluated for short-term and long-term slope stability remediation and to consider improvements for operation and maintenance sustainability. The SFPUC remains committed to completing the project.

The SFPUC will work with the quarry operator to stabilize the pond banks and re-evaluate the facility design to simplify operation and maintenance requirements. It is anticipated that a new construction contract will be issued using a design/build project delivery method and explore the possibility of adding initial operation and maintenance scope as part of the contract.

The planned facilities may include components similar to the previous design including vertical turbine pumps mounted on floating barges located in existing Pond F2; flexible discharge pipelines extending from each pump to a new pipe manifold located on shore; a pipeline connection between the new pipeline manifold and the existing Sunol Pipeline to discharge the recaptured water to the SFPUC system; throttling valves and a flow meter; electrical control building; power lines from the existing Hetch Hetchy Water & Power Calaveras Electrical Substation installed on existing power poles; and general site improvements and access. Components may change based on the re-evaluation of the project during planning phase.

CUW30103 Regional Groundwater Storage and Recovery

The approved scope for the RGWSR remains the same as approved in March 2022. However, since 2022 several scope refinements and some additions have been required for successful implementation of the project.

The "Phase 1 (Varies) – Regional Groundwater Remaining Work" sub-project was created to compile the remaining and additional work. The remaining work consists of the construction of electrical system to provide power to the remote sample station for the Treasure Island Well Station, monitoring and mitigation program that includes installation of flowmeters and transducers for 6 cemeteries and a golf course, reimbursement for design and construction of Westlake Facility Expansion in City of Daly City, and reimbursement for design and construction of emergency water tank with City of San Bruno. Additional work consists of fencing and gates at several well stations.

For Phase 2A, the additional work consists of removal of the well pump system at the Hickey, Funeral Home and Treasure Island Well Stations. These well pump system will be placed in long term storage due to a continued lack of staffing; operational challenges related to pipeline minimal flows for Hickey and Treasure Island well facilities; and detection of elevated ammonia concentrations at the Funeral Home Well Station. All three pumps will have their major components stored at Treasure Island Well Station.

For Phase 2B, the additional work consists of the design and installation of ammonia treatment facilities at Linear Park Well Station. This work was transferred to this phase from the Regional Groundwater Treatment Improvements project under the Water Enterprise Capital Improvement Program in order to turn the well over sooner to Cal Water. Improvements have been identified to address the high levels of ammonia by incorporating an ammonia contact chamber to the process.

5. SCHEDULE CHANGES

The project schedules in the March 2024 Revised WSIP reflect the latest available information on each active regional project based on the status of ongoing implementation efforts as of early March 2024. It is standard practice to refine project schedules as more knowledge is gained about project-specific needs and challenges. The recent schedule forecasting and review efforts have led to more accurate and realistic project- specific schedules.

Provided below is a brief explanation as to why the March 2024 Revised WSIP completion dates for the remaining three (3) projects of the WSIP and the Program Management Project have been extended. Table 5.1 shows the revised project schedules, and a summary of schedule changes can also be found in Appendix A, Attachment 4 of the March 8, 2024 Notice of Public Hearing.

Regional Groundwater Storage and Recovery Project (10-Month Change):

The proposed schedule revision is needed due to delays in PG&E completing the electrical design for the Phase 2B contract. The previously Approved Project Completion date was February 1, 2027, and the March 2024 Revised WSIP Project Completion date is December 7, 2027.

Bioregional Habitat Restoration (39-Month Change):

All of the Bioregional Habitat Restoration project construction work was completed with WD-2882 Trousdale Oaks Tree Removal. The work scope that remains is the purchase of mitigation credits for approximately 24 acres impacted by the San Joaquin Pipeline project. Due to the limited availability of mitigation banks with applicable credits, the project is forecast to be extended to allow time for mitigation banks to become available. The previously Approved Project Completion date was October 1, 2024, and the March 2024 Revised WSIP Project Completion date is December 30, 2027.

Alameda Creek Recapture Project (96.5-Month Change):

The proposed schedule revision is due to the SFPUC's decision to terminate the construction contract in April 2023 to allow time for quarry pond slope stability improvements and to thereafter construct a facility with improved operating and maintenance simplicity. Slope stability improvements and project planning are forecasted to take two years, followed by issuance of a design-build construction contract and potentially retaining the contractor for additional time for initial operations and maintenance before turning over to the SFPUC. The previously Approved Project Completion date was June 18, 2024, and the March 2024 Revised WSIP Project Completion date is June 30, 2032.

Program Management Project (65-Month Change)

The Program Management Project, not counted as one of the 52 Regional Projects, includes program management activities such as reporting and controls. Funding has been increased and extended for the duration of the WSIP. While effective cost controls have been put into place, some overhead funding is still required to continue program controls and reporting until

the completion of the WSIP. The Current Approved Project Completion date is February 1, 2027, and the Proposed Completion date is June 30, 2032.

Table 5-1: March 2024 Revised WSIP – Summary of Schedule Changes

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
San Joaquin Region										
36401	Lawrence Livermore Water Quality Improvement *(Completed)*	08/26/09	03/11/11	07/31/13	08/26/09	03/11/11	07/31/13	-	-	-
37301	San Joaquin Pipeline System *(Completed)*	06/02/10	03/31/16	03/31/16	06/02/10	03/31/16	03/31/16	-	-	-
37302	Rehabilitation of Existing San Joaquin Pipelines *(Completed)*	08/26/09	11/01/11	10/31/14	08/26/09	11/01/11	10/31/14	-	-	-
38401	Tesla Treatment Facility *(Completed)*	03/31/09	10/31/14	01/30/15	03/31/09	10/31/14	01/30/15	-	-	-
SJI0101	WSIP Closeout – San Joaquin *(Completed)*	05/09/17	03/31/21	03/31/21	05/09/17	03/31/21	03/31/21	-	-	-
Sunol Valley Region										
35201	Alameda Creek Recapture Project [1]	06/21/21	09/17/23	06/18/24	06/21/21	06/30/31	06/30/32	-	93(Late)	96.5 (Late)
35501	Standby Power Facilities - Various Locations *(Completed)*	12/10/07	05/28/10	12/22/10	12/10/07	05/28/10	12/22/10	-	-	-
35901	New Irvington Tunnel *(Completed)*	07/22/10	09/30/17	03/31/18	07/22/10	09/30/17	03/31/18	-	-	-
35902	Alameda Siphon #4 *(Completed)*	08/26/09	08/24/12	06/28/13	08/26/09	08/24/12	06/28/13	-	-	-

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
37001	Pipeline Repair & Readiness Improvements *(Completed)*	01/30/06	10/15/08	04/16/09	01/30/06	10/15/08	04/16/09	-	-	-
37401	Calaveras Dam Replacement *(Completed)*	08/15/11	09/30/21	03/31/22	08/15/11	09/30/21	03/31/22	-	-	-
37402	Calaveras Reservoir Upgrades *(Completed)*	N/A	02/14/06	07/28/06	N/A	02/14/06	07/28/06	-	-	-
37403	San Antonio Backup Pipeline *(Completed)*	03/29/13	12/31/15	06/30/16	03/29/13	12/31/15	06/30/16	-	-	-
38101	SVWTP Expansion & Treated Water Reservoir *(Completed)*	06/23/10	09/20/13	10/31/14	06/23/10	09/20/13	10/31/14	-	-	-
38601	San Antonio Pump Station Upgrade *(Completed)*	11/02/09	09/30/11	06/29/12	11/02/09	09/30/11	06/29/12	-	-	-
SVI0101	WSIP Closeout – Sunol Valley [2] *(Completed)*	04/07/17	06/30/22	06/30/22	04/07/17	12/31/22	12/31/22	-	6 (Late)	6 (Late)
Bay Division Region										
35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves *(Completed)*	08/21/06	03/19/08	07/31/09	08/21/06	03/19/08	07/31/09	-	-	-
35302	Seismic Upgrade of BDPL Nos. 3 & 4 *(Completed)*	09/04/12	06/25/18	07/30/18	09/04/12	06/25/18	07/30/18	-	-	-
36301	SCADA System - Phase II *(Completed)*	12/15/09	12/28/12	05/28/13	12/15/09	12/28/12	05/28/13	-	-	-
36801	BDPL Reliability Upgrade – Tunnel *(Completed)*	04/01/10	05/30/16	08/30/16	04/01/10	05/30/16	08/30/16	-	-	-

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
36802	BDPL Reliability Upgrade – Pipeline *(Completed)*	01/07/10	03/31/16	03/31/16	01/07/10	03/31/16	03/31/16	-	-	-
36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2 *(Completed)*	01/07/10	05/28/10	05/28/10	01/07/10	05/28/10	05/28/10	-	-	-
38001	BDPL Nos. 3 & 4 Crossovers *(Completed)*	07/13/09	09/11/13	06/30/14	07/13/09	09/11/13	06/30/14	-	-	-
38901	SFPUC/EBMUD Intertie *(Completed)*	01/25/05	03/20/14	03/20/14	01/25/05	03/20/14	03/20/14	-	-	-
39301	BDPL No. 4 Condition Assessment PCCP Sections *(Completed)*	N/A	N/A	02/06/09	N/A	N/A	02/06/09	-	-	-
BDP0101	WSIP Closeout – Bay Division *(Completed)* [2]	07/06/16	03/31/21	03/31/21	07/06/16	03/31/21	03/31/21	-	-	-
Peninsula Region										
35401	Lower Crystal Springs Dam Improvements *(Completed)*	01/31/11	05/01/12	12/28/12	01/31/11	05/01/12	12/28/12	-	-	-
35601	New Crystal Springs Bypass Tunnel *(Completed)*	12/01/08	08/17/12	08/17/12	12/01/08	08/17/12	08/17/12	-	-	-
35701	Adit Leak Repair - Crystal Springs/Calaveras *(Completed)*	04/09/07	03/05/08	07/31/08	04/09/07	03/05/08	07/31/08	-	-	-
36101	Pulgas Balancing - Inlet/Outlet Work *(Completed)*	N/A	02/02/06	05/11/06	N/A	02/02/06	05/11/06	-	-	-

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
36102	Pulgas Balancing - Discharge Channel Modifications *(Completed)*	04/02/09	12/07/09	07/30/10	04/02/09	12/07/09	07/30/10	-	-	-
36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement *(Completed)*	11/30/09	09/01/11	12/28/12	11/30/09	09/01/11	12/28/12	-	-	-
36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility *(Completed)*	09/22/10	10/25/12	03/20/13	09/22/10	10/25/12	03/20/13	-	-	-
36501	Cross Connection Controls *(Completed)*	07/31/08	11/26/08	04/30/09	07/31/08	11/26/08	04/30/09	-	-	-
36601	HTWTP Short-Term Improvements (Demo Filters) *[Completed]*	09/14/05	02/27/06	11/14/06	09/14/05	02/27/06	11/14/06	-	-	-
36603	HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters *(Completed)*	07/10/08	03/31/10	07/28/10	07/10/08	03/31/10	07/28/10	-	-	-
36701	HTWTP Long-Term Improvements *(Completed)*	03/16/11	09/30/16	12/30/16	03/16/11	09/30/16	12/30/16	-	-	-
36702	Peninsula Pipelines Seismic Upgrade *(Completed)*	04/28/14	02/29/16	07/06/16	04/28/14	02/29/16	07/06/16	-	-	-
36901	Capuchino Valve Lot Improvements *(Completed)*	01/29/07	03/05/08	08/19/08	01/29/07	03/05/08	08/19/08	-	-	-

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
37101	Crystal Springs/San Andreas Transmission Upgrade *(Completed)*	12/01/10	06/30/15	06/30/15	12/01/10	06/30/15	06/30/15	-	-	-
37801	Crystal Springs Pipeline No. 2 Replacement *(Completed)*	03/07/11	12/31/14	12/31/14	03/07/11	12/31/14	12/31/14	-	-	-
37901	San Andreas Pipeline No. 3 Installation *(Completed)*	08/27/09	06/30/11	08/30/12	08/27/09	06/30/11	08/30/12	-	-	-
39101	Baden and San Pedro Valve Lots Improvements *(Completed)*	04/08/09	12/30/11	03/29/13	04/08/09	12/30/11	03/29/13	-	-	-
PWI0101	WSIP Closeout - Peninsula [2] *(Completed)*	07/01/16	12/30/21	12/30/21	07/01/16	12/30/21	12/30/21	-	-	-
San Francisco Regional Region										
30103	Regional Groundwater Storage and Recovery [2]	01/30/12	01/31/26	02/01/27	01/30/12	12/12/26	12/07/27	-	11 (Late)	10 (Late)
35801	Sunset Reservoir - North Basin *(Completed)*	10/10/06	11/09/09	09/10/10	10/10/06	11/09/09	09/10/10	-	-	-
37201	University Mound Reservoir - North Basin *(Completed)*	08/03/09	08/23/11	03/29/13	08/03/09	08/23/11	03/29/13	-	-	-
Support Projects										
36302	System Security Upgrades *(Completed)* [2]	11/13/06	04/19/19	04/19/19	11/13/06	04/19/19	04/19/19	-	-	-

Table 5-1 – Summary of Schedule Changes										
Project No.	Project Name	Previously Approved [1]			March 2024 Revised			Variance (In Months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
38801	Programmatic EIR *(Completed)* [3]	N/A	N/A	06/30/09	N/A	N/A	06/30/09	-	-	-
38802	Bioregional Habitat Restoration [2]	06/27/11	05/31/18	10/01/24	06/27/11	05/31/18	12/30/27	-	-	39 (Late)
38803	Vegetation Restoration of WSIP Construction Sites *(Completed)*	N/A	N/A	06/30/16	N/A	N/A	06/30/16	-	-	-
38804	Long Term Mitigation Endowment [4]	N/A	N/A	10/01/24	N/A	N/A	10/01/24	-	-	-
39201	Program Management Project [3]	N/A	N/A	02/01/27	N/A	N/A	06/30/32	-	-	65 (Late)
39401	Watershed and Environmental Improvement Program [5] *(Completed)*	N/A	N/A	06/30/22	N/A	N/A	06/30/22	-	-	-

NOTES:

(1) Schedule approved as part of the March 2024 Revised WSIP, plus any additional schedule changes approved by the Commission as part of additional contingencies on construction contracts.
(2) For projects with multiple construction contracts, the NTP date reported is that of the earliest contract.
(3) Program activities managed and tracked separately but not included in 52 regional project count.
(4) The Long Term Mitigation Endowment (LTME) fund is to provide a secure source of funds for perpetual monitoring and maintenance of the Bioregional Habitat Restoration sites constructed in the SFPUC watershed. The LTME fund does not involve construction activities.
(5) The Watershed and Environmental Improvement Program (WEIP) is a program-wide effort to permanently protect watersheds and other lands through perpetual conservation easements and/or fee title purchase of property from willing landowners, and includes funding for construction of educational/outreach facilities.

Completed Projects

6. BUDGET CHANGES

The project budgets in the March 2024 Revised WSIP reflect the latest available information on each active project as of early March 2024. It is standard practice to refine project budgets as more knowledge is gained about project-specific needs and challenges. The budget forecasting and review efforts have led to more accurate and realistic project-specific budgets.

Provided below is an explanation as to why the March 2024 Revised WSIP project budgets for certain active projects are different than the March 2022 Approved project budgets. Note that this document does not provide explanations for the projects that have been completed. A summary of the budget changes can be found in Table 6.1 and also in Appendix A, Attachment 7 of the March 8, 2024 Notice of Public Hearing.

Bioregional Habitat Restoration (+$1.2M Change)

The project is currently in Close Out. The previously Approved Project Budget is $92.17M and the March 2024 Revised WSIP project budget is $93.34M, which represents a $1.2M increase. The additional funding is needed to purchase the remaining mitigation credits.

Alameda Creek Recapture Project (+$5M Change):

The strategy for project continuation is to focus on planning for the next two years to assure slope stabilization can be completed and a future sustainable, operable facility can be built. The additional $5 million is forecasted to be needed to support planning for a future contract to complete the work.

Program Management Project (+$4.3M Change)

The Program Management Project, not counted as one of the 52 Regional Projects, includes program management activities such as reporting and controls. Funding has been increased and extended for the duration of the WSIP. While effective cost controls have been put into place, some overhead funding is still required to continue program controls and reporting until the completion of the WSIP. The previously Approved Project Budget was $117.3M and the March 2024 Revised WSIP project budget is $121.6M, which represents a $4.3M increase.

Inactive (Completed) Projects with Minor Budget Reconciliations

As part of the program revision, reconciliation of past minor cost discrepancies resulting from the SFPUC's conversion of financial systems from FAMIS to Peoplesoft was performed for all inactive (completed) projects. This reconciliation resulted in an overall reduction in reported actual costs on completed projects of about $4.3M. The savings has been transferred to the Program Management project, CUW 39201, as the Director's Reserve.

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Table 6-1: March 2024 Revised WSIP – Summary of Budget Changes

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
San Joaquin Region		**221,877,376**	**$221,226,284**	**$651,092**	**$117,137,282**	**$116,456,540**	**$680,742**	**$8,184,486**	**$8,184,486**	**-**	**$347,199,144**	**$345,867,311**	**$1,331,834**
CUW36401	Lawrence Livermore Water Quality Improvement ***(Completed)***	$1,481,801	$1,481,801	-	$2,716,446	$2,716,446	`	-	-	-	$4,198,247	$4,198,247	-
CUW37301	San Joaquin Pipeline System ***(Completed)***	$125,965,937	$125,965,937	-	$73,780,110	$73,779,846	$264	$3,431,968	$3,431,968	-	$203,178,015	$203,177,750	$264
CUW37302	Rehabilitation of Existing San Joaquin Pipelines ***(Completed)***	$11,434,583	$11,434,583	-	$9,695,039	$9,710,215	($15,175)	$24,000	$24,000	-	$21,153,622	$21,168,797	($15,175)
CUW38401	Tesla Treatment Facility ***(Completed)***	$81,277,518	$81,291,242	($13,723)	$27,205,570	$27,205,570	-	$4,728,519	$4,728,519	-	$113,211,607	$113,225,331	($13,723)
CUW38701	Tesla Portal Disinfection Station ***(Combined with CUW38401)***	-	-	-	$2,081,278	$2,081,278	-	-	-	-	$2,081,278	$2,081,278	-
CUWSJI0101	WSIP Closeout - San Joaquin ***(Completed)***	$1,717,537	$1,052,722	$664,816	$1,658,839	$963,186	$695,653	-	-	-	$3,376,376	$2,015,908	$1,360,468
Sunol Valley Region		**$1,104,065,973**	**$1,102,395,758**	**$1,670,215**	**$358,236,833**	**$363,752,280**	**($5,515,448)**	**$8,088,321**	**$8,066,007**	**$22,314**	**$1,470,391,127**	**$1,474,214,046**	**($3,822,919)**
CUW35201	Alameda Creek Recapture Project	$21,663,000	$19,922,454	$1,740,546	$20,199,645	$26,940,191	($6,740,546)	$2,104,750	$2,104,750	-	$43,967,395	$48,967,395	($5,000,000)
CUW35501	Standby Power Facilities - Various	$9,602,901	$9,602,901	-	$3,347,665	$3,347,665	-	-	-	-	$12,950,566	$12,950,566	-

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
	Locations *(Completed)*												
CUW35901	New Irvington Tunnel *(Completed)*	$272,130,689	$272,174,407	($43,717)	$65,813,793	$65,309,240	$504,553	$2,461,876	$2,461,876	-	$340,406,358	$339,945,523	$460,835
CUW35902	Alameda Siphon #4 *(Completed)*	$41,479,253	$41,479,253	-	$23,209,275	$22,989,306	$219,969	$261,978	$261,978	-	$64,950,507	$64,730,538	$219,969
CUW37001	Pipeline Repair & Readiness Improvements *(Completed)*	$2,763,325	$2,763,325	-	$2,432,056	$2,415,141	$16,915	-	-	-	$5,195,381	$5,178,466	$16,915
CUW37401	Calaveras Dam Replacement *(Completed)*	$617,883,876	$617,904,149	($20,273)	$173,392,587	$173,387,684	$4,902	$2,789,860	$2,767,546	$22,314	$794,066,323	$794,059,379	$6,944
CUW37402	Calaveras Reservoir Upgrades *(Completed)*	$1,274,600	$1,274,600	-	$415,953	$415,953	-	-	-	-	$1,690,552	$1,690,552	-
CUW37403	San Antonio Backup Pipeline *(Completed)*	$33,339,396	$33,339,396	-	$20,255,287	$20,222,782	$32,505	-	-	-	$53,594,683	$53,562,178	$32,505
CUW38101	SVWTP Expansion & Treated Water Reservoir *(Completed)*	$94,121,180	$94,121,180	-	$35,002,638	$35,002,638	-	$469,856	$469,856	-	$129,593,674	$129,593,674	-
CUW38102	SVWTP Calaveras Road *(Eliminated)*	-	-	-	$34,654	$34,654	-	-	-	-	$34,654	$34,654	-
CUW38201	SVWTP Treated Water Reservoir *(Combined with CUW38101)*	-	-	-	$5,056,596	$5,056,596	-	-	-	-	$5,056,596	$5,056,596	-
CUW38601	San Antonio Pump Station Upgrade *(Completed)*	$7,516,865	$7,516,865	-	$5,377,727	$5,369,275	$8,452	-	-	-	$12,894,592	$12,886,140	$8,452
CUWSVI0101	WSIP Closeout - Sunol Valley *(Completed)*	$2,290,887	$2,297,229	($6,342)	$3,698,958	$3,261,155	$437,802	-	-	-	$5,989,845	$5,558,385	$431,461

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
Bay Division Region		**$464,148,073**	**$463,282,443**	**$865,630**	**$173,288,209**	**$172,293,255**	**$994,954**	**$8,014,106**	**$8,014,106**	**-**	**$645,450,387**	**$643,589,803**	**$1,860,584**
CUW35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves ***(Completed)***	$20,649,649	$20,649,649	-	$6,389,500	$6,395,977	($6,477)	-	-	-	$27,039,149	$27,045,626	($6,477)
CUW35302	Seismic Upgrade of BDPL Nos. 3 & 4 ***(Completed)***	$41,685,040	$40,802,363	$882,677	$30,435,863	$29,648,653	$787,210	$73,316	$73,316	-	$72,194,219	$70,524,332	$1,669,887
CUW36301	SCADA System - Phase II ***(Completed)***	$5,390,903	$5,390,903	-	$4,061,570	$4,063,686	($2,117)	$18,450	$18,450	-	$9,470,922	$9,473,039	($2,117)
CUW36801	BDPL Reliability Upgrade - Tunnel ***(Completed)***	$220,454,710	$220,454,710	-	$50,077,878	$50,077,878	-	$1,831,502	$1,831,502	-	$272,364,089	$272,364,089	-
CUW36802	BDPL Reliability Upgrade - Pipeline ***(Completed)***	$148,577,665	$148,651,118	($73,453)	$62,592,578	$62,592,578	-	$5,551,929	$5,551,929	-	$216,722,172	$216,795,625	($73,453)
CUW36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2 ***(Completed)***	$2,363,366	$2,363,366	-	$683,615	$683,615	-	-	-	-	$3,046,981	$3,046,981	-
CUW38001	BDPL Nos. 3 & 4 Crossovers ***(Completed)***	$14,794,660	$14,794,660	-	$14,576,880	$14,579,481	($2,600)	$538,909	$538,909	-	$29,910,449	$29,913,049	($2,600)
CUW38901	SFPUC/EBMUD Intertie ***(Completed)***	$8,489,689	$8,489,689	-	$677,617	$677,617	-	-	-	-	$9,167,306	$9,167,306	-
CUW39301	BDPL No. 4 Condition Assessment PCCP Sections ***(Completed)***	-	-	-	$1,937,599	$1,937,599	-	-	-	-	$1,937,599	$1,937,599	-
CUWBDP0101	WSIP Closeout - Bay Division ***(Completed)***	$1,742,391	$1,685,985	$56,406	$1,855,109	$1,636,171	$218,938	-	-	-	$3,597,500	$3,322,156	$275,344

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
Peninsula Region		**$544,185,287**	**$544,132,521**	**$52,766**	**$257,999,146**	**$257,127,277**	**$871,869**	**$2,940,047**	**$2,940,047**	**-**	**$805,124,480**	**$804,199,845**	**$924,635**
CUW35401	Lower Crystal Springs Dam Improvements ***(Completed)***	$20,357,967	$20,357,967	-	$14,451,073	$14,452,105	($1,032)	$50,000	$50,000	-	$34,859,040	$34,860,072	($1,032)
CUW35601	New Crystal Springs Bypass Tunnel ***(Completed)***	$57,409,887	$57,409,887	-	$23,933,121	$23,901,998	$31,122	$123,725	$123,725	-	$81,466,732	$81,435,610	$31,122
CUW35701	Adit Leak Repair - Crystal Springs/Calaveras ***(Completed)***	$1,706,478	$1,706,478	-	$1,080,845	$1,080,845	-	-	-	-	$2,787,322	$2,787,322	-
CUW36101	Pulgas Balancing - Inlet/Outlet Work ***(Completed)***	$638,020	$638,020	-	$1,127,918	$1,127,918	-	-	-	-	$1,765,938	$1,765,938	-
CUW36102	Pulgas Balancing - Discharge Channel Modifications ***(Completed)***	$903,240	$903,240	-	$1,942,236	$1,942,236	-	$64,531	$64,531	-	$2,910,007	$2,910,007	-
CUW36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement ***(Completed)***	$13,283,050	$13,283,050	-	$6,804,183	$6,792,914	$11,269	$151,483	$151,483	-	$20,238,716	$20,227,447	$11,269
CUW36104	Pulgas Balancing - Laguna Creek Sedimentation ***(Eliminated)***	-	-	-	$503,928	$505,127	($1,199)	-	-	-	$503,928	$505,127	($1,199)
CUW36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility ***(Completed)***	$2,054,696	$2,054,696	-	$3,285,334	$3,286,657	($1,323)	$50,000	$50,000	-	$5,390,031	$5,391,353	($1,323)

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
CUW36501	Cross Connection Controls ***(Completed)***	$1,835,224	$1,835,224	-	$2,090,210	$2,089,993	$217	$23,509	$23,509	-	$3,948,943	$3,948,727	$217
CUW36601	HTWTP Short-Term Improvements (Demo Filters) ***(Completed)***	$1,683,042	$1,683,042	-	$1,384,862	$1,384,862	-	-	-	-	$3,067,903	$3,067,903	-
CUW36602	HTWTP Short-Term Improvements - Remaining Filters ***(Combined with CUW36603)***	-	-	-	$1,424,510	$1,424,510	-	-	-	-	$1,424,510	$1,424,510	-
CUW36603	HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters ***(Completed)***	$15,214,291	$15,214,291	-	$3,390,646	$3,390,646	-	-	-	-	$18,604,937	$18,604,937	-
CUW36701	HTWTP Long-Term Improvements ***(Completed)***	$196,529,072	$196,529,072	-	$76,569,060	$76,381,693	$187,367	$983,837	$983,837	-	$274,081,969	$273,894,602	$187,367
CUW36702	Peninsula Pipelines Seismic Upgrade *(Completed)*	$23,048,700	$23,048,700	-	$15,214,511	$15,168,937	$45,573	$562,136	$562,136	-	$38,825,346	$38,779,772	$45,573
CUW36901	Capuchino Valve Lot Improvements ***(Completed)***	$1,576,733	$1,576,733	-	$1,226,420	$1,226,420	-	-	-	-	$2,803,153	$2,803,153	-
CUW37101	Crystal Springs/San Andreas Transmission Upgrade ***(Completed)***	$133,465,522	$133,465,522	-	$56,707,341	$56,047,461	$659,879	$136,590	$136,590	-	$190,309,453	$189,649,573	$659,879
CUW37801	Crystal Springs Pipeline No. 2 Replacement ***(Completed)***	$34,750,123	$34,750,123	-	$20,932,509	$20,932,509	-	$387,877	$387,877	-	$56,070,509	$56,070,509	-
CUW37901	San Andreas Pipeline No. 3	$17,087,803	$17,087,803	-	$10,001,396	$10,025,554	($24,158)	$406,359	$406,359	-	$27,495,558	$27,519,716	($24,158)

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
	Installation *(Completed)*												
CUW39101	Baden and San Pedro Valve Lots Improvements *(Completed)*	$15,646,639	$15,646,639	-	$9,344,164	$9,346,839	($2,675)	-	-	-	$24,990,803	$24,993,478	($2,675)
CUWPWI0101	WSIP Closeout - Peninsula *(Completed)*	$6,994,800	$6,942,034	$52,766	$6,584,880	$6,618,051	($33,171)	-	-	-	$13,579,680	$13,560,086	$19,595
San Francisco/ Regional Region		**$181,385,000**	**$177,784,744**	**$3,600,256**	**$77,609,454**	**$80,998,519**	**($3,389,065)**	**$6,893,256**	**$7,104,207**	**($210,951)**	**$265,887,710**	**$265,887,470**	**$241**
CUW30103	Regional Groundwater Storage and Recovery	$97,446,597	$93,846,341	$3,600,256	$54,010,580	$57,399,885	($3,389,306)	$6,893,256	$7,104,207	($210,951)	$158,350,433	$158,350,433	-
CUW35801	Sunset Reservoir - North Basin *(Completed)*	$52,777,386	$52,777,386	-	$11,493,339	$11,493,339	-	-	-	-	$64,270,725	$64,270,725	-
CUW37201	University Mound Reservoir - North Basin *(Completed)*	$31,161,017	$31,161,017	-	$12,105,535	$12,105,295	$241	-	-	-	$43,266,552	$43,266,312	$241
Support Projects		**$6,981,242**	**$5,600,947**	**$1,380,295**	**$173,255,024**	**$177,090,134**	**($3,835,110)**	**$88,776,547**	**$91,616,107**	**($2,839,560)**	**$269,012,813**	**$274,307,188**	**($5,294,375)**
CUW36302	System Security Upgrade *(Completed)*	$5,601,047	$5,600,947	$100	$8,818,761	$8,796,947	$21,813	$280,862	-	$280,862	$14,700,669	$14,397,894	$302,775
CUW38801	Programmatic EIR *(Completed)*	-	-	-	$10,730,684	$10,734,567	($3,883)	-	-	-	$10,730,684	$10,734,567	(3,883)
CUW38802	Bioregional Habitat Restoration	-	-	-	$35,731,733	$38,095,960	($2,364,228)	$56,434,014	$55,246,023	$1,187,991	$92,165,746	$93,341,983	($1,176,237)
CUW38803	Vegetation Restoration of WSIP Construction Sites *(Completed)*	-	-	-	$1,177,223	$1,177,223	-	$934,323	$934,323	-	$2,111,546	$2,111,546	-

Table 6-1 – Summary of Budget Changes													
Project No.	Project Name	Construction Costs [1]			Delivery Costs [2]			Other Costs [3]			Total Project Costs		
		Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance	Previously Approved *	March 2024 Revised	Variance
CUW38804	Long Term Mitigation Endowment	-	-	-	-	-	-	$12,000,000	$12,000,000	-	$12,000,000	$12,000,000	-
CUW39201	Program Management Project	-	-	-	$112,747,230	$112,776,926	($29,696)	$4,556,936	$8,865,121	($4,308,185)	$117,304,166	$121,642,047	($4,337,881)
CUW39401	Watershed and Environmental Improvement Program*(Completed)*	$1,380,195	-	$1,380,195	$4,049,393	$5,508,510	($1,459,116)	$14,570,412	$14,570,640	($228)	$20,000,000	$20,079,150	($79,149)
Regional Program Sub-Total		**$2,522,642,951**	**$2,514,422,697**	**$8,220,254**	**$1,157,525,947**	**$1,167,718,005**	**($10,192,058)**	**$122,896,763**	**$125,924,959**	**($3,028,196)**	**$3,803,065,661**	**$3,808,065,661**	**($5,000,000)**
San Francisco Local Program													
All Original Local Projects		$238,682,678	$238,682,678	-	$92,311,149	$92,311,149	-	$862,883	$862,883	-	$331,856,710	$331,856,710	-
Water Supply Projects		$183,210,505	$183,381,095	($170,590)	$94,976,786	$94,806,196	$170,590	$2,674,008	$2,674,008	-	$280,861,299	$280,861,299	-
Local Program Sub-Total		**$421,893,183**	**$422,063,773**	**($170,590)**	**$187,287,935**	**$187,117,345**	**$170,590**	**$3,536,891**	**$3,536,891**	**-**	**$612,718,010**	**$612,718,010**	**-**
Regional + Local Programs Sub-Total		**$2,944,536,134**	**$2,936,486,470**	**$8,049,664**	**$1,344,813,882**	**$1,354,835,350**	**($10,021,468)**	**$126,433,654**	**$129,461,850**	**($3,028,196)**	**$4,415,783,671**	**$4,420,783,671**	**($5,000,000)**
Financing Cost											**$371,991,469**	**$371,991,469**	**-**
PROGRAM TOTAL											**$4,787,775,140**	**$4,792,775,140**	**($5,000,000)**

Notes::

* It should be noted that there was no change in budget since March 2018, the last WSIP revision. The approved Budget in March 2022 Revised WSIP was the same as budget in March 2018. The Current Approved budget includes budget approved in March 2022 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contracts.

(1) Construction Costs include the Construction Base Bid, Construction Contingency and owner-provided equipment/material.

(2) Delivery Costs include program and project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

(3) Other Costs include environmental mitigation, art enrichment, security Improvements, and real estate expenses.

(4) The cost variances for previously completed projects are due to reconciliation of discrepancies between project cost data and financial system data resulting from the SFPUC's conversion of its financial system from FAMIS to PeopleSoft. This reconciliation resulted in an overall reduction in reported actual costs on completed projects of about $4.3M. The savings has been transferred to the Program Management project, CUW 39201, as the Director's Reserve.

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APPENDICES

A. MARCH 8, 2024 NOTICE OF PUBLIC HEARING

B. SFPUC COMMISSION AGENDA ITEM NO. 7 FROM APRIL 9, 2024: APPROVE THE MARCH 2024 PROPOSED REVISED WATER SYSTEM IMPROVEMENT PROGRAM

C. NOVEMBER 2023 AMENDED AND UPDATED WATER ENTERPRISE LEVELS OF SERVICE GOALS AND OBJECTIVES AND RESOLUTION 23-0210

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APPENDIX A: MARCH 8, 2024 NOTICE OF PUBLIC HEARING

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San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
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NOTICE OF PUBLIC HEARING
(Posted on Friday, March 8, 2024)

NOTICE OF PUBLIC HEARING FOR CONSIDERATION OF REVISIONS TO THE SAN FRANCISCO PUBLIC UTILITIES COMMISSION (SFPUC) WATER SYSTEM IMPROVEMENT PROGRAM (WSIP)

Tuesday, April 9, 2024
1:30 P.M.
City Hall, Room 400
1 Dr. Carlton B. Goodlett Place
San Francisco, California

SUBJECT OF PUBLIC MEETING

Notice is hereby given that the San Francisco Public Utilities Commission (SFPUC) will hold a public hearing as part of its regularly scheduled meeting on Tuesday, April 9, 2024, for the purpose of considering proposed revisions to the Water System Improvement Program (WSIP), referred to as the "March 2024 Proposed Revised WSIP."

COMMENTS ON PROPOSED REVISIONS

All interested parties are invited to attend the public hearing and provide public comment on the proposed revisions. Individuals who are unable to attend the public hearing may submit to the SFPUC, by the time the hearing begins on April 9, 2024, written comments regarding the subject of the hearing. These comments will be brought to the attention of the Commission and will become part of the official public record. Written comments should be sent to:

Donna Hood, Commission Secretary
San Francisco Public Utilities Commission
525 Golden Gate Avenue (13th Floor)
San Francisco, CA 94102
Email: Commission@sfwater.org

BACKGROUND

The Wholesale Regional Water System Security and Reliability Act (Water Code § 73500 et seq.) requires that the SFPUC provide notification of certain program changes. Specifically, the SFPUC is required to provide an advance 30-day written notice if the SFPUC is to consider the adoption of program changes that would delay WSIP projects and/or result in the construction of different projects.

The proposed changes and explanations are provided in this document; additional information about the WSIP can be found in quarterly and annual reports that are available on the SFPUC's website (www.sfpuc.org). The SFPUC last adopted program-wide revisions to the WSIP on April 26, 2022, including revisions to the schedules of eight projects, budget changes to four projects, and slight modifications to scope for three projects, extending the program completion date to its currently approved date of February 1, 2027 but causing no impact to the program budget, which remains at $4,787.8M.

During early 2024, the SFPUC reviewed the status of the remaining WSIP projects and analyzed the forecasted scopes, schedules, and budgets for each project. The recommended action from this review is for the SFPUC to adopt the proposed project revisions documented in the various attachments to this notice and referred to henceforth as the March 2024 Proposed Revised WSIP.

CHANGE SUMMARY

The overall scope of the WSIP remains unchanged. The most significant proposed change to the WSIP is the extension of the overall program completion date from February 1, 2027, to June 30, 2032. There is a change to the total forecast cost of the Regional WSIP projects from $3,803.1 million (M) to $3,808.1M, resulting in an overall program forecast cost change from $4,787.8M to $4,792.8M.

Of the fifty-two (52) existing regional projects in the WSIP, forty-eight (48) have been completed.

The project scopes remain the same as those approved in 2022, except for two (2) projects with minor scope refinements. No regional projects have been deleted from the WSIP since 2018 and there are no project name changes.

The March 2024 Proposed Revised WSIP includes proposed schedule extensions for three (3) active projects, and the Program Management project.

The project with the longest proposed schedule extension is Alameda Creek Recapture Project, at ninety-six and a half (96.5) months; the last project forecasted to complete in the March 2024 Proposed Revised WSIP is also Alameda Creek Recapture Project.

The March 2024 Proposed Revised WSIP includes proposed budget revisions for two (2) active projects and the Program Management project, and minor revisions for several inactive (completed) projects.

The SFPUC is undertaking a number of steps to reduce and control the remaining costs of the WSIP. For example, we have significantly reduced the regional management structure of the program and we also have reduced the City and Consultant resources at the program level. Furthermore, we have substantially transitioned much of the work from Consultants to City staff and will continue to do so where practicable.

SUPPORTING DOCUMENTS

This notice and the attached documents focus on the WSIP regional projects (all local projects have been completed). The eleven (11) following attachments are included with this notice to explain the proposed changes to the scope, schedule, and budget of various WSIP projects to be considered for adoption by the Commission at the public hearing on April 9, 2024.

Attachment 1: March 2024 Proposed Revised WSIP - General Project Changes and Additions
Attachment 2: March 2024 Proposed Revised WSIP - Project Status
Attachment 3: March 2024 Proposed Revised WSIP - Summary of Scope Changes
Attachment 4: March 2024 Proposed Revised WSIP - Summary of Schedule Changes
Attachment 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes
Attachment 6: March 2024 Proposed Revised WSIP - Explanation of Schedule Changes
Attachment 7: March 2024 Proposed Revised WSIP - Explanation of Budget Changes
Attachment 8: March 2024 Proposed Revised WSIP - Project Descriptions
Attachment 9: March 2024 Proposed Revised WSIP - Project-Level Schedule
Attachment 10: March 2024 Proposed Revised WSIP - Phase-Level Schedules
Attachment 11: March 2024 Proposed Revised WSIP - Project-Level Cost Summary

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ATTACHMENT 1:

March 2024 Proposed Revised WSIP - General Project Changes and Additions

HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM

Overall, the March 2024 Proposed Revised WSIP is similar to the March 2022 Revised WSIP. Changes for the March 2024 Proposed Revised WSIP include two (2) active projects with scope refinements.

Project Name Changes

There are no proposed project name changes.

Projects Eliminated

There are no proposed projects to be eliminated.

Projects Modified

Two (2) projects have proposed scope refinements as follows:

- CUW35201 - Alameda Creek Recapture Project
- CUW30103 - Regional Groundwater Storage and Recovery

Projects Added

There are no proposed projects to be added.

Project Status

Attachment 2 shows the status of WSIP Regional projects by project phase as of December 2023 with the proposed phase completion dates. There are two (2) projects in construction, one (1) project in close-out, one (1) project not initiated; and forty-eight (48) projects have been completed.

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ATTACHMENT 2: March 2024 Proposed Revised WSIP – Project Status

Projects Not Initiated		
Project No.	**Project Name**	**Proposed Project Start Date**
	None	
Projects in Pre-Construction		
Project No.	**Project Name**	**Proposed Notice-to-Proceed (NTP) Date**
CUW38804	Long Term Mitigation Endowment (1)	N/A
Projects in Construction		
Project No.	**Project Name**	**Proposed Construction Phase Completion Date**
CUW35201	Alameda Creek Recapture Project	6/30/31
CUW30103	Regional Groundwater Storage and Recovery (2)	12/12/26
Projects in Closeout		
Project No.	**Project Name**	**Proposed Project Completion Date**
CUW38802	Bioregional Habitat Restoration (3)	12/30/27
Projects Completed		
Project No.	**Project Name**	**Actual Project Completion Date**
CUW36101	Pulgas Balancing - Inlet/Outlet Work	05/11/06
CUW37402	Calaveras Reservoir Upgrades	07/28/06
CUW36601	HTWTP Short-Term Improvements (Demo Filters)	11/14/06
CUW35701	Adit Leak Repair - Crystal Springs/Calaveras	07/31/08
CUW36901	Capuchino Valve Lot Improvements	08/19/08
CUW39301	BDPL No. 4 Condition Assessment PCCP Sections	02/06/09
CUW37001	Pipeline Repair & Readiness Improvements	04/16/09
CUW36501	Cross Connection Controls	04/30/09
CUW35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves	07/31/09
CUW36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2	05/28/10
CUW36102	Pulgas Balancing - Discharge Channel Modifications	07/28/10
CUW36603	HTWTP Short-Term Improvements - Coagulation &Flocculation/ Remaining Filters	07/30/10

ATTACHMENT 2: March 2024 Proposed Revised WSIP – Project Status

Projects Completed		
Project No.	**Project Name**	**Actual Project Completion Date**
CUW35801	Sunset Reservoir - North Basin	09/10/10
CUW35501	Standby Power Facilities - Various Locations	12/22/10
CUW38601	San Antonio Pump Station Upgrade	06/29/12
CUW35601	New Crystal Springs Bypass Tunnel	08/17/12
CUW37901	San Andreas Pipeline No. 3 Installation	08/30/12
CUW35401	Lower Crystal Springs Dam Improvements	12/28/12
CUW36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement	12/28/12
CUW36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility	03/20/13
CUW37201	University Mound Reservoir - North Basin	03/29/13
CUW39101	Baden and San Pedro Valve Lots Improvements	03/29/13
CUW36301	SCADA System - Phase II	05/28/13
CUW35902	Alameda Siphon #4	06/28/13
CUW36401	Lawrence Livermore Water Quality Improvement	07/31/13
CUW38901	SFPUC/EBMUD Intertie	03/20/14
CUW38001	BDPL Nos. 3 & 4 Crossovers	06/30/14
CUW37302	Rehabilitation of Existing San Joaquin Pipelines	10/31/14
CUW38101	SVWTP Expansion & Treated Water Reservoir	10/31/14
CUW37801	Crystal Springs Pipeline No. 2 Replacement	12/31/14
CUW38401	Tesla Treatment Facility	01/30/15
CUW37101	Crystal Springs/San Andreas Transmission Upgrade	06/30/15
CUW36802	BDPL Reliability Upgrade - Pipeline	03/31/16
CUW37301	San Joaquin Pipeline System	03/31/16
CUW37403	San Antonio Backup Pipeline	06/30/16
CUW38803	Vegetation Restoration of WSIP Construction Sites	06/30/16
CUW36702	Peninsula Pipelines Seismic Upgrade	07/06/16
CUW36801	BDPL Reliability Upgrade / Tunnel	08/30/16
CUW36701	HTWTP Long-Term Improvements	12/30/16
CUW35901	New Irvington Tunnel	03/31/18
CUW35302	Seismic Upgrade of BDPL Nos. 3 & 4	07/30/18
CUW36302	System Security Upgrades	04/09/19
CUWBDP0101	WSIP Closeout - Bay Division	03/31/21
CUWSJI0101	WSIP Closeout - San Joaquin	03/31/21
CUWPWI0101	WSIP Closeout - Peninsula	12/30/21
CUW37401	Calaveras Dam Replacement	03/31/22
CUW39401	Watershed and Environmental Improvement Program	06/30/22
CUWSVI0101	WSIP Closeout - Sunol Valley	12/31/22

ATTACHMENT 2: March 2024 Proposed Revised WSIP – Project Status

(1) The Long Term Mitigation Endowment (LTME) fund is to provide a secure source of funds for perpetual monitoring and maintenance of the Bioregional Habitat Restoration sites constructed in the SFPUC watershed. The LTME fund does not involve construction activities. The LTME is scheduled to be completed on 10/01/24.

(2) Project currently active in multiple phases. Project classified according to the phase in which a majority of the work is taking place.

(3) The Bioregional Habitat Restoration Project includes 9 construction contracts.

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ATTACHMENT 3:

March 2024 Proposed Revised WSIP - Summary of Scope Changes & Additions

The scopes of all but two (2) projects remain the same as those last approved by the San Francisco Public Utilities Commission (SFPUC) on April 10, 2018, as refined in part on April 26, 2022. Scope refinements are proposed for the following projects: Alameda Creek Recapture Project, and Regional Groundwater Storage and Recovery Project. The scope refinements and additions are described below.

CUW35201 Alameda Creek Recapture Project

In April 2023 the SFPUC terminated the project's construction contract WD-2825R due to concerns regarding worsening pond slope erosion, anticipated facility operating and maintenance complexity, and excessive change orders to redesign the facility to accommodate erosive slope conditions. The project is being re-evaluated for short-term and long-term slope stability remediation and to consider improvements for operation and maintenance sustainability. The SFPUC remains committed to completing the project.

The SFPUC will work with the quarry operator to stabilize the pond banks and re-evaluate the facility design to simplify operation and maintenance requirements. It is anticipated that a new construction contract will be issued using a design/build project delivery method and explore the possibility of adding initial operation and maintenance scope as part of the contract.

The planned facilities may include components similar to the previous design including vertical turbine pumps mounted on floating barges located in existing Pond F2; flexible discharge pipelines extending from each pump to a new pipe manifold located on shore; a pipeline connection between the new pipeline manifold and the existing Sunol Pipeline to discharge the recaptured water to the SFPUC system; throttling valves and a flow meter; electrical control building; power lines from the existing Hetch Hetchy Water & Power Calaveras Electrical Substation installed on existing power poles; and general site improvements and access. Components may change based on the re-evaluation of the project during planning phase.

CUW30103 Regional Groundwater Storage and Recovery

The approved scope for the RGWSR remains the same as approved in March 2022. However, since 2022 several scope refinements and some additions have been required for successful implementation of the project.

The "Phase 1 (Varies) – Regional Groundwater Remaining Work" sub-project was created to compile the remaining and additional work. The remaining work consists of the construction of electrical system to provide power to the remote sample station for the Treasure Island Well Station, monitoring and mitigation program that includes installation of flowmeters and transducers for 6 cemeteries and a golf course, reimbursement for design and construction of Westlake Facility Expansion in City of Daly City, and reimbursement for design and construction of emergency water tank with City of San Bruno. Additional work consists of fencing and gates at several well stations.

For Phase 2A, the additional work consists of removal of the well pump system at the Hickey, Funeral Home and Treasure Island Well Stations. These well pump system will be placed in long term storage due to a continued lack of staffing; operational challenges related to pipeline minimal flows for Hickey and Treasure Island well facilities; and detection of elevated ammonia concentrations at the Funeral Home Well Station. All three pumps will have their major components stored at Treasure Island Well Station.

For Phase 2B, the additional work consists of the design and installation of ammonia treatment facilities at Linear Park Well Station. This work was transferred to this phase from the Regional Groundwater Treatment Improvements project under the Water Enterprise Capital Improvement Program in order to turn the well over sooner to Cal Water. Improvements have been identified to address the high levels of ammonia by incorporating an ammonia contact chamber to the process to remove raw water ammonia.

ATTACHMENT 4: March 2024 Proposed Revised WSIP – Summary of Schedule Changes

Project No.	Project Name	Current Approved (1)			March 2024 Proposed			Variance (in months)		
		Construction NTP (2)	Construction Phase Completion	Project Completion	Construction NTP (2)	Construction Phase Completion	Project Completion	Construction NTP (2)	Construction Phase Completion	Project Completion
San Joaquin Region										
36401	Lawrence Livermore Water Quality Improvement *(Completed)*	08/26/09	03/11/11	07/31/13	08/26/09	03/11/11	07/31/13	-	-	-
37301	San Joaquin Pipeline System *(Completed)*	06/02/10	03/31/16	03/31/16	06/02/10	03/31/16	03/31/16	-	-	-
37302	Rehabilitation of Existing San Joaquin Pipelines *(Completed)*	08/26/09	11/01/11	10/31/14	08/26/09	11/01/11	10/31/14	-	-	-
38401	Tesla Treatment Facility *(Completed)*	03/31/09	10/31/14	01/30/15	03/31/09	10/31/14	01/30/15	-	-	-
SJI0101	WSIP Closeout – San Joaquin *(Completed)*	05/09/17	03/31/21	03/31/21	05/09/17	03/31/21	03/31/21	-	-	-
Sunol Valley Region										
35201	Alameda Creek Recapture Project (1)	06/21/21	09/17/23	06/18/24	06/21/21	6/30/31	06/30/32	-	93(Late)	96.5(Late)
35501	Standby Power Facilities - Various Locations *(Completed)*	12/10/07	05/28/10	12/22/10	12/10/07	05/28/10	12/22/10	-	-	-
35901	New Irvington Tunnel *(Completed)*	07/22/10	09/30/17	03/31/18	07/22/10	09/30/17	03/31/18	-	-	-
35902	Alameda Siphon #4 *(Completed)*	08/26/09	08/24/12	06/28/13	08/26/09	08/24/12	06/28/13	-	-	-
37001	Pipeline Repair & Readiness Improvements *(Completed)*	01/30/06	10/15/08	04/16/09	01/30/06	10/15/08	04/16/09	-	-	-
37401	Calaveras Dam Replacement *(Completed)*	08/15/11	09/30/21	03/31/22	08/15/11	09/30/21	03/31/22	-	-	-
37402	Calaveras Reservoir Upgrades *(Completed)*	N/A	02/14/06	07/28/06	N/A	02/14/06	07/28/06	-	-	-
37403	San Antonio Backup Pipeline *(Completed)*	03/29/13	12/31/15	06/30/16	03/29/13	12/31/15	06/30/16	-	-	-
38101	SVWTP Expansion & Treated Water Reservoir *(Completed)*	06/23/10	09/20/13	10/31/14	06/23/10	09/20/13	10/31/14	-	-	-

ATTACHMENT 4: March 2024 Proposed Revised WSIP – Summary of Schedule Changes

Project No.	Project Name	Current Approved [1]			March 2024 Proposed			Variance (in months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
38601	San Antonio Pump Station Upgrade *(Completed)*	11/02/09	09/30/11	06/29/12	11/02/09	09/30/11	06/29/12	-	-	-
SVI0101	WSIP Closeout – Sunol Valley [2] *(Completed)*	04/07/17	06/30/22	06/30/22	04/07/17	12/31/22	12/31/22	-	6 (Late)	6 (Late)
Bay Division Region										
35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves *(Completed)*	08/21/06	03/19/08	07/31/09	08/21/06	03/19/08	07/31/09	-	-	-
35302	Seismic Upgrade of BDPL Nos. 3 & 4 *(Completed)*	09/04/12	06/25/18	07/30/18	09/04/12	06/25/18	07/30/18	-	-	-
36301	SCADA System - Phase II *(Completed)*	12/15/09	12/28/12	05/28/13	12/15/09	12/28/12	05/28/13	-	-	-
36801	BDPL Reliability Upgrade – Tunnel *(Completed)*	04/01/10	05/30/16	08/30/16	04/01/10	05/30/16	08/30/16	-	-	-
36802	BDPL Reliability Upgrade – Pipeline *(Completed)*	01/07/10	03/31/16	03/31/16	01/07/10	03/31/16	03/31/16	-	-	-
36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2 *(Completed)*	01/07/10	05/28/10	05/28/10	01/07/10	05/28/10	05/28/10	-	-	-
38001	BDPL Nos. 3 & 4 Crossovers *(Completed)*	07/13/09	09/11/13	06/30/14	07/13/09	09/11/13	06/30/14	-	-	-
38901	SFPUC/EBMUD Intertie *(Completed)*	01/25/05	03/20/14	03/20/14	01/25/05	03/20/14	03/20/14	-	-	-
39301	BDPL No. 4 Condition Assessment PCCP Sections *(Completed)*	N/A	N/A	02/06/09	N/A	N/A	02/06/09	-	-	-
BDP0101	WSIP Closeout – Bay Division *(Completed)* [2]	07/06/16	03/31/21	03/31/21	07/06/16	03/31/21	03/31/21	-	-	-
Peninsula Region										
35401	Lower Crystal Springs Dam Improvements *(Completed)*	01/31/11	05/01/12	12/28/12	01/31/11	05/01/12	12/28/12	-	-	-
35601	New Crystal Springs Bypass Tunnel *(Completed)*	12/01/08	08/17/12	08/17/12	12/01/08	08/17/12	08/17/12	-	-	-

ATTACHMENT 4: March 2024 Proposed Revised WSIP – Summary of Schedule Changes

Project No.	Project Name	Current Approved [1]			March 2024 Proposed			Variance (in months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
35701	Adit Leak Repair - Crystal Springs/Calaveras *(Completed)*	04/09/07	03/05/08	07/31/08	04/09/07	03/05/08	07/31/08	-	-	-
36101	Pulgas Balancing - Inlet/Outlet Work *(Completed)*	N/A	02/02/06	05/11/06	N/A	02/02/06	05/11/06	-	-	-
36102	Pulgas Balancing - Discharge Channel Modifications *(Completed)*	04/02/09	12/07/09	07/30/10	04/02/09	12/07/09	07/30/10	-	-	-
36103	Pulgas Balancing - Structural Rehabilitation andRoof Replacement *(Completed)*	11/30/09	09/01/11	12/28/12	11/30/09	09/01/11	12/28/12	-	-	-
36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility *(Completed)*	09/22/10	10/25/12	03/20/13	09/22/10	10/25/12	03/20/13	-	-	-
36501	Cross Connection Controls *(Completed)*	07/31/08	11/26/08	04/30/09	07/31/08	11/26/08	04/30/09	-	-	-
36601	HTWTP Short-Term Improvements (Demo Filters) *[Completed]*	09/14/05	02/27/06	11/14/06	09/14/05	02/27/06	11/14/06	-	-	-
36603	HTWTP Short-Term Improvements - Coagulation& Flocculation/ Remaining Filters *(Completed)*	07/10/08	03/31/10	07/28/10	07/10/08	03/31/10	07/28/10	-	-	-
36701	HTWTP Long-Term Improvements *(Completed)*	03/16/11	09/30/16	12/30/16	03/16/11	09/30/16	12/30/16	-	-	-
36702	Peninsula Pipelines Seismic Upgrade *(Completed)*	04/28/14	02/29/16	07/06/16	04/28/14	02/29/16	07/06/16	-	-	-
36901	Capuchino Valve Lot Improvements *(Completed)*	01/29/07	03/05/08	08/19/08	01/29/07	03/05/08	08/19/08	-	-	-
37101	Crystal Springs/San Andreas Transmission Upgrade *(Completed)*	12/01/10	06/30/15	06/30/15	12/01/10	06/30/15	06/30/15	-	-	-
37801	Crystal Springs Pipeline No. 2 Replacement *(Completed)*	03/07/11	12/31/14	12/31/14	03/07/11	12/31/14	12/31/14	-	-	-
37901	San Andreas Pipeline No. 3 Installation *(Completed)*	08/27/09	06/30/11	08/30/12	08/27/09	06/30/11	08/30/12	-	-	-
39101	Baden and San Pedro Valve Lots Improvements *(Completed)*	04/08/09	12/30/11	03/29/13	04/08/09	12/30/11	03/29/13	-	-	-
PWI0101	WSIP Closeout - Peninsula [2] *(Completed)*	07/01/16	12/30/21	12/30/21	07/01/16	12/30/21	12/30/21	-	-	-

ATTACHMENT 4: March 2024 Proposed Revised WSIP – Summary of Schedule Changes

Project No.	Project Name	Current Approved [1]			March 2024 Proposed			Variance (in months)		
		Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion	Construction NTP [2]	Construction Phase Completion	Project Completion
San Francisco Regional Region										
30103	Regional Groundwater Storage and Recovery [2]	01/30/12	01/31/26	02/01/27	01/30/12	12/12/26	12/07/27	-	11(Late)	10(Late)
35801	Sunset Reservoir - North Basin *(Completed)*	10/10/06	11/09/09	09/10/10	10/10/06	11/09/09	09/10/10	-	-	-
37201	University Mound Reservoir - North Basin *(Completed)*	08/03/09	08/23/11	03/29/13	08/03/09	08/23/11	03/29/13	-	-	-
Support Projects										
36302	System Security Upgrades *(Completed)* [2]	11/13/06	04/19/19	04/19/19	11/13/06	04/19/19	04/19/19	-	-	-
38801	Programmatic EIR *(Completed)* [3]	N/A	N/A	06/30/09	N/A	N/A	06/30/09	-	-	-
38802	Bioregional Habitat Restoration [2]	06/27/11	05/31/18	10/01/24	06/27/11	05/31/18	12/30/27	-	-	39(Late)
38803	Vegetation Restoration of WSIP ConstructionSites *(Completed)*	N/A	N/A	06/30/16	N/A	N/A	06/30/16	-	-	-
38804	Long Term Mitigation Endowment [4]	N/A	N/A	10/01/24	N/A	N/A	10/01/24	-	-	-
39201	Program Management Project [3]	N/A	N/A	02/01/27	N/A	N/A	06/30/32	-	-	65(Late)
39401	Watershed and Environmental Improvement Program [5] *(Completed)*	N/A	N/A	06/30/22	N/A	N/A	06/30/22	-	-	-

(1) Schedule approved as part of the March 2022 Revised WSIP, plus any additional schedule changes approved by the Commission as part of additional contingencies on construction contracts.

(2) For projects with multiple construction contracts, the NTP date reported is that of the earliest contract.

(3) Program activities managed and tracked separately but not included in 52 regional project count.

(4) The Long Term Mitigation Endowment (LTME) fund is to provide a secure source of funds for perpetual monitoring and maintenance of the Bioregional Habitat Restoration sitesconstructed in the SFPUC watershed. The LTME fund does not involve construction activities.

(5) The Watershed and Environmental Improvement Program (WEIP) is a program-wide effort to permanently protect watersheds and other lands through perpetual conservation easementsand/or fee title purchase of property from willing landowners, and includes funding for construction of educational/outreach facilities.

Completed Projects

ATTACHMENT 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes

PROJECT NO.	Project Name	CONSTRUCTION COSTS (1)			DELIVERY COSTS (2)			OTHER COSTS (3)			TOTAL PROJECT COSTS		
		Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance(4)
San Joaquin Region		**$221,877,376**	**$221,226,284**	**$651,092**	**$117,137,282**	**$116,456,540**	**$680,742**	**$8,184,486**	**$8,184,486**	**-**	**$347,199,144**	**$345,867,311**	**$1,331,834**
CUW36401	Lawrence Livermore Water Quality Improvement *(Completed)*	$1,481,801	$1,481,801	-	$2,716,446	$2,716,446	-	-	-	-	$4,198,247	$4,198,247	-
CUW37301	San Joaquin Pipeline System *(Completed)*	$125,965,937	$125,965,937	-	$73,780,110	$73,779,846	$264	$3,431,968	$3,431,968	-	$203,178,015	$203,177,750	$264
CUW37302	Rehabilitation of Existing San Joaquin Pipelines *(Completed)*	$11,434,583	$11,434,583	-	$9,695,039	$9,710,215	($15,175)	$24,000	$24,000	-	$21,153,622	$21,168,797	($15,175)
CUW38401	Tesla Treatment Facility *(Completed)*	$81,277,518	$81,291,242	($13,723)	$27,205,570	$27,205,570	-	$4,728,519	$4,728,519	-	$113,211,607	$113,225,331	($13,723)
CUW38701	Tesla Portal Disinfection Station *(Combined with CUW38401)*	-	-	-	$2,081,278	$2,081,278	-	-	-	-	$2,081,278	$2,081,278	-
CUWSJI0101	WSIP Closeout - San Joaquin *(Completed)*	$1,717,537	$1,052,722	$664,816	$1,658,839	$963,186	$695,653	-	-	-	$3,376,376	$2,015,908	$1,360,468
Sunol Valley Region		**$1,104,065,973**	**$1,102,395,758**	**$1,670,215**	**$358,236,833**	**$363,752,280**	**($5,515,448)**	**$8,088,321**	**$8,066,007**	**$22,314**	**$1,470,391,127**	**$1,474,214,046**	**($3,822,919)**
CUW35201	Alameda Creek Recapture Project	$21,663,000	$19,922,454	$1,740,546	$20,199,645	$26,940,191	($6,740,546)	$2,104,750	$2,104,750	-	$43,967,395	$48,967,395	($5,000,000)
CUW35501	Standby Power Facilities - Various Locations *(Completed)*	$9,602,901	$9,602,901	-	$3,347,665	$3,347,665	-	-	-	-	$12,950,566	$12,950,566	-
CUW35901	New Irvington Tunnel *(Completed)*	$272,130,689	$272,174,407	($43,717)	$65,813,793	$65,309,240	$504,553	$2,461,876	$2,461,876	-	$340,406,358	$339,945,523	$460,835
CUW35902	Alameda Siphon #4 *(Completed)*	$41,479,253	$41,479,253	-	$23,209,275	$22,989,306	$219,969	$261,978	$261,978	-	$64,950,507	$64,730,538	$219,969
CUW37001	Pipeline Repair & Readiness Improvements *(Completed)*	$2,763,325	$2,763,325	-	$2,432,056	$2,415,141	$16,915	-	-	-	$5,195,381	$5,178,466	$16,915
CUW37401	Calaveras Dam Replacement *(Completed)*	$617,883,876	$617,904,149	($20,273)	$173,392,587	$173,387,684	$4,902	$2,789,860	$2,767,546	$22,314	$794,066,323	$794,059,379	$6,944
CUW37402	Calaveras Reservoir Upgrades *(Completed)*	$1,274,600	$1,274,600	-	$415,953	$415,953	-	-	-	-	$1,690,552	$1,690,552	-
CUW37403	San Antonio Backup Pipeline *(Completed)*	$33,339,396	$33,339,396	-	$20,255,287	$20,222,782	$32,505	-	-	-	$53,594,683	$53,562,178	$32,505
CUW38101	SVWTP Expansion & Treated Water Reservoir *(Completed)*	$94,121,180	$94,121,180	-	$35,002,638	$35,002,638	-	$469,856	$469,856	-	$129,593,674	$129,593,674	-
CUW38102	SVWTP Calaveras Road *(Eliminated)*	-	-	-	$34,654	$34,654	-	-	-	-	$34,654	$34,654	-
CUW38201	SVWTP Treated Water Reservoir *(Combined with CUW38101)*	-	-	-	$5,056,596	$5,056,596	-	-	-	-	$5,056,596	$5,056,596	-
CUW38601	San Antonio Pump Station Upgrade *(Completed)*	$7,516,865	$7,516,865	-	$5,377,727	$5,369,275	$8,452	-	-	-	$12,894,592	$12,886,140	$8,452
CUWSVI0101	WSIP Closeout - Sunol Valley *(Completed)*	$2,290,887	$2,297,229	($6,342)	$3,698,958	$3,261,155	$437,802	-	-	-	$5,989,845	$5,558,385	$431,461

ATTACHMENT 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes

PROJECT NO.	Project Name	CONSTRUCTION COSTS [1]			DELIVERY COSTS [2]			OTHER COSTS [3]			TOTAL PROJECT COSTS		
		Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024Proposed	Variance	Current Approved *	March 2024 Proposed	Variance[4]
Bay Division Region		**$464,148,073**	**$463,282,443**	**$865,630**	**$173,288,209**	**$172,293,255**	**$994,954**	**$8,014,106**	**$8,014,106**	-	**$645,450,387**	**$643,589,803**	**$1,860,584**
CUW35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves *(Completed)*	$20,649,649	$20,649,649	-	$6,389,500	$6,395,977	($6,477)	-	-	-	$27,039,149	$27,045,626	($6,477)
CUW35302	Seismic Upgrade of BDPL Nos. 3 & 4 *(Completed)*	$41,685,040	$40,802,363	$882,677	$30,435,863	$29,648,653	$787,210	$73,316	$73,316	-	$72,194,219	$70,524,332	$1,669,887
CUW36301	SCADA System - Phase II *(Completed)*	$5,390,903	$5,390,903	-	$4,061,570	$4,063,686	($2,117)	$18,450	$18,450	-	$9,470,922	$9,473,039	($2,117)
CUW36801	BDPL Reliability Upgrade - Tunnel *(Completed)*	$220,454,710	$220,454,710	-	$50,077,878	$50,077,878	-	$1,831,502	$1,831,502	-	$272,364,089	$272,364,089	-
CUW36802	BDPL Reliability Upgrade - Pipeline *(Completed)*	$148,577,665	$148,651,118	($73,453)	$62,592,578	$62,592,578	-	$5,551,929	$5,551,929	-	$216,722,172	$216,795,625	($73,453)
CUW36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2 *(Completed)*	$2,363,366	$2,363,366	-	$683,615	$683,615	-	-	-	-	$3,046,981	$3,046,981	-
CUW38001	BDPL Nos. 3 & 4 Crossovers *(Completed)*	$14,794,660	$14,794,660	-	$14,576,880	$14,579,481	($2,600)	$538,909	$538,909	-	$29,910,449	$29,913,049	($2,600)
CUW38901	SFPUC/EBMUD Intertie *(Completed)*	$8,489,689	$8,489,689	-	$677,617	$677,617	-	-	-	-	$9,167,306	$9,167,306	-
CUW39301	BDPL No. 4 Condition Assessment PCCP Sections *(Completed)*	-	-	-	$1,937,599	$1,937,599	-	-	-	-	$1,937,599	$1,937,599	-
CUWBDP0101	WSIP Closeout - Bay Division *(Completed)*	$1,742,391	$1,685,985	$56,406	$1,855,109	$1,636,171	$218,938	-	-	-	$3,597,500	$3,322,156	$275,344
Peninsula Region		**$544,185,287**	**$544,132,521**	**$52,766**	**$257,999,146**	**$257,127,277**	**$871,869**	**$2,940,047**	**$2,940,047**	-	**$805,124,480**	**$804,199,845**	**$924,635**
CUW35401	Lower Crystal Springs Dam Improvements *(Completed)*	$20,357,967	$20,357,967	-	$14,451,073	$14,452,105	($1,032)	$50,000	$50,000	-	$34,859,040	$34,860,072	($1,032)
CUW35601	New Crystal Springs Bypass Tunnel *(Completed)*	$57,409,887	$57,409,887	-	$23,933,121	$23,901,998	$31,122	$123,725	$123,725	-	$81,466,732	$81,435,610	$31,122
CUW35701	Adit Leak Repair - Crystal Springs/Calaveras *(Completed)*	$1,706,478	$1,706,478	-	$1,080,845	$1,080,845	-	-	-	-	$2,787,322	$2,787,322	-
CUW36101	Pulgas Balancing - Inlet/Outlet Work *(Completed)*	$638,020	$638,020	-	$1,127,918	$1,127,918	-	-	-	-	$1,765,938	$1,765,938	-
CUW36102	Pulgas Balancing - Discharge Channel Modifications *(Completed)*	$903,240	$903,240	-	$1,942,236	$1,942,236	-	$64,531	$64,531	-	$2,910,007	$2,910,007	-
CUW36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement *(Completed)*	$13,283,050	$13,283,050	-	$6,804,183	$6,792,914	$11,269	$151,483	$151,483	-	$20,238,716	$20,227,447	$11,269
CUW36104	Pulgas Balancing - Laguna Creek Sedimentation *(Eliminated)*	-	-	-	$503,928	$505,127	($1,199)	-	-	-	$503,928	$505,127	($1,199)
CUW36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility *(Completed)*	$2,054,696	$2,054,696	-	$3,285,334	$3,286,657	($1,323)	$50,000	$50,000	-	$5,390,031	$5,391,353	($1,323)
CUW36501	Cross Connection Controls *(Completed)*	$1,835,224	$1,835,224	-	$2,090,210	$2,089,993	$217	$23,509	$23,509	-	$3,948,943	$3,948,727	$217
CUW36601	HTWTP Short-Term Improvements (Demo Filters) *(Completed)*	$1,683,042	$1,683,042	-	$1,384,862	$1,384,862	-	-	-	-	$3,067,903	$3,067,903	-

ATTACHMENT 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes

PROJECT NO.	Project Name	CONSTRUCTION COSTS [1]			DELIVERY COSTS [2]			OTHER COSTS [3]			TOTAL PROJECT COSTS		
		Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance[4]
CUW36602	HTWTP Short-Term Improvements - Remaining Filters ***(Combined with CUW36603)***	-	-	-	$1,424,510	$1,424,510	-	-	-	-	$1,424,510	$1,424,510	-
CUW36603	HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters ***(Completed)***	$15,214,291	$15,214,291	-	$3,390,646	$3,390,646	-	-	-	-	$18,604,937	$18,604,937	-
CUW36701	HTWTP Long-Term Improvements ***(Completed)***	$196,529,072	$196,529,072	-	$76,569,060	$76,381,693	$187,367	$983,837	$983,837	-	$274,081,969	$273,894,602	$187,367
CUW36702	Peninsula Pipelines Seismic Upgrade *(Completed)*	$23,048,700	$23,048,700	-	$15,214,511	$15,168,937	$45,573	$562,136	$562,136	-	$38,825,346	$38,779,772	$45,573
CUW36901	Capuchino Valve Lot Improvements ***(Completed)***	$1,576,733	$1,576,733	-	$1,226,420	$1,226,420	-	-	-	-	$2,803,153	$2,803,153	-
CUW37101	Crystal Springs/San Andreas Transmission Upgrade ***(Completed)***	$133,465,522	$133,465,522	-	$56,707,341	$56,047,461	$659,879	$136,590	$136,590	-	$190,309,453	$189,649,573	$659,879
CUW37801	Crystal Springs Pipeline No. 2 Replacement ***(Completed)***	$34,750,123	$34,750,123	-	$20,932,509	$20,932,509	-	$387,877	$387,877	-	$56,070,509	$56,070,509	-
CUW37901	San Andreas Pipeline No. 3 Installation ***(Completed)***	$17,087,803	$17,087,803	-	$10,001,396	$10,025,554	($24,158)	$406,359	$406,359	-	$27,495,558	$27,519,716	($24,158)
CUW39101	Baden and San Pedro Valve Lots Improvements ***(Completed)***	$15,646,639	$15,646,639	-	$9,344,164	$9,346,839	($2,675)	-	-	-	$24,990,803	$24,993,478	($2,675)
CUWPWI0101	WSIP Closeout - Peninsula ***(Completed)***	$6,994,800	$6,942,034	$52,766	$6,584,880	$6,618,051	($33,171)	-	-	-	$13,579,680	$13,560,086	$19,595
San Francisco Regional Region		**$181,385,000**	**$177,784,744**	**$3,600,256**	**$77,609,454**	**$80,998,519**	**($3,389,065)**	**$6,893,256**	**$7,104,207**	**($210,951)**	**$265,887,710**	**$265,887,470**	**$241**
CUW30103	Regional Groundwater Storage and Recovery	$97,446,597	$93,846,341	$3,600,256	$54,010,580	$57,399,885	($3,389,306)	$6,893,256	$7,104,207	($210,951)	$158,350,433	$158,350,433	-
CUW35801	Sunset Reservoir - North Basin ***(Completed)***	$52,777,386	$52,777,386	-	$11,493,339	$11,493,339	-	-	-	-	$64,270,725	$64,270,725	-
CUW37201	University Mound Reservoir - North Basin ***(Completed)***	$31,161,017	$31,161,017	-	$12,105,535	$12,105,295	$241	-	-	-	$43,266,552	$43,266,312	$241
Support Projects		**$6,981,242**	**$5,600,947**	**$1,380,295**	**$173,255,024**	**$177,090,134**	**($3,835,110)**	**$88,776,547**	**$91,616,107**	**($2,839,560)**	**$269,012,813**	**$274,307,188**	**($5,294,375)**
CUW36302	System Security Upgrade ***(Completed)***	$5,601,047	$5,600,947	$100	$8,818,761	$8,796,947	$21,813	$280,862	-	$280,862	$14,700,669	$14,397,894	$302,775
CUW38801	Programmatic EIR ***(Completed)***	-	-	-	$10,730,684	$10,734,567	($3,883)	-	-	-	$10,730,684	$10,734,567	($3,883)
CUW38802	Bioregional Habitat Restoration	-	-	-	$35,731,733	$38,095,960	($2,364,228)	$56,434,014	$55,246,023	$1,187,991	$92,165,746	$93,341,983	($1,176,237)
CUW38803	Vegetation Restoration of WSIP Construction Sites ***(Completed)***	-	-	-	$1,177,223	$1,177,223	-	$934,323	$934,323	-	$2,111,546	$2,111,546	-
CUW38804	Long Term Mitigation Endowment	-	-	-	-	-	-	$12,000,000	$12,000,000	-	$12,000,000	$12,000,000	-
CUW39201	Program Management Project	-	-	-	$112,747,230	$112,776,926	($29,696)	$4,556,936	$8,865,121	($4,308,185)	$117,304,166	$121,642,047	($4,337,881)
CUW39401	Watershed and Environmental Improvement Program ***(Completed)***	$1,380,195	-	$1,380,195	$4,049,393	$5,508,510	($1,459,116)	$14,570,412	$14,570,640	($228)	$20,000,000	$20,079,150	($79,149)

ATTACHMENT 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes

PROJECT NO.	Project Name	CONSTRUCTION COSTS (1)			DELIVERY COSTS (2)			OTHER COSTS (3)			TOTAL PROJECT COSTS		
		Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance	Current Approved *	March 2024 Proposed	Variance (4)
	Regional Program Sub-Total	$2,522,642,951	$2,514,422,697	$8,220,254	$1,157,525,947	$1,167,718,005	($10,192,058)	$122,896,763	$125,924,959	($3,028,196)	$3,803,065,661	$3,808,065,661	($5,000,000)
	San Francisco Local Program												
	All Original Local Projects	$238,682,678	$238,682,678	-	$92,311,149	$92,311,149	-	$862,883	$862,883	-	$331,856,710	$331,856,710	-
	Water Supply Projects	$183,210,505	$183,381,095	($170,590)	$94,976,786	$94,806,196	$170,590	$2,674,008	$2,674,008	-	$280,861,299	$280,861,299	-
	Local Program Sub-Total	$421,893,183	$422,063,773	($170,590)	$187,287,935	$187,117,345	$170,590	$3,536,891	$3,536,891	-	$612,718,010	$612,718,010	-
	Regional + Local Programs Sub-Total	$2,944,536,134	$2,936,486,470	$8,049,664	$1,344,813,882	$1,354,835,350	($10,021,468)	$126,433,654	$129,461,850	($3,028,196)	$4,415,783,671	$4,420,783,671	($5,000,000)
	Financing Cost										**$371,991,469**	**$371,991,469**	-
	PROGRAM TOTAL										**$4,787,775,140**	**$4,792,775,140**	**($5,000,000)**

LEGEND:

* It should be noted that there was no change in budget since March 2018, the last WSIP revision. The approved Budget in March 2022 Revised WSIP was the same as budget in March 2018. The Current Approved budget includes budget approved in March 2022 Revised WSIP, plus any additional budget changes approved by the Commission as part of additional contingencies on construction contracts.

(1) **Construction Costs** include the Construction Base Bid, Construction Contingency and owner-provided equipment/material.

(2) **Delivery Costs** include program and project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.

(3) **Other Costs** include environmental mitigation, art enrichment, security Improvements, and real estate expenses.

(4) The cost variances for previously completed projects are due to reconciliation of discrepancies between project cost data and financial system data resulting from the SFPUC's conversion of its financial system from FAMIS to PeopleSoft. This reconciliation resulted in an overall reduction in reported actual costs on completed projects of about $4.3M. The savings has been transferred to the Program Management project, CUW 39201, as the Director's Reserve.

Completed Projects

ATTACHMENT 6:

March 2024 Proposed Revised WSIP - Explanation of Schedule Changes

The proposed project schedules in the March 2024 Proposed Revised Water System Improvement Program (WSIP) reflect the latest available information on each active regional project based on the status of ongoing implementation efforts as of early March 2024. It is standard practice to refine project schedules as more knowledge is gained about project-specific needs and challenges. The recent schedule forecasting and review efforts have led to more accurate and realistic project-specific schedules.

Attachment 4: March 2024 Proposed Revised WSIP - Summary of Schedule Changes, compares the Current Approved and Proposed March 2024 dates for Construction Notice-to-Proceed (NTP), Construction Phase Completion, and Project Completion for all active WSIP regional projects. Provided below is a brief explanation as to why the Proposed March 2024 completion dates for the Alameda Creek Recapture Project, Regional Groundwater Storage and Recovery Project, Bioregional Habitat Restoration, and the Program Management Project, which is not counted as one of the 52 projects, have been extended beyond the Current Approved completion dates. Note that this document does not provide explanations for the 48 projects that have been completed.

Projects with Completion Dates Extended Less than 6 Months

None

Projects with Completion Dates Extended by 6 to 12 Months

Regional Groundwater Storage and Recovery Project (10-Month Change):

The proposed schedule revision is needed due to delays in PG&E completing the electrical design for the Phase 2B contract. The Current Approved Project Completion date is February 1, 2027, and the Proposed Project Completion date is December 7, 2027.

Projects with Completion Dates Extended by Greater than 12 Months

Bioregional Habitat Restoration (39-Month Change):

All of the Bioregional Habitat Restoration project construction work was completed with WD-2882 Trousdale Oaks Tree Removal. The work scope that remains is the purchase of mitigation credits for approximately 24 acres impacted by the San Joaquin Pipeline project. Due to the limited availability of mitigation banks with applicable credits, the project is forecast to be extended to allow time for mitigation banks to become available. The Current Approved Project Completion date is October 1, 2024, and the Proposed Project Completion date is December 30, 2027.

Alameda Creek Recapture Project (96.5-Month Change):

The proposed schedule revision is due to the SFPUC's decision to terminate the construction contract in April 2023 to allow time for quarry pond slope stability improvements and to thereafter construct a facility with improved operating and maintenance simplicity. Slope stability improvements and project planning are forecasted to take two years, followed by issuance of a design-build construction contract and potentially retaining the contractor for additional time for initial operations and maintenance before turning over to the SFPUC. The Current Approved Project Completion date is June 18, 2024, and the Proposed Project

Completion date is June 30, 2032.

Program Management Project (65-Month Change)

The Program Management Project, not counted as one of the 52 Regional Projects, includes program management activities such as reporting and controls. Funding has been increased and extended for the duration of the WSIP. While effective cost controls have been put into place, some overhead funding is still required to continue program controls and reporting until the completion of the WSIP. The Current Approved Project Completion date is February 1, 2027, and the Proposed Completion date is June 30, 2032.

ATTACHMENT 7:

March 2024 Proposed Revised WSIP - Explanation of Budget Changes

The proposed project budgets in the March 2024 Proposed Revised Water System Improvement Program (WSIP) reflect the latest available information on each active project based on the status of ongoing implementation efforts as of early March 2024. It is standard practice to refine project budgets as more knowledge is gained about project-specific needs and challenges. The recent budget forecasting and review efforts have led to more accurate and realistic project-specific budgets.

Attachment 5: March 2024 Proposed Revised WSIP - Summary of Budget Changes, compares the Current Approved and Proposed March 2024 project budgets allocated for Construction Costs, Delivery Costs, Other Costs, and Total Costs for all WSIP regional projects. Provided below is an explanation as to why the Proposed March 2024 project budgets for certain active projects are different than the Current Approved project budgets; minor reconciliations of costs for inactive (completed) projects are also included in Attachment 5 and explained below.

Projects with Budget Decreases

None

Projects with Budget Increases Less than $2 Million

Bioregional Habitat Restoration (+$1.2M Change)

The project is currently in Close Out. The Current Approved Project Budget is $92.17M and the Proposed Project Budget is $93.34M, which represents a $1.2M increase. The additional funding is needed to purchase the remaining mitigation credits.

Projects with Budget Increases of $2 to $5 Million

Alameda Creek Recapture Project (+$5M Change):

The strategy for project continuation is to focus on planning for the next two years to assure slope stabilization can be completed and a future sustainable, operable facility can be built. The additional $5 million is forecasted to be needed to support planning for a future contract to complete the work.

Program Management Project (+$4.3M Change)

The Program Management Project, not counted as one of the 52 Regional Projects, includes program management activities such as reporting and controls. Funding has been increased and extended for the duration of the WSIP. While effective cost controls have been put into place, some overhead funding is still required to continue program controls and reporting until the completion of the WSIP. The Current Approved Project Budget is $117.3M and the Proposed Project Budget is $121.6M, which represents a $4.3M increase.

Inactive (Completed) Projects with Minor Budget Reconciliations

As part of the program revision, reconciliation of past minor cost discrepancies resulting from the SFPUC's conversion of financial systems from FAMIS to Peoplesoft was performed for all inactive (completed) projects. This reconciliation resulted in an overall reduction in reported actual costs on completed projects of about $4.3M. The savings has been transferred to the Program Management project, CUW 39201, as the Director's Reserve.

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HETCH HETCHY
WATER SYSTEM IMPROVEMENT PROGRAM

ATTACHMENT 8:

March 2024 Proposed Revised WSIP

Project Descriptions

Hetch Hetchy Regional Water System
Services of the San Francisco Public Utilities Commission

San Francisco Public Utilities Commission

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Contents

Introduction

This document includes updated descriptions for all of the Water System Improvement System (WSIP) regional projects as part of the March 2024 Proposed Revised WSIP to be considered for approval by the San Francisco Public Utilities Commission (SFPUC) on April 9, 2024.

The project descriptions each include the three (3) following sections:

1) The Project Background section discusses the purpose of the project and the Level of Service (LOS) goals the project is designed to achieve;
2) The Description section summarizes the project's major scope elements; and
3) The Scope Refinements section highlights the changes made to the project's scope since publication of the March 2022 Notice of Change to WSIP report.

Note that only two (2) projects have scope refinements since these descriptions were last published in March 2022. These projects are:

- CUW35201 Alameda Creek Recapture Project
- CUW30103 Regional Groundwater Storage and Recovery

San Joaquin Region

36401, Lawrence Livermore Water Quality Improvement

Background
This project is provided in response to the Water Quality LOS goals. Water services to the Lawrence Livermore National Laboratory are located at the Thomas Shaft and Mocho Shaft on the Coast Range Tunnel. At the Thomas Shaft, water does not reliably comply with either current or anticipated disinfection requirements. This will be the case even after completion of the Tesla Treatment Facility Project. However, water from the Mocho Shaft will meet current and anticipated standards after completion of the Tesla Treatment Facility Project. The purpose of this project is to provide facilities at Thomas Shaft to reliably disinfect the water and ensure compliance at both service locations.

Description
The project consists of:

- Ultraviolet (UV) disinfection, including two (2) 150-gallon-per-minute, parallel UV units and ancillary facilities. The units will be installed in the existing Thomas Shaft building.
- Two (2) pumps that will pump water from the Coast Range Tunnel to the new disinfection system.

Scope Refinements
There are no scope refinements to this project.

37301, San Joaquin Pipeline System

Background
The project is provided in response to the Delivery Reliability LOS goals. The San Joaquin Pipeline (SJPL) system spans the San Joaquin Valley, nearly 48 miles, to link the Oakdale Portal of the Foothill Tunnel to the Tesla Portal of the Coast Range Tunnel. The system includes three (3) large-diameter pipes that range in age from 43 to 79 years. The original 300 million gallons per day (mgd) design capacity of the system has decreased due, in part, to general deterioration of pipe linings. Also, as the system is now configured, shutdowns for inspection or maintenance require that an entire length of pipeline be removed from service, which greatly reduces the system's hydraulic capacity. The purposes of this project are to reduce the outage time and lost capacity associated with having to take an entire length of pipe out of service, and to increase the design capacity of the SJPL system to 313 mgd.

Description
This project consists of:

- Pipeline crossover facilities at Emery Road (including 10 valves) and Pelican Road (including 12 valves).
- Installation of a portion of new pipeline, the Western Segment, from the San Joaquin River to the Tesla Portal. The pipeline will be 78-inches in diameter, approximately 10.3 miles in

length and will include tunneled crossings of several highways, railroads, and irrigation canals. The pipeline will cross over the top of the California Aqueduct.

- Installation of a portion of new pipeline, the Eastern Segment, from the Oakdale Portal to a new connection point approximately 6.7 miles downstream on SJPL No. 3. This segment will also be 78-inches in diameter.
- Installation of valve facilities on SJPL Nos. 3 and 4 along the Eastern Segment to provide for operational needs to divide and isolate segments of these lines for maintenance and to regulate flow and control pressure in the system.
- Security-related site improvements at Oakdale Portal.

Scope Refinements
There are no scope refinements to this project.

37302, Rehabilitation of Existing San Joaquin Pipelines

Background
This project is provided in response to the Delivery Reliability LOS goals. The three (3) existing SJPLs are each approximately 48 miles long and range in age and size from 43 to 79 years old, and 56 to 78-inches diameter. Due to the age of the system, certain segments are experiencing deterioration that will likely result in increased unplanned outages, potentially impacting overall system reliability. The purpose of this project is to establish a program of intensified condition assessment, monitoring, and rehabilitation that will increase reliability and minimize unplanned outages.

Description
The project scope is to assure that existing San Joaquin Pipelines will meet Delivery Reliability LOS goals by establishing a program of routine maintenance, repair and replacement activities for long-term implementation and by addressing the highest priority rehabilitation measures identified during the timeframe of the WSIP:

- Rehabilitation of and security-related site improvements at the existing Roselle Crossover.
- Establishment of a program of pipelines conditions assessment, including upgrading and renewal as required, of pipe coating and lining systems.
- Upgrade of the existing SJPL cathodic protection system.
- Upgrade of the existing SJPL Supervisory Control and Data Acquisition (SCADA) system.

Scope Refinements
- There are no scope refinements to this project.

38401, Tesla Treatment Facility

Background

This project, which is a combination of the originally identified Tesla Portal Disinfection Facility Project and the Advanced Disinfection Project, is provided in response to the Water Quality, Seismic Reliability and Delivery Reliability LOS goals. Planning studies have determined that the advanced disinfection facilities should be constructed at the Tesla Portal site. Facilities for advanced disinfection to comply with the United States Environmental Protection Agency's Long Term 2 Enhanced Surface Water Treatment Rule must be implemented by April 2012. The Tesla Treatment Facility Project will ensure compliance by providing a new 315 mgd treatment facility using ultra-violet (UV) disinfection and new chemical feed facilities. The new chemical storage and feed facilities will replace the functions of the existing Tesla Portal Disinfection Facility, eliminating the need to rehabilitate that facility.

Description

The project consists of:

- Isolation valves and piping to divert SJPL flow to the new treatment facility, large-diameter piping and valves located within the treatment facilities, and a single discharge pipeline to tie back into the existing SJPLs.
- A disinfection building housing 12 UV reactors, cleaning equipment, and ancillary equipment.
- A chemical storage and feed building for sodium hypochlorite, hydrofluosilicic acid (i.e., fluoride), and carbon dioxide.
- Office, laboratory, and control facilities, emergency engine generators, and security-related site and access road improvements.

Scope Refinements

There are no scope refinements to this project.

SJI, WSIP Closeout – San Joaquin Region

Background

A new WSIP Closeout Project for the San Joaquin Region was added in the March 2016 Revised WSIP in response to miscellaneous identified needs and/or improvements that are needed to supplement the scope of WSIP regional projects to ensure that WSIP Level of Service (LOS) goals are fully achieved. The scopes of work of the individual sub-projects that are included within the WSIP Closeout Project for the San Joaquin Region are described below.

Description

- **Supplemental Solar Panel Installations –** The CUW37301 San Joaquin Pipeline System, including the western segment, eastern segment and facilities, and crossover pipeline projects achieved final completion in 2013, 2014 and 2015, respectively. During the initial course of operations, it was noted the solar panel arrays designed to provide power for the facility equipment were not sufficient to meet all modes of operational demands. This sub-project will provide additional solar panels to cover power shortfalls

and allow the facility to better meet its water delivery reliability LOS goal. This sub-project consists of three (3) job order contracts at three (3) sites: Oakdale, Knight Ferry Throttling Station, and San Joaquin Junction No. 4. The scope of work as noted in the March 2016 Notice of Change includes:

- Minor site preparation and grading work
- Furnishing and installing new supplemental solar arrays mounted on concrete pads within security fence enclosures
- Connections and integration of the new solar panels into the existing power system and controls
- Installation of batteries for solar power storage on-site
- Minor site preparation and grading work

- **Tesla Portal Facility Interior Floor Slab –** The Tesla Portal Facility, a sub-project of the CUW38401 Tesla Treatment Facility, was completed in January 2015. During construction, the concrete interior floor slab was deleted from the project construction documents to allow easier access to repair corrosion of the existing pipelines discovered during construction beneath the new Tesla Portal Facility. Due to drainage issues at the site, the Operations staff at the facility has now requested the interior slab be incorporated into the structure with a small access opening for future maintenance and corrosion repairs of the existing buried pipelines. As noted in the March 2016 Notice of Change, this sub-project will be constructed through use of a job order contract including:
  - A new interior concrete slab slope to drain to a new catch basin
  - A new catch basin with grating and sump
  - A small sump pump and drain through the slab or existing concrete wall to a discharge point

Scope Refinements

There are no scope refinements to this project.

Sunol Valley Region

35201, Alameda Creek Recapture Project

Background

The Alameda Creek Recapture (ACR) Project, formerly known as Upper Alameda Creek Filter Gallery (UACFG) project is provided in response to the Water Supply LOS goals. The purpose of this project is to recapture water diverted from Calaveras Reservoir or bypassed around Alameda Creek Diversion Dam for fisheries habitat enhancement in Alameda Creek and return it to the SFPUC water system through facilities in the Sunol Valley. The original project involved recapturing water released from the upstream dams via use of an in-stream infiltration gallery that would allow the water to flow by gravity to a new pump station, thereby returning the water to the SFPUC system. The re-scoped project (March 2013) is being planned to recapture water that naturally infiltrates from Alameda Creek into an existing quarry pond. A new pump station and pipeline would be constructed to return flows captured in the pond to the SFPUC system.

Description

The planned facilities for this project are based on Alternative 4-1 from the Updated Alternatives Analysis Report (AAR) dated January 30, 2009, with some refinements described below. The planned facilities include the following components: four (4) identical vertical turbine pumps

mounted on floating barges located in existing Pond F2 (including a mooring system); four (4) flexible discharge pipelines extending from each pump to a new pipe manifold located on shore; approximately 100-feet of 36-inch pipeline connection between the new pipe manifold and the existing Sunol Pipeline to discharge the recaptured water to the SFPUC system; throttling valves and a flow meter; electrical control building; 1,600 feet of power lines from the existing Hetch Hetchy Water & Power Calaveras Electrical Substation installed on 10 new power poles; and general site improvements. In addition, the scope includes conveyance of the water to various existing storage sites within the Sunol Valley or the Sunol Valley Water Treatment Plant, as necessary.

Scope Refinements

The strategy for project continuation is to focus on planning for the next two years to assure slope stabilization can be completed and a future sustainable, operable facility can be built.

In April 2023 the SFPUC terminated the project's construction contract WD-2825R due to concerns regarding worsening pond slope erosion, anticipated facility operating and maintenance complexity, and excessive change orders to redesign the facility to accommodate erosive slope conditions. The project is being re-evaluated for short-term and long-term slope stability remediation and to consider improvements for operation and maintenance sustainability. The SFPUC remains committed to completing the project.

The SFPUC will work with the quarry operator to stabilize the pond banks and re-evaluate the facility design to simplify operation and maintenance requirements. It is anticipated that a new construction contract will be issued using a design/build project delivery method and explore the possibility of adding initial operation and maintenance scope as part of the contract.

The planned facilities may include components similar to the previous design including vertical turbine pumps mounted on floating barges located in existing Pond F2; flexible discharge pipelines extending from each pump to a new pipe manifold located on shore; a pipeline connection between the new pipeline manifold and the existing Sunol Pipeline to discharge the recaptured water to the SFPUC system; throttling valves and a flow meter; electrical control building; power lines from the existing Hetch Hetchy Power & Water Calaveras Electrical Substation installed on existing power poles; and general site improvements and access. Components may change based on the re-evaluation of the project during planning phase.

35501, Standby Power Facilities – Various Locations

Background

The project is provided in response to both the Seismic Reliability and Delivery Reliability LOS goals. The project provides for standby power at six (6) critical facilities to allow these facilities to remain in operation during power outages and other emergencies.

Description

Standby power requirements are provided at six (6) sites in the East Bay and on the Peninsula. Each site is either provided with an emergency generator or the electrical receptacles to accommodate a portable emergency generator.

The facilities at the six (6) sites include:

- Alameda West Portal: standby power improvements include installing a permanent 20-kilowatt (kW) emergency generator in a sound-attenuated masonry wall enclosure.
- San Antonio Reservoir and Dam: standby power improvements include providing electrical

receptacles for a portable 37-kW emergency generator at two (2) locations.

- Harry Tracy Water Treatment Plant (HTWTP): standby power improvements include removing the four (4) existing, smaller emergency generators and providing two (2) permanently installed 2-megawatt (MW) emergency generators.
- Millbrae Yard: standby power improvements include replacing the existing emergency generator with a permanently installed 300-kW unit to enable this facility to function as an emergency operations center.
- San Pedro Valve Lot: standby power improvements include installing a permanent 20-kW emergency generator in a sound-attenuated masonry wall enclosure.
- Capuchino Valve Lot: standby power improvements include providing an electrical receptacle for a portable 30-kW engine generator.
- The project will also provide the trailer mounted engine generator that will be stored at the Millbrae Yard.

Scope Refinements

There are no scope refinements to this project.

35901, New Irvington Tunnel

Background

This project is provided in response to both the Seismic Reliability and Delivery Reliability LOS goals. Unlike the other transmission facilities upstream of the Alameda East Portal which transmit water only from Hetch Hetchy, the existing Irvington Tunnel carries water from two (2) supply sources: Hetch Hetchy and the SVWTP. The tunnel cannot be taken out of service for inspection or maintenance without severely reducing delivery of water to customers. Additionally the Irvington Tunnel is located close to both the seismically active Hayward and Calaveras Fault Zones. The New Irvington Tunnel (NIT) provides a redundant tunnel and new seismically reinforced Alameda West and Irvington Portals.

Description

The NIT alignment will be located just to the south of the existing tunnel. It will be 18,660 feet long and have a horseshoe shape with excavated dimensions of approximately 13 feet by 14 feet. The final tunnel lining will be mortar-lined, welded steel pipe, resulting in a finished diameter of 8.5 feet. Extra thick steel liner segments will also be used at low cover areas near the portals and beneath Interstate 680, and where it intersects inactive fault zones or in locations of poor ground conditions.

The NIT project is currently in construction and approximately 99% complete. Major project elements are listed below.

- Conventional mining methods were used for excavation in a westward direction from the Alameda West Portal, in both an eastward and westward direction from an intermediate shaft located near Vargas Road, just off Interstate 680, and in an eastward direction from Irvington Portal. Tunneling was completed by multiple road header tunneling machines, and limited, controlled detonation in areas of hard rock. Spoils disposal was taken to fill sites just north of the San Antonio Pump Station (SAPS) near the intersection of Calaveras Road and Interstate 680. The completed spoils fills will create a visual barrier to new quarry operation located near Calaveras Road. Potentially contaminated spoils were screened, separated, and if found to contain contaminants, hauled to a permitted landfill.
- At the Irvington Portal, tunnel connections were made to Bay Division Pipeline (BDPL) Nos. 1, 2, and 5 and to BDPL Nos. 3 and 4. Control valves were directly buried with instrumentation and electrical gear in a small control building. At the Alameda West Portal, the tunnel was connected to the discharge of the new mixing manifold to be constructed as part of the Alameda Siphons # 4 Project and to the existing overflow shaft. The project includes a new isolation valve between the mixing manifold and the portal.
- A new access bridge was constructed across Alameda Creek to accommodate temporary construction traffic and on-going SFPUC Alameda West Portal operations.
- A Groundwater Management Program was developed that includes two (2) years of pre-construction monitoring of wells, springs, creeks, ponds, and wetlands; environmental habitat construction mitigation measures; and two (2) years of monitoring after construction to minimize the impact to the local groundwater.
- At both the existing Irvington and Alameda West Portal facilities, other security-related site improvements were constructed, including undergrounding of portal structures and new card access controlled gates and security fences.

- In the March 2014 Notice of Change, simplifications were made to the design of the new security structure for the existing Alameda West Portal. The design changes included a more secure structure with a smaller footprint and removal of pipe manifolds that will no longer be in service.

Scope Refinements
There are no new scope refinements to this project.

35902, Alameda Siphon #4

Background
This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The three (3) existing Alameda Siphons extend approximately 3,000 feet across the Sunol Valley. They cross the Calaveras Fault and are vulnerable to a major earthquake on that fault. The primary purpose of this project is to provide a seismically reliable pipeline that will withstand a major earthquake on the Calaveras Fault.

Description
The Alameda Siphon #4 Project extends approximately 3,000 feet from the Alameda East Portal across both the Calaveras Fault and Alameda Creek to the Alameda West Portal.

The project primarily consists of:

- A 66-inch-diameter welded steel pipeline with 310 feet of special trench design and thicker-walled pipe in the fault rupture zone, and a tunneled crossing of Alameda Creek.
- A 96-inch-diameter “blending structure” consisting of a pipe and valve manifold near the Alameda West Portal that will blend SVWTP and Hetch Hetchy water so that the existing and new Irvington Tunnels will receive a uniform quality of water.
- New isolation/throttling valves on Alameda Siphons No. 3 and 4 and new isolation valves on Alameda Siphons No. 1 and 2. The valves will be installed upstream of the blending structure.
- Ventilation improvements at Alameda East Portal for the Coast Range Tunnel required for construction access.
- New chemical injection facilities on Alameda Siphon No. 4.
- Relocation and extension of the existing overflow pipe from the Alameda East Portal about 500 feet to an existing quarry, and site fencing at Alameda East Portal. The overflow to the existing quarry includes a grouted rock riprap channel down the side of the quarry for erosion protection.
- Road improvements at the intersection with Calaveras Road for construction access.

Scope Refinements
There are no scope refinements to this project.

37001, Pipeline Repair and Readiness Improvements

Background

This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. These goals, in part, require that facilities be repaired in the 30 days following a major seismic event to restore the ability to meet system average day demand. The facilities provided in this project are intended to facilitate the repair and replacement of damaged (damage resulting from seismic activity and other causes) sections of the system pipelines.

Description

This project is 100% complete and has been closed out. The project was separated into the three (3) following implementation phases:

- Phase A: Procurement of varied lengths and sizes of welded steel pipe and fittings for stockpiling at new storage facilities at seven (7) locations along the transmission system, west of the Coast Range Tunnel.
- Phase B: Procurement and installation of a pipe rolling machine at the Sunol Yard. The rolling machine, which has the capability to roll pipe sections up to 9 feet in diameter, will be housed in a new building with an emergency power supply.
- Phase C: Development of a pipeline repair prioritization plan, on-call emergency repair procedures and contracts, and mutual assistance agreements.

Scope Refinements

There are no scope refinements to this project.

37401, Calaveras Dam Replacement

Background

This project is provided in response to the Seismic Reliability, Delivery Reliability and Water Supply LOS goals. The dam was originally designed to store up to 96,850 acre-feet of water in the Calaveras Reservoir. Water from the reservoir is treated at the SVWTP before delivery to customers. The California Department of Water Resources Division of Safety of Dams (DSOD) has, however, mandated that the maximum reservoir level be significantly reduced because the dam is located near the active Calaveras Fault and has been determined to be seismically vulnerable. The storage volume associated with the reduced level is approximately 38,100 acre-feet (39% of original capacity). The replacement dam will restore the original reservoir capacity, and it will be designed such that it can be raised to accommodate a potential reservoir enlargement in the future.

In addition, the Alameda Creek Diversion Dam (ACDD), which diverts water from Alameda Creek to the Calaveras Reservoir, will be modified with a new fish ladder and new flow bypass tunnel and valve to allow for downstream flows below the ACDD. Fish screens will be added at the inlet to the existing Alameda Creek Diversion Tunnel (ACDT), immediately upstream of the ACDD, to prevent entrainment of fish into the tunnel. The bypass flows at ACDD, together with flow releases from new low-flow capacity valves installed at the base of the replacement Calaveras Dam, will provide water downstream of these facilities to support native aquatic

resources and future populations of steelhead trout that are being restored to the Alameda Creek Watershed. Fish screens that are compliant with current criteria of the California Department of Fish and Wildlife (CDFW) will also be added on to the existing intake adits of the intake tower at Calaveras Dam.

Description

Project elements primarily include:

- Constructing a new 210-foot-high earth and rock fill dam designed to accommodate a maximum credible earthquake on the Calaveras Fault. The dam will be constructed immediately downstream of the existing dam and will have a crest length of 1,210 feet, a base thickness of 1,180 feet, and a crest thickness of 80 feet. The total volume of the dam will be approximately 2.8 million cubic yards.
- The materials for construction will primarily originate from onsite sources, while surplus excavated material will be placed at disposal sites around the rim of the Calaveras Reservoir, including two (2) in-water disposal sites and several upland disposal sites.
- The existing spillway will be removed, and a new spillway and stilling basin will be constructed. The overflow weir of the new spillway will be 307 feet long. The spillway will vary from 60 to 80 feet wide and will be 1,100 feet long. The stilling basin below the spillway will be 80 feet wide and 155 feet long.
- A new intake tower and shaft will be constructed. The drain line and three (3) adits from the existing facility will be connected to the new shaft. The existing outlet conduit from the tower will be extended 1,250 feet downstream (beneath the replacement dam) and will be equipped with a high capacity fixed-cone discharge valve (relocated from the existing facility) to accommodate water releases from the reservoir. Fish screens will be added to the existing adits of the intake tower.
- The existing dam will largely remain in place. The downstream face will, however, be partially removed and re-graded and a channel will be excavated through the dam to form the approach to the new spillway.
- A new 525-foot long fish ladder and flow bifurcation systems at ACDD will be used in conjunction with new low-flow capacity valves to be added at the base of the replacement Calaveras Dam to provide flows downstream of these facilities to support native aquatic resources and future populations of steelhead trout that are being restored to the Alameda Creek Watershed.
- The fish ladder and a total of four (4) new fish protection screens will be added on the right abutment (looking downstream) of the ACDD. In addition, conveyance pipes will be installed to allow water from Alameda Creek to be delivered to the Calaveras Reservoir via the ACDT.
- Landslide A removal beneath the northern half of the left abutment slope located on the left side of the valley (when looking downstream) as well as other associated changes as previously noted in the March 2013 Notice of Change.
- Landslide B removal within the lower left abutment slope as well as other associated changes as previously noted in the March 2014 Notice of Change.
- Additional slope reinforcement in Borrow Area B and import of offsite rockfill as noted in the March 2016 Notice of Change.
- Repairs to the landslide portion of Calaveras Road and restoration of the West Haul Road as noted in the scope refinements listed below for this March 2018 Notice of Change.

- For the ACDD fish ladder, to address the potential landslide hazard and further protect the fish passage structure, as noted in the scope refinements listed below for this March 2018 Notice of Change, an extension to the contract landslide stabilization wall and an additional reinforced concrete panel wall with tie-backs to reinforce a section of the soil nail wall.

Scope Refinements

There are no scope refinements to this project.
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37402, Calaveras Reservoir Upgrades

Background
This project, which was originally included as a sub-project to the Calaveras Dam Replacement Project, is provided in response to the Water Quality LOS goals. As a result of restricted reservoir operating levels, the reservoir experienced algal blooms that can adversely impact raw water quality and subsequently limited the ability of the SVWTP to deliver water of suitable quality. The purpose of the project is to enhance interim operations and improve raw water quality prior to completion of the replacement dam.

Description
The project consists of installing a hypolimnetic oxygenation system and associated cryogenic (oxygen generation) equipment near the dam. The addition of oxygen into the reservoir will limit the negative effects of algal blooms and may promote a healthier fish habitat. The system will continue to be usable following completion of the replacement Calaveras Dam. The project primarily consists of the new cryogenic equipment, two (2) diffuser systems in the reservoir, and miscellaneous site work.

Scope Refinements
There are no scope refinements to this project.

37403, San Antonio Backup Pipeline

Background
This project is provided in response to the Delivery Reliability LOS goals. The purpose of the San Antonio Backup Pipeline (SABPL) is to provide a means of discharging up to 313 mgd of Hetch Hetchy flow that does not meet water quality requirements due to a treatment failure or raw water quality event. This discharge can also be used in the event of an emergency shutdown of the transmission system downstream of the Alameda East Portal. The pipeline allows discharge of the Hetch Hetchy flow while simultaneously pumping water from San Antonio Reservoir to the SVWTP through the existing San Antonio Pipeline (SAPL). This new pipeline will enable the SVWTP to serve 160 mgd of treated local reservoir water while the Hetch Hetchy water is being discharged; since the Calaveras Reservoir supply to the SVWTP is limited to only 90 mgd (San Antonio needs to supply the additional 70 mgd). This function meets the LOS goals for providing average day demand to the system during an unplanned

outage of the Hetch Hetchy supply. The SABPL will also serve as a partial redundant facility to the existing SAPL, which is aging and is constructed of PCCP.

Description

The SABPL consists of 6,600 feet of 66-inch-diameter steel pipe and extends from the Alameda Siphons at the SAPS to Sunol quarry, SMP-24, near the intersection of Calaveras Road and San Antonio Creek. There are three (3) tie-in facilities with air gap provisions from the SABPL: one connecting to Alameda Siphon No. 3, a second to the SAPL near SAPS, and a third to the SAPL on the west side of Calaveras Road before the SAPL alignment turns and heads west to quarry SMP-24. The alignment of the SABPL parallels that of the existing SAPL, terminating with a control valve and concrete energy dissipation structure to quarry SMP-24. The project includes new chemical storage, feed and water quality monitoring facilities for de-chlorination and pH adjustment of any discharges through the SABPL, the existing SAPL, and the Alameda East Portal overflow pipe. Water discharged into the SMP-24 quarry pond will be recovered with two submersible pumps and a short section of 24-inch diameter steel pipe which will connect to the existing SAPL to convey water to San Antonio Reservoir. Power to the water recovery pumps will be supplied from the nearby Calaveras Substation, which is owned and operated by Hetch Hetchy Water & Power. Construction of a slurry wall is included around the quarry pond to minimize groundwater intrusion and to ensure slope stability.

Scope Refinements

There are no scope refinements to this project.

38101, SVWTP Expansion & Treated Water Reservoir

Background

This project is provided in response to the Delivery Reliability LOS goals. It includes two major components that were formerly separate projects. The plant expansion, which was originally included in the Additional 40 mgd Treated Water Supply Project, is provided to increase the plant's sustainable capacity (capacity with the largest unit out of service) to 160 mgd to meet the LOS goal that requires delivery of the average day demand during an outage of the Hetch Hetchy supply. The treated water reservoir (TWR), which was originally included in the Sunol Valley Treated Water Reservoir Project, is provided to meet the Water Quality LOS goals and is required in response to a California Department of Public Health compliance order. The project will significantly increase plant sustainable capacity and reliability, and system operational flexibility.

Description

The project primarily consists of:

- The expansion improvements, which increase the sustainable capacity to 160 mgd, include the addition of a new flocculation/sedimentation basin and the retrofit of six (6) of the twelve (12) existing filters. Design of improvements to the remaining six (6) filters was performed under the project, and was included as an optional bid item in the construction contract. As a result, upgrades to all 12 filters were able to be performed under the construction contract, providing an additional factor of safety for reliable and sustainable production of 160 mgd required to meet the LOS goals established for the system.
- A single 17.5-million-gallon (mg) circular TWR which was constructed along with a new 3.5-MG rectangular chlorine contact tank on the northern portion of the existing plant site.

Roughly 400,000 cubic yards of excavated material was hauled to a disposal site immediately east of the plant for disposal.

- New chemical storage and feed facilities for disinfection are constructed including sodium hypochlorite and ammonia. New fluoride facilities were also added.
- Construction of approximately 2,700 feet of 78-inch-diameter pipe that connects the new TWR to the existing plant discharge pipeline. This included a tunneled crossing of Alameda Creek.
- Nine (9) existing chemical tanks and associated electrical and instrumentation components were replaced under the construction contract. The existing chemical tanks and the associated electrical and instrumentation had reached the end of their useful life and were in jeopardy of failure.
- Miscellaneous plant improvements include a new emergency generator and improvements to the plant electrical system, substation, electrical panels, and motor control centers; an upgrade of the instrumentation and controls; a new filter washwater recovery basin; improvements to the flow distribution structure and associated facilities; replacement of the plant's existing boiler; improvements to the influent chemical mixing system; and repaving of the existing plant access road.

Scope Refinements
There are no scope refinements to this project.

38601, San Antonio Pump Station Upgrade

Background
This project is provided in response to the Delivery Reliability LOS goals. The SAPS pumps water from the San Antonio Reservoir to the SVWTP when it cannot flow by gravity; and it pumps Hetch Hetchy transmission system water to either the San Antonio Reservoir or the SVWTP when it does not meet water quality standards for delivery or is required for reservoir replenishment. The SAPS is required to have a 160 mgd sustainable capacity including during periods of power outages.

Description
The project consists of:

- Replacement of the three (3) 1,000-horsepower electrical pumps.
- Addition of two (2) 1.5-megawatt emergency generators. The generators are sized to power the three (3) electric pumps.
- Seismic retrofit of the pump station, including reinforcement of the walls, foundation improvements, and connection of the roof to the walls.

Scope Refinements
There are no scope refinements to this project.

SVI, WSIP Closeout – Sunol Region

Background

This WSIP Closeout Project for the Sunol Region was added in the March 2016 Notice of Change in response to miscellaneous identified needs and/or improvements that are needed to supplement the scope of WSIP regional projects to ensure that WSIP Level of Service (LOS) goals are fully achieved. The scopes of work of the individual sub-projects that are included within the WSIP Closeout Project for the Sunol Region are described below.

Description

- **Alameda Siphon No, 4 Carrier Water System Modifications –** The CUW35902 Alameda Siphon No. 4 Project was completed in 2013. Since that time, new facilities that have been brought on-line as well as other changes have occurred in water operations, have resulted in an apparent drop in water pressures and volumes at the Sunol Valley Chloramination Facility. This has reduced the available water needed for the current carrier watersystem to pump the necessary water treatment chemicals into the system. This new sub-project is designed to resolve the deficiency and allow the facility to better meet its water delivery reliability LOS goal. This sub-project will be constructed by a job order contract including:
    - Modifications of the current chemical injection system of overcome lack of water system pressure and volume
    - New supplemental water facilities, including possible new storage tanks, and monitoring and regulating equipment as needed
    - Plumbing and control connections between the new facilities and the current system

- **Erosion Repair at Pond F3 East –** The completed CUW37403 San Antonio Backup Pipeline Project included drainage improvements on the east side bank of Quarry Pond F3 East. After completion of construction, it was noted that the rock riprap below a 12-inch drainage pipe had eroded away and undermined the downstream section of the pipe. This sub-project will repair the erosion and restore the drainage pipe through a job order contract including:
    - New rockfill on the east back of the quarry pond from the current drainpipe to the toe of the bank
    - Excavation and grading to remove loose bank debris and prepare the subgrade slope to receive new rockfill
    - Extension of the existing drainpipe downslope to the water line of the pond
    - Temporary access improvements at the side bank of the pond for a crane and other equipment to deliver to, and place new rockfill and other materials into, the repair area

- **Sunol Valley Water Treatment Plant Basin Polymer Feed Facility**. The Sunol Valley Water Treatment Plant Expansion and Treated Water Reservoir Project was completed in 2014 and included addition of a new fifth flocculation sedimentation basin (Basin 5) to the existing four (4) basins at the plant. During operations after completion,it was noted that Basin 5 was not able to achieve the optimal water production goal of 40 million gallons per day consistently. This sub-project is to build a polymer feed facility that will serve not only Basin 5, but also the four (4) older basins (Basins 1 to 4), to optimize plant water production, and allow this facility to better meet its water quality and delivery reliability LOS goals. The portion of the facility cost attributed to Basin 5 will be funded under the WSIP; the portion of the facility cost attributed to Basins 1 to 4 will be funded under the Water 10- Year Capital Improvement Program. This sub-project will be

constructed by a bid contract including:

- Addition of new flocculant aid polymer to Basin 5
- Water testing to develop a range of polymer doses for the range of different water quality expected at the plant
- Construction of new structures and facilities to store, monitor and control the application of the new polymer
- Possible extension of the new polymer to optimize water production from the four (4) older basins

- **Miscellaneous Work at Alameda West Portal, Irvington Portal and San Antonio Back-Up Pipeline** – The CUW 35901 New Irvington Tunnel (NIT) was completed in 2017, and the CUW 37403 San Antonio Backup Pipeline (SABPL) was completed in 2016. This subproject will include the following work:

    - Installation of new security doors at Alameda West Portal (AWP) and Irvington Portal (IVP)
    - Installation of new couplings between the valve stem and actuator for the cathodic protection at AWP and IVP
    - Refurbishment of uninterruptible power supply (UPS) and installation of new enclosures for the UPS at AWP and IVP
    - Installation of discharge pipe lateral supports, safety railings, ladder stiffening supports, and sunshades for electrical equipment on SABPL

- **New Irvington Tunnel Water Quality Equipment Relocation** – The CUW35901 New Irvington Tunnel (NIT) project installed new water quality monitoring equipment in an underground vault to monitor water quality on Irvington Portal 2 (IP2). After the equipment was installed, problems were noted that related to safe access and water drainage. This sub-project is to relocate the water quality monitoring equipment to Building B10 for Irvington Portal 1 (IP1), and install a new pump to pump water from Irvington Tunnel 2 (IT2) to Irvington Tunnel 1 (IT1) to provide IT2 water for the water quality monitoring.

- **San Antonio Backup Pipeline Carrier Water System Modifications** – The CUW37403 San Antonio Back Pipeline was completed in 2016. Since that time, changes in operations have resulted in an apparent drop in water pressure in the carrier water system for two (2) chemicals including Calcium Thiosulfate for dechlorination and Hydrofluorosilicic acid for pH adjustment. The purpose of this sub-project is to modify the carrier water and chemical injection systemto ensure the chemicals will be injected properly.

- **Alameda Creek Diversion Dam Power and Communication Facilities** (new sub-project addition in 2022) – The CUW37401 Alameda Creek Diversion Dam Fish Passage Facilities (WD-2729 contract) is a sub-project to the Calaveras Dam Replacement Project, which will close out on 3/31/2022. After operating the fish passage facility for over one year, a few deficiencies were discovered in the power system for the communication facilities, the main power system, and a few of the valves and gates. Job Order Contracts (small contracts less than one million dollars in value) will be used to address these issues under this new sub-project.

Scope Refinements

There are no scope refinements to this project.

Bay Division Region

35301, BDPL Nos. 3 & 4 Crossover/Isolation Valves

Background

This project is provided in response to the Seismic Reliability LOS goals. The project consists of two (2) new crossover/isolation valve vaults located on either side of the Hayward Fault in Fremont. The purpose of the facilities is to automatically and/or remotely be able to shut down flow in either or both pipelines should damage occur as a result of a seismic event or other emergency and to divert flow into one pipeline in the event one survives the earthquake.

Description

The project consists of:

- Two (2) large vaults that are primarily below-ground installations with only the top 30 inches of the structure exposed. Above-ground facilities include security fencing and satellite communication dishes. The vaults are approximately 2,400 feet apart along the BDPL Nos. 3 and 4.
- Each vault includes four (4) mainline isolation valves and a crossover valve. The isolation valves are hydraulically operated, while the crossover valves are electrically operated.
- The existing BDPL No. 3 is a 78-inch-diameter reinforced concrete pipe, and BDPL No. 4 is a 96-inch-diameter PCCP. At each vault, approximately 170 feet of each pipeline will be replaced with welded steel pipe.
- Each facility will be equipped with connections for portable electric generators, and a battery system will provide immediate emergency power to operate the hydraulic system.
- Valve actuators will have remote monitoring and operating capability through the SFPUC SCADA system.

Scope Refinements

There are no scope refinements to this project.

35302, Seismic Upgrade of BDPL Nos. 3 & 4

Background

This project provides a seismically resistant pipeline crossing of the Hayward Fault in response to the Seismic Reliability LOS goals. BDPL Nos. 3 and 4 cross the Hayward Fault near the intersection of Mission Blvd and Interstate 680 (I-680). In fact, one of the traces of the fault intersects the pipelines under I-680. The maximum credible seismic event will cause a strike-slip displacement that will result in probable failure of both pipelines. This project provides a seismically reliable conduit between the two (2) crossover/isolation valve vaults constructed under the BDPL Nos. 3 & 4 Crossover/Isolation Valves Project for transmission of water following a maximum credible seismic event to meet LOS goals.

Description

The existing pipeline fault crossing between the two (2) crossover/isolation valve vaults constructed under the BDPL Nos. 3 & 4 Crossover/Isolation Valves Project is about 2,400 feet in length, and consists of BDPL No. 3, a 78-inch-diameter reinforced concrete cylinder pipe, and BDPL No. 4, a 96-inch-diameter PCCP. These vaults are located east and west of I-680 near the intersection of Mission Boulevard. The current project scope includes replacement of about 2,300 feet of BDPL No. 3. Ongoing investigations have determined that improvements to BDPL No. 4 are also required to facilitate the failure of BDPL No. 4 in a controlled manner that does not cause the failure of BDPL No. 3. It is planned that about 400 feet of the new BDPL No. 3 will cross Trace A under I-680 in an existing oversized corrugated metal pipe; about 300 feet that crosses Trace B under Mission Blvd. will be in a newly constructed concrete vault ("box culvert"); and the remaining new pipeline will be buried. All new construction will be in the SFPUC's existing right-of-way (ROW).

The project primarily consists of:

BDPL No. 3:

- A new 300-foot-long concrete vault will be constructed under Mission Boulevard near the I-680 Interchange where Fault Trace B is located. A new 300-foot segment of 72-inch welded steel BDPL No. 3 will be installed inside the vault. Within the vault and on either end of the fault trace zone, 72-inch-diameter ball joints and slip joints will be installed that will accommodate pipeline displacement during a seismic event.
- For the crossing under I-680 at Trace A, about 400 feet of 78-inch-diameter welded steel pipe will be installed in an existing, unused corrugated metal pipe.
- About 1,450 feet of additional new 78-inch diameter welded steel pipe will connect the existing and new segments between the two (2) vaults, and will be buried.

BDPL No. 4:

- About 400 feet of new 80-inch steel liner will be installed inside BDPL No. 4 at Hayward Fault Trace C.
- BDPL No. 4 will be encased with concrete outside the existing slip joint vault at Hayward Fault Trace B.
- Modifications to the existing slip joint vault will be made including enlarging BDPL No. 4 pipe penetrations in the vault, new drainage systems, new roof panels and adjustments to the existing slip joint.
- Modifications to the existing BDPL No. 3 (to be abandoned in place) to collect and divert water from the area and prevent the undermining of the new BDPL No. 3.
- About 400 feet of new 90-inch diameter welded steel pipe will be installed at Trace A of the Hayward Fault.
- Relocation of the following utilities: two (2) Alameda County Water District water pipelines, one (1) Union Sanitary District sewer pipeline, one (1) conduit of AT&T phone lines, and one (1) six-inch diameter PG&E gas pipeline.

Scope Refinements

There are no scope refinements to this project.

36301, SCADA System – Phase II

Background

This project is provided in response to the Delivery Reliability LOS goals. In addition, the California Department of Public Health mandated improvements to remote monitoring and operating capabilities in a compliance order to the SFPUC. The purpose of this project is to upgrade the SCADA system to allow for system-wide monitoring and control of remote facilities. The upgraded system, as well as additional monitoring and control facilities at several sites, will reduce the risks associated with unplanned outages, improve the efficiency of making planned outages, and generally improve the ability to remotely monitor and control system pressure and flow from a centralized location.

Description

The project primarily consists of:

- Establish a common software platform and migrate all elements to this platform.
- Connect existing flow meters and new pressure transmitters, and provide communication to SCADA master station at five (5) major Bay Area Water Supply and Conservation Agency (BAWSCA) customer sites.
- Install pressure transmitters, perform piping modifications, and provide communication to SCADA master station at seven (7) existing regulating valves in the City of San Francisco distribution system.
- Install new flow and pressure monitoring devices at 23 key locations in the City distribution system.

Scope Refinements

There are no scope refinements to this project.

36801, BDPL Reliability Upgrade – Tunnel

Background

This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. Previously the project included both the tunnel and pipelines at both ends in a single project. The two (2) components were separated because they each represent a significant amount of work that may best be constructed by contractors with different skill sets. The pipeline portion is included in the - BDPL Reliability Upgrade - Pipeline Project. The tunnel links the existing segments of BDPL Nos. 1 and 2 and the future BDPL No. 5 in the East Bay with those on the Peninsula. The existing portions of BDPL Nos. 1 and 2 in this very environmentally sensitive marsh location are a combination of submarine pipe and pipe on a trestle-support (the pipe and the trestle are in a deteriorated condition). The tunnel is being utilized, in part, because construction in the marsh is not environmentally acceptable.

Description

The tunnel extends 5 miles under San Francisco Bay and is adjacent to the marshlands between the vicinity of the Ravenswood Valve Lot and the Newark Valve Lot. The tunnel will be

constructed with a Tunnel Boring Machine (TBM). The final tunnel lining will consist of a 9-foot-diameter welded steel pipeline. The tunnel will terminate on each end with vertical shafts and a connection to the BDPL Nos. 1, 2, and 5 piping manifolds. The two (2) piping manifolds are provided under the BDPL Reliability Upgrade - Pipeline Project. The tunnel spoils are anticipated to be used as part of the conversion of adjacent salt ponds to marshland. The portion of the existing BDPL Nos. 1 and 2 that are replaced by the tunnel will be capped on each end and will be abandoned in place.

Two (2) facilities were added to the original scope of work as part of the March 2014 Revised WSIP and are necessary to ensure the project will meet LOS goals:

- SCADA Communications system at Newark Valve Lot - This added scope provides for the installation of a SCADA communications system and integrating such system into the existing water quality monitoring equipment located in the Newark Valve Lot Control Building. The work consists of installing communications equipment, telephone line, wires, conduits, and electrical cabinets.

- 42–inch diameter Bay Division Pipeline No. 2 (BDPL2) Bypass - The supply from the Newark Valve Lot to the City of Hayward is currently being fed from both Bay Division Pipelines (BDPL) No. 1 and No. 2. Upon the completion of the Bay Tunnel Project, Hayward supply will be fed only by BDPL2. BDPL2, built in the mid-1930s, is a mixture of reinforced concrete cylinder pipe and wrought steel pipe. Thus, with the original scope of the Bay Tunnel project, the reliability of the Hayward service line could be reduced when the project is completed. The scope of work for this change provides for the installation 640 lineal feet of new 42-inch diameter welded steel pipe, replacing a portion of BDPL2, thereby increasing the reliability of the Hayward service.

Scope Refinements
There are no scope refinements to this project.

36802, BDPL Reliability Upgrade – Pipeline

Background
This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. This project was originally combined with the BDPL Reliability Upgrade - Tunnel Project. A critical component of the upgrade to the Bay Division transmission system is the addition of this BDPL No. 5. This new large-diameter pipeline to be built parallel to BDPL Nos. 1 and 2 in the SFPUC ROW will provide redundancy and improve seismic reliability to the transmission system. The BDPL No. 5 will include two segments: one in the East Bay and one on the Peninsula, with the new Bay Tunnel linking them.

Description
The project primarily consists of:

- In the East Bay, 7 miles of 72-inch-diameter pipe will be constructed between the Irvington Portal and the Newark Portal of the new Bay Tunnel. On the Peninsula, 9 miles of 60-inch-diameter pipe will be constructed between the Ravenswood Portal of the new Bay Tunnel and the portal of the Pulgas Tunnel.

- A seismically resistant crossing of the Hayward Fault will be constructed. The crossing will include a new crossover valve vault on each side of the fault. The valves will be hydraulically actuated and will include emergency batteries. The pipe between the vaults will be higher strength and will be installed on a special foundation or trench section.
- Isolation valves and an interconnecting pipe manifold will be constructed at each portal of the new Bay Tunnel. The facilities will include new or rehabilitated control buildings with new emergency generators.
- New crossover valves between BDPL Nos. 2 and 5 will be installed at a location in Redwood City. The crossover facility will include a new or rehabilitated control building and connections for a portable emergency generator.
- A new throttling valve will also be added on BDPL No. 5 at the Pulgas Valve Lot. The throttling valve will include a new or rehabilitated control building.
- The project originally included underground concrete vaults for crossover facilities at Newark, Ravenswood, and Redwood City Valve Lots. The current project eliminates the concrete vaults and directly buries the valves with full access to valve actuators at these facilities.

Scope Refinements
There are no scope refinements to this project.

36803, BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2

Background
The project is provided in response to the Delivery Reliability LOS goals. BDPL Nos. 1 and 2 are located above-ground near their crossing with the Bay Area Rapid Transit (BART) system in Fremont and are enclosed in a concrete culvert under the adjacent railroad. The objectives of this project are to reduce the risk of unplanned outages and improve system reliability in conjunction with other development in this area by relocating facilities below-ground.

Description
The project includes relocation of approximately 600 feet of each pipeline (BDPL Nos. 1 and 2) at the BART/railroad crossings. The pipe segments to be relocated will be installed inside new casings that will be placed by the construction contractor doing the other development work in the area. The encased pipes are being installed in accordance with a utility agreement between the City of Fremont and the SFPUC.

Scope Refinements
There are no scope refinements to this project.

38001, BDPL Nos. 3 & 4 Crossovers

Background

This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. BDPL Nos. 3 and 4 extend approximately 34 miles around the south end of San Francisco Bay. While there are currently two (2) isolation/crossover points on these pipelines, the distance between them is approximately 8 miles. This relatively large distance makes it difficult to take segments of pipe out of service for planned inspection and maintenance, and results in a large number of customers that may be impacted by an emergency outage of a pipeline. The purpose of this project is to add three (3) additional isolation/crossover facilities so that the distance between them will be approximately 4 miles, making the system easier to maintain and repair, and increasing the number of customers that would be likely to receive water within 24 hours following a major seismic event.

Description

The three (3) proposed crossover facilities are located near the Guadalupe River in Santa Clara, near Barron Creek in Palo Alto, and near Bear Gulch in Atherton. The facilities include vaults that are largely below-ground, with only the top 30 inches exposed. They are very similar to one another, consisting of four (4) mainline valves and a crossover valve. Emergency engine generators will be included as an optional bid item.

Scope Refinements

There are no scope refinements to this project.

38901, SFPUC/EBMUD Intertie

Background

This project is provided in response to the Delivery Reliability LOS goals. The purpose of the project is to inter-connect the SFPUC and the East Bay Municipal Utility District (EBMUD) systems. The connection uses existing water system piping in the City of Hayward with connections to EBMUD and SFPUC systems on each end. The connection allows up to 30 mgd of water to flow between the two water systems in the event of critical shutdowns for emergency repairs, maintenance and/or construction activities.

Description

The project primarily consists of:

- Providing new 36-inch-diameter piping and valving at the Newark Turnout to provide an additional connection between BDPL Nos. 1 and 2 to the existing City of Hayward system.
- Using the existing City of Hayward system for conveyance and providing six (6) new valves for isolation.
- Providing 1.3 miles of new 36-inch-diameter pipe to connect the City of Hayward system to the EBMUD system and providing a new pump station along this alignment.

Scope Refinements

There are no scope refinements to this project.

39301, BDPL No. 4 Condition Assessment PCCP Sections

Background

This project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. An alternatives analysis and a partial condition assessment of the BDPLs were performed as part of the BDPL Reliability Upgrade - Pipeline Project. The study raised concerns about the two (2) pipeline reaches of BDPL No. 4 that are constructed of PCCP. It is recognized that PCCP has a potential for sudden failures, and the SFPUC has experienced two major failures prior to 2003. The original condition assessment, which included a desktop study and limited field investigations, identified potential for both seismic risks (associated with the gasketed joints) and questionable life expectancy (due to concerns for corrosion of the pre-stressed wires).

Description

This project is 100% complete and has been closed out. This project includes a detailed condition assessment of the two PCCP segments along BDPL No. 4. The first reach of concern (Reach 1) is 8.6 miles long and 96-inches in diameter. The second reach of concern (Reach 4) is 8.0 miles long and 84-inches in diameter. The condition assessment consists of an electromagnetic survey, seismic risk analysis, corrosion survey, visual inspection, and field investigations.

The assessment identified six (6) reaches of pipe (144 feet total out of 16 miles) that are potentially distressed. During initial investigations, the condition of one (1) distressed pipe segment (Pipe 1558) was determined visually to be particularly deteriorated, and immediate emergency repair was recommended. The project funded and completed emergency repair, using post-tension exterior tendon repair, for this segment. For the other five (5) potentially distressed pipe segments that were identified using electromagnetic survey, and determined to be of lower priority, recommendations were made for future excavation to confirm pipe condition in these areas, and repair if needed. A number of future follow-up investigations were recommended, including monitoring of groundwater acidity for a period of one (1) year in the area of Edgewood Road, and additional excavations of lower priority pipe pieces. Any additional required repairs will be scheduled based on urgency and funded through the Water Enterprise's Repair and Replacement (R&R) Program.

Scope Refinements

There are no scope refinements to this project.

BDP, WSIP Closeout – Bay Division Region

Background

This WSIP Closeout Project for the Bay Division Region was added in March 2016 Notice of Change in response to miscellaneous identified needs and/or improvements that are needed to supplement the scope of WSIP regional projects to ensure that WSIP Level of Service (LOS) goals are fully achieved. The scopes of work of the individual sub-projects that are included within the WSIP Closeout Project for the Bay Division Region are described below.

Description

- **Site Drainage and Pipe Coating Repairs** - This sub-project will focus on providing a drainage system solely within SFPUC's Right-of-Way to address an erosion issue that developed after the construction of the CUW35302 Seismic Upgrades of BDPL Nos. 3 & 4. In addition, this sub-project will include repairs to coatings on the pipe and pipe supports of the Bay Division Pipeline (BDPL) No. 3 to address issues that developed inside the articulated vault after construction was completed. The sub-project includes design, construction, and management of the drainage system work.

- **Bay Tunnel Warranty Inspection and BDPL 1 & 2 EIR Mitigation** – This sub-project advances the planning for a decommissioning study of the existing BDPL Nos. 1 and 2 until such time that the funding for a new Water 10-Year Capital Improvement Project (CIP) to further study mitigation alternatives and pursue removal of the BDPL Nos. 1 and 2 within the Don Edwards San Francisco Bay National Wildlife Refuge becomes available in FY2020-21.

- **Hydro-seeding at Bay Tunnel Project** - Due to the drought conditions and timing of hydro-seeding performed for the Bay Tunnel Project outside of the typical seasonal window, it may not be possible to file the Notice of Termination (NOT) to close out the storm water permit prior to the Bay Tunnel Project closeout date, as the 70% growth take requirement, with less than 10% noxious weeds, may not be achieved by that time. Accordingly, the scope of this sub-project provides for monitoring of the hydro-seeded areas, removal of noxious weeds and potentially re-seeding some of the areas at the tunnel portals in Menlo Park and Newark if the storm water performance objectives are not met.

- **Newark Valve Lot Additional Gravel Placement** - The Bay Tunnel Project design plans call for a portion of the Newark Valve Lot to be landscaped and hydro-seeded. However, based on recent discussions, Operations staff are requesting that gravel be placed in this area since it will be a high traffic area during shutdowns and other maintenance work. Accordingly, this sub-project provides for the purchase and placement of the gravel.

- **Corrosion Protection for Valve E5OU** – The E50U Valve was installed in 2011 as part of the CUW36802 BDPL Reliability Upgrade – Pipeline Project. Immediately prior to the Bay Tunnel Project in-service/commissioning date in early Fall 2015, the Bay Tunnel Contractor completed the flanged connection of the manifold to the existing E50U Valve. However, during the installation and testing of the new flanged connection, the Bay Tunnel Contractor discovered an inconsistency in the corrosion protection isolation system of the existing valve E50U (high corrosion potential). It was decided to not authorize a Change Order to fix the corrosion problem of the E50U Valve at that time due to the risk of potential delays to the Bay Tunnel Project, at high cost, if leaks were to occur after the solution was implemented. Accordingly, this sub-project includes excavating and shoring the area around the valve, and removal of one bolt at a time for testing and replacing of the bolts (if necessary). A gasket will be purchased and may be installed if there are leaks that develop after the bolts are removed, cleaned and replaced. The proposed work on the valve will be done during the shutdown of the Bay Tunnel for warranty inspection in Winter 2016/2017.

- **Ventilation and Sump Pump Systems Installation (new sub-project in 2018)** - This sub-project provides improvements for inspection, monitoring and maintenance associated with the construction of the CUW35302 Seismic Upgrades of BDPL Nos. 3 and 4. The BDPL No. 3 pipe, slip joint, ball joints and pipe supports and seismic monitoring equipment inside the articulated vault require on-going inspection, monitoring and maintenance. The type and frequency of inspection and maintenance were not well defined during the design phase; it is now clear that a fixed ventilation system is required for the BDPL No. 3 vault. Furthermore, the BDPL No. 4 expansion joint vault also requires access for inspection and monitoring; installation of a sump pump is required to remove water from the vault prior to inspections. Accordingly, the scope of this sub-project is to install a fixed ventilation system and a sump pump system to eliminate the need for removing access hatches and installing temporary fans and sump pump prior to accessing the vaults for frequent inspection and maintenance needs.

Scope Refinements

- There are no scope refinements to this project.

Peninsula Region

35401, Lower Crystal Springs Dam Improvements

Background

The project is provided in response to the Delivery Reliability and Water Supply LOS goals. The Lower Crystal Springs Reservoir System (Upper and Lower Crystal Springs Reservoirs) is the primary impoundment facility on the San Francisco Peninsula. Water stored in this reservoir is pumped to the San Andreas Reservoir, which subsequently provides raw water to the Harry Tracy Water Treatment Plant (HTWTP). In 1983, the California DSOD dictated that the maximum allowable water surface elevation of the reservoir be lowered by 8 feet because the dam's spillway was inadequate to safely pass a Probable Maximum Flood event. The lower maximum operating elevation reduces the storage capacity of the reservoir by 2.6 billion gallons. The purpose of this project is to make the necessary improvements to the dam so that it can safely pass the Probable Maximum Flood event, thereby allowing the ability to restore the maximum operating elevation of the reservoir.

Description

The project consists of:

- Spillway modifications that include widening the spillway, constructing two (2) bridge piers within the spillway to accommodate rebuilding of a San Mateo County Bridge, removing the existing timber stop-log system, constructing a new weir system within the spillway, installing access cat-walks for operation and maintenance, and eliminating water ponding on top of the dam.
- Parapet wall modifications that include raising the wall that is located on top of the upstream face of the dam and raising the approach walls to the spillway.
- Stilling basin modifications at the base of the spillway that include removing the existing basin, constructing a new larger basin, and adding downstream riprap protection at the toe of the basin.

Scope Refinements

There are no scope refinements to this project.

35601, New Crystal Springs Bypass Tunnel

Background

The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The New Crystal Springs Bypass Tunnel (NCSBT) is being constructed to provide redundancy to the existing Crystal Springs Bypass Pipeline (CSBPL). This pipeline is a critical link in the transmission system, transmitting all of the water from the East Bay to the Peninsula and City of San Francisco. The CSBPL is a PCCP and is located below a hillside along Polhemus Road in the unincorporated area of San Mateo County. The soils in this area are vulnerable to landslides and subject to failure in a major seismic event.

Description

The project consists of:

- A 4,200-foot-long tunnel with an 8-foot-diameter welded steel liner.

- Vertical shafts on each end of the tunnel to accommodate the TBM and future maintenance.
- The southern shaft will include a connection to the existing CSBPL near the north end of the existing Crystal Springs Bypass Tunnel; the existing pipeline has been determined to be seismically reliable in this area.
- The northern shaft of the new tunnel will tie into the southern ends of both the Crystal Springs Pipeline (CSPL) No. 2 and the Sunset Supply Pipeline (SSPL). The connecting segment and tie-in to the SSPL will be provided by this project. However, the connecting segment and a blind flange for CSPL No. 2 will be provided by the Crystal Springs Pipeline No. 2 Replacement Project, and this project will tie into the blind flange. This contractual arrangement is used to prevent two (2) shutdowns of the CSPL No. 2.
- New isolation valves and valve vaults.
- Standby power near valve vault G40.
- The existing pipeline will remain in service to provide redundancy for inspection of the tunnel.

Scope Refinements
There are no scope refinements to this project.

35701, Adit Leak Repair - Crystal Springs/Calaveras

Background
The project is provided in response to the Delivery Reliability LOS goals. The adit structures function as the outlet facilities from the reservoirs; as such they are critical links in the water supply system. The adit structures in the Lower Crystal Springs, Calaveras, and San Antonio Reservoirs have been damaged by leakage. These facilities contain the valves and piping usedto control withdrawal of water from the reservoirs through horizontal tunnels. Leakage into the structures makes access difficult and unsafe and also results in deterioration of equipment. Thepurpose of this project is to repair the adit structures.

Description
The project consists of:

- Crystal Springs Outlet Tower No. 1: repairing leaks inside the tower, blasting and recoating piping and valves, replacing the roof, structurally retrofitting the access footbridge, and installing a marine hatch at the tower drain.
- Crystal Springs Outlet Tower No. 2: installing a marine hatch at the tower drain.
- Calaveras Outlet Tower: installing a dewatering pump, replacing a deteriorated valve actuator, and providing ladder fall protection.
- San Antonio Outlet Tower: installing a dewatering pump and repairing leaks inside the tower.

Scope Refinements
There are no scope refinements to this project.

36101, Pulgas Balancing - Inlet/Outlet Work

Background
The project is provided in response to the Water Quality and Delivery Reliability LOS goals.

Originally this was a single project with multiple phases of work. The phases have subsequently been allocated to separate projects to facilitate construction scheduling and work by contractors with different skill sets. The Pulgas Balancing Reservoir is a 60-mg facility that helps the transmission system meet daily peak demands and dampens fluctuations of the water level in the Pulgas Tunnel. Because of its relatively large size and configuration, the water is not mixed well. The inadequate mixing results in some water remaining in the reservoir significantly longer than other water. This condition tends to degrade water quality.

Description
The project includes new inlet and outlet piping designed to direct the path of the water in such a manner as to promote better mixing. The shutdowns associated with construction of these improvements also provided an opportunity to perform a condition assessment of the reservoir interior that has been used to help identify work associated with the Pulgas Balancing - Structural Rehabilitation & Roof Replacement Project.

Scope Refinements
There are no scope refinements to this project.

36102, Pulgas Balancing - Discharge Channel Modifications

Background
The project is provided in response to the Delivery Reliability LOS goals. As previously noted the original project has been divided into separate projects to facilitate construction. The Pulgas Balancing Reservoir includes a discharge channel to convey water from the transmission system to the Upper Crystal Springs Reservoir. The channel is over 70 years old, does not have sufficient capacity to accommodate peak flow rates, and is in need of repair.

Description
The discharge channel modifications to be built under this project will accommodate the anticipated maximum flow of 250 mgd. Project components include raising the channel walls, repairing concrete cracks and exposed reinforcing steel, strengthening and interconnecting the channel floor sections, and strengthening the tall tapered wall near the Pulgas Tunnel.

Scope Refinements
There are no scope refinements to this project.

36103, Pulgas Balancing - Structural Rehabilitation & Roof Replacement

Background
The project is provided in response to the Water Quality and Delivery Reliability LOS goals. As previously noted, the original project has been divided into separate projects to facilitate construction. The Pulgas Balancing Reservoir is seismically vulnerable, requires improvements for sanitary protections, and requires general rehabilitation of miscellaneous structural, mechanical and electrical systems. During the shutdown to enable inlet/outlet construction associated with the Pulgas Balancing – Inlet/Outlet Work Project, a general condition assessment was conducted that documented areas of general structural deterioration on the interior of the reservoir.

Description
The project includes structural rehabilitation of the reservoir, which consists of seismic retrofit of the walls, installation of a new steel frame roof, and repairs of concrete cracks and exposed reinforcing steel. The general rehabilitation also includes the installation of a new ventilation system and sampling ports, the replacement of utility piping, and the upgrade of the electrical system.

Scope Refinements
There are no scope refinements to this project.

36105, Pulgas Balancing - Modification of the Existing Dechloramination Facility

Background
The project is provided in response to the Water Quality and Delivery Reliability LOS goals. Water in the transmission system is chloraminated for disinfection and pH adjusted for corrosion control. The Dechloramination Facility removes chlorine and ammonia and adjusts the pH of the drinking water prior to the water being discharged to Upper Crystal Springs Reservoir to maintain compliance with Regional Water Quality Control Board requirements and to reduce nutrient loading to the reservoir. The flow rate of water that is discharged to the reservoir is affected by the continuing changes in system demand that occur throughout the day. Therefore, the flows through the existing Dechloramination Facility change frequently, causing added complexity to the process control requirements. The facility has experienced difficulty in treatment due to the flow fluctuations and process complexity. This project is intended to, at a minimum, modify the pH and dechlorination systems to provide more reliable compliance with existing regulations.

Description
Improvements to the dechloramination and pH control facilities are necessary to address immediate compliance issues. The modifications are anticipated to primarily be made to the flow measurement and control system, and to the various process control and chemical feed systems. Emphasis will be placed on chlorine removal and pH adjustment first to comply with existing regulations, with consideration towards the interdependent secondary goal of maximizing ammonia removal for nutrient control in the reservoirs. The scope of this project will be refined further as design efforts continue to move forward.

Scope Refinements
There are no scope refinements to this project.

36501, Cross Connection Controls

Background
The project is provided in response to the Water Quality LOS goals. The Cross Connection Controls Project addresses requirements of the California Department of Public Health. Throughout the transmission system there are 304 sites, such as air valves and blow-off points, where potential cross connections exist.

Description
The project consists of providing improvements at the 304 sites identified to address potential cross connections. The work varies from site to site due to specific site conditions. The major

work elements typically include:

- Install air gaps at blow-off locations and at air valves
- Install backflow protection devices
- Reconstruct or raise existing vaults
- Install new vault covers
- Replace existing air valves
- Modify, relocate, or remove existing blow-off facilities

Scope refinements

There are no scope refinements to this project.

36601/02/03, Harry Tracy Water Treatment Plant Short-Term Improvements

Background

These three (3) projects are provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The HTWTP treats surface water supplies from the Peninsula reservoirs for delivery to customers in Northern San Mateo County and the City of San Francisco. These projects include process and seismic improvements to the existing coagulation, flocculation, and filtration systems to facilitate the ability to reliably deliver treated water. The work has been divided into three (3) projects to facilitate full-scale performance testing and subsequent construction of the improvements.

Description

The projects consist of:

- CUW36601 (HTWTP Short-Term Improvements - Demo Filters): Retrofit of two (2) filters and full-scale performance demonstration testing (project has been completed).
- CUW36602 (HTWTP Short-Term Improvements - Remaining Filters): Scope of that project combined with Project CUW36602.
- CUW36603 (HTWTP Short-Term Improvements – Coagulation & Flocculation/Remaining Filters):
    - Coagulation improvements that include restoring and improving operation of the pumped-jet flash-mix system, increasing capacity of the flash-mix pumps, providing the pumps with variable speed controls to improve efficiency, providing an automated dilution water system, and reconfiguring the chemical injectors to improve performance.
    - Flocculation improvements that include reconfiguring the baffling system to reduce headloss by widening the channels, adding new mechanical mixers with variable speed controls to improve performance and efficiency, and seismically retrofitting the walkways and basin walls.
    - Filtration modifications to eight (8) of the ten (10) existing filters (two (2) were replaced in Project CUW36601), replacing effluent control valves and backwash supply valves, providing a filter to waste system, installing new underdrains and media, and seismically retrofitting the basin walls.

Scope Refinements

There are no scope refinements to this project.

36701, Harry Tracy Water Treatment Plant Long-Term Improvements

Background

The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals, and also addresses maintaining regulatory compliance in the Water Quality LOS goals. The purpose of the HTWTP Long-Term Improvements Project is to improve delivery reliability and provide seismic upgrades to achieve a sustained capacity of 140 mgd for at least 60 days, and to provide 140 mgd within 24 hours following a seismic event on the San Andreas Fault. The raw water quality from the Peninsula reservoirs, while typically of very high quality, can vary significantly and may occasionally be relatively poor due to sporadic filter-clogging algae blooms and high turbidity events. Planning studies for this project concluded that the direct filtration process can adequately treat poor raw water quality and meet all water quality requirements, but that the plant capacity may be diminished since the filters clog more rapidly. In order to assure capacity under all raw water quality conditions, implementation of a clarification process was recommended. During the planning process, it was decided that the frequency of occurrence of poor raw water quality events was acceptable to continue employing the direct filtration process, but that new filters should be added to ensure capacity under most water quality conditions. It was acknowledged that the plant may not be capable of achieving a sustained capacity of 140 mgd during some poor raw water quality conditions. The process design associated with this project will employ direct filtration (sedimentation basins are not included upstream of the filters). However, reliability will be added through the addition of new filters.

Description

The project consists of:

- Hydraulic improvements in the various treatment units to reduce headloss and increase capacity.
- Improvements to the disinfection process by upgrading the ozone generation system and backup oxygen supply.
- Expansion of the filtration process capacity by adding five (5) new filters.
- Improvements to the sludge handling system, including the addition of improved thickening and dewatering systems.
- Improvements to the washwater system, including the addition of a second washwater tank, associated equipment and piping.
- Seismic upgrade to all critical process units.
- Electrical upgrade, including a new substation, switchgear, and motor control center. New emergency generators are being provided as part of the Standby Power Facilities - Various Locations Project.
- Interim seismic response improvements, such as automated valves, to minimize seismic hazards until the long-term improvements are complete.
- New 11.0 mg TWR and subsequent abandonment of the existing 6.5 mg and 8.0 mg TWRs.
- New seismically reliable pipelines just east of the existing TWRs.
- Miscellaneous improvements to chemical feed systems, site piping, drainage, and roads.
- Addition of a third 2-megawatt generator set to satisfy emergency power needs of new facilities added as part of the project;

- Replacement of parallel switchgear and motor control center to accommodate addition of third generator set and to provide additional operational flexibility;
- Improvements to plant's recloser to increase reliability of PG&E power to the plant;
- Additional seismic anchorage of existing equipment; and
- Hydraulic modifications to coagulation and flocculation basins.

Scope Refinements
There are no scope refinements to this project.

36702, Peninsula Pipelines Seismic Upgrade

Background
This project was created in response to 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 (3) drinking water transmission pipelines that deliver water from the HTWTP to customers within the Regional Water System and City and County 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.

Description
The scope of this project includes 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 has been 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 (3) 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:

The refined project scope (Phase 1) currently includes the following components at five (5) locations on the San Francisco Peninsula to address Serra Fault Crossing locations and liquefaction hazard potential in the Colma Creek area:

- Colma Site – Replacement of an approximately 700-ft segment of SAPL2
- South San Francisco Site – Replacement of an approximately 720-ft segment of SAPL2
- San Bruno North Site – Stabilization of SAPL2 where it extends through a tunnel
- San Bruno South Site – Replacement of an approximately 1,170-ft segment of SAPL2 and an approximately 1,050-ft segment of SAPL3; and
- Millbrae Site – Replacement of an approximately 900-ft segment of SSBPL

A common staging area is planned to be located at SFPUC Baden Valve Lot in South San

Francisco on El Camino Real.

Phase 2 of the project will include installation of two (2) new isolation valves near the Baden Valve Lot on SAPL No. 2 and No. 3 in the City of South San Francisco.

The WSIP construction contract will include both Phases 1 and 2.

Phase 3 has been identified as a non-WSIP project, and includes condition assessment and improvements to SAPL2, installation of new isolation valves, and the potential addition of flexible connections along the alignment within the City of San Francisco.

Scope Refinements
There are no scope refinements to this project.

36901, Capuchino Valve Lot Improvements

Background
The project is provided in response to the Delivery Reliability LOS goals. The Capuchino Valve Lot is a pressure reducing station that allows water to flow from the HTWTP high-pressure zone to the low-pressure supply zone. The station includes two (2) pressure-reducing valves located in a vault.

Description
This project is 100% complete and has been closed out. The project primarily consists of replacing two (2) existing isolation valves; providing new electric actuators for valve operation; performing concrete crack repair to prevent water leakage into the vault; providing new instrumentation and control systems for valve operation and pressure monitoring; and relocating the existing electrical and instrumentation systems outside the vault.

Scope Refinements
There are no scope refinements to this project.

37101, Crystal Springs/San Andreas Transmission System Upgrade

Background
The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The project includes all facilities necessary to move water from the Upper Crystal Springs Reservoir, through the Lower Crystal Springs Reservoir to San Andreas Reservoir and, ultimately, to the HTWTP Raw Water Pump Station. All of these facilities are located in very close proximity to the San Andreas Fault. The purpose of the project is to improve system reliability so that raw water will be supplied to the HTWTP as necessary to meet its sustainable capacity requirements.

Description
Improvements will be made to the Upper Crystal Springs Dam discharge culverts, the Lower Crystal Springs outlet structures, the Crystal Springs Pump Station (CSPS), the CSSA Pipeline, and the San Andreas outlet structures.

The project primarily consists of:

- The Upper Crystal Springs Dam includes two (2) discharge culverts. During geotechnical investigations, it was confirmed that the lower culvert crosses the 1906 San Andreas Fault. Improvements will be made to the lower culvert to ensure its operation following a San Andreas Event. This will involve lining the culvert to provide operational and seismic protection and providing a second discharge riser on the east side of the San Andreas Fault.
- The Lower Crystal Springs Outlet Structures Nos. 1 and 2 improvements include removal of all equipment from the outlet towers and installation of new submerged adit valves; removal of the free-standing portion of the towers and bridge to address seismic concerns; installation of reliable adit selection system; and installation of fish screens. Additionally, the tunnels and pipe systems leading from the outlet structures to the CSPS will be improved.
- A new CSPS, together with site piping and valving, will be constructed with increased capacity to meet LOS goals and other functionalities, similar to those provided by the existing pump station. Additionally, a new electrical substation; emergency backup electrical generators for emergency demands, yard valves and small auxiliary pump (but not for large pumps); and security-related site improvements will be provided.
- The emergency chlorination system at the existing CSPS will be replaced with a portable chlorination system to provide more reliable response during an emergency.
- The CSSA Pipeline improvements include improvements to the first 800 feet of pipeline (upstream end of pipeline) to provide reliable operation at a higher operating pressure; replacement of the last 1,400 feet of the pipeline (downstream end of pipeline) to address seismic hazards; replacement and refurbishment of all appurtenances and lining to provide a 50-year life and protect against surge and seismic hazards; improvements, installation, and repair to 31 drainages that cross the pipeline alignment; and road improvements to provide access for maintenance and emergency response.
- The San Andreas Reservoir Outlet Structure Nos. 2 and 3 improvements include seismic retrofit to the structures; construction of an approach channel; modifications to the adits; replacement of all equipment in the towers; and installation of emergency isolation valves, reliable adit selection systems, and fish screens.
- The pipe in the tunnel leading from the San Andreas Outlet Structure No. 2 to the raw water pump station at the HTWTP will be replaced with a tunnel liner system.
- The tunnel portal of San Andreas Outlet Structure No. 3 will be retrofitted to protect the pipeline from the Serra Fault crossing.
- The isolation valves at Upper Crystal Springs Dam were removed from the contract per direction from DSOD. The concern was that the installation of these valves would bring the Upper Crystal Springs Dam (Hwy 92) under DSOD's jurisdiction.
- Part of one segment of pipeline from the Crystal Springs Pipeline No. 2 project was added to this contract. This segment runs along the access road to the pump station and was added to avoid conflict between different Contractors.

Scope Refinements

There are no scope refinements to this project.

37801, Crystal Springs Pipeline No. 2 Replacement

Background

The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. Crystal Springs Pipeline (CSPL) No. 2 extends from a point near the CSPS in unincorporated San Mateo County to the University Mound Reservoir in San Francisco. The pipeline is primarily 60-inch-diameter pipe with a 3.2 mile section that is 54-inch-diameter pipe. The purpose of the project is to improve the seismic reliability of the pipeline.

Description

The major project elements consist of:

- Seismic reliability improvements, which include replacing or relocating a total of 1.7 miles of pipe at 12 different locations, sliplining 3.5 miles of pipe, retrofitting pipe bridge pier supports at two (2) creek crossings, providing a new connection at the CSPS, and providing a connecting segment with a blind flange for later connection to the NCSBT. The tie-in to the NCSBT will be performed under the NCSBT Project, eliminating the need for a second shutdown of the CSPL No. 2.
- Installing a new isolation valve near the CSPS area.
- Performing site improvements, including the installing fences and enclosures for exposed facilities, concealing exposed portions of pipe, and painting exposed portions of pipe.
- Upgrading the cathodic protection system along the length of the pipeline.

Scope Refinements

There are no scope refinements to this project.

37901, San Andreas Pipeline No. 3 Installation

Background

The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The existing San Andreas Pipeline No. 3 (SAPL3) extends from the HTWTP to the San Pedro Valve Lot. The original extension of this pipeline to the Merced Manor Reservoir was provided by the Baden-Merced Pipeline. The Baden-Merced Pipeline is out of service and beyond repair. The purpose of this project is to replace the currently abandoned Baden-Merced Pipeline by extending the SAPL3 from the San Pedro Valve Lot in Daly City to the Merced Manor Reservoir in San Francisco.

Description

This project is 100% complete and has been closed out. The major project elements include:

- Installation of 4.4 miles of 36-inch-diameter pipe with three (3) bore-and-jack street crossings along 19th Avenue and John Daly Boulevard.
- Installation of five (5) service connections.

- Installation of one (1) altitude valve at Merced Manor Reservoir, six (6) isolation valves, and a flow meter.
- Installation of a new cathodic protection system.
- Installation of three (3) connections to the San Andreas Pipeline No. 2 (SAPL2).

Scope Refinements
There are no scope refinements to this project.

39101, Baden and San Pedro Valve Lots Improvements

Background
The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. Both of these facilities are critical to the transmission of water in the northern portion of the Peninsula.

Description
The project includes a general mechanical and seismic upgrade of existing facilities and the addition of a pressure-reducing station. Miscellaneous work will also be performed at the Pulgas Pump Station and the Pulgas Tunnel Air Shaft to facilitate moving flow southward through the system at higher pressures than normal.

The major work elements at the various sites primarily include:

- The Baden Valve Lot improvements include installation of a new pressure-reducing valve to allow water to flow from the HTWTP high-pressure zone to the low-pressure supply zone, installation of five (5) new isolation valves, replacement of three (3) existing valves, seismic retrofit of eight (8) existing vaults, replacement of onsite piping segments, replacement of the existing electrical switchgear and transformer, replacement of three (3) pumps, installation of variable frequency drives, and other miscellaneous improvements
- The San Pedro Valve Lot improvements include seismic retrofit of two (2) valve vaults, modification of the electric valve operators, installation of a new air valve, and miscellaneous site drainage improvements
- The Pulgas Pump Station improvements include replacement of one (1) isolation valve
- The Pulgas Tunnel Air Shaft improvements include site work to stabilize slopes

Scope Refinements
There are no scope refinements to this project.

PNI, WSIP Closeout – Peninsula Region

Background
A new WSIP Closeout Project for the Peninsula Region was added in the March 2016 Notice of Change in response to miscellaneous identified needs and/or improvements that are needed to supplement the scope of WSIP regional projects to ensure that WSIP Level of Service (LOS) goals are fully achieved. The scopes of work of the individual sub-projects that are included within the WSIP Closeout Project for the Peninsula Region are described below.

Description

- **LCSD Stilling Basin Modifications & Dissipation Structure Riprap** – This sub-project is provided in response to concerns that fish may be "trapped" in the Lower Crystal Springs Dam (LCSD) stilling basin during low flow summer periods, and that high flow discharges from the new LCSD dissipation structure and potential high water levels in Pool 2 may cause erosion of the bank adjacent to the dissipation structure. The dissipation structure includes 60-inch diameter pipes with a maximum flow of 600 cubic feet per second (cfs) each and two (2) 8-inch diameter pipes with maximum flow of 7 cfs each. During flow testing of the dissipation structure, released water could be observed flowing over the dissipation structure, potentially eroding the bank adjacent to the structure. It was also observed that during summer periods, due to low flow in the channel downstream of the stilling basin, fish trapped in the basin were dying due to warm water temperatures. The purposes of this sub-project are to hydraulically connect the stilling basin with Pool 2 in order to allow fish to escape the basin in summer, and to add rip-rap behind the dissipation structure to prevent erosion. Specifically, this sub-project consists of:
    - A new deeper channel between the dissipation structure and the Pool 2, which would prevent fish from being trapped in the stilling basin
    - Installation of a new SCADA controls to the existing 8-in discharge pipeline and re-routing one (1) line to the stilling basin
    - Installation of additional rip-rap around the dissipation structure
    - Installation of a new 24-inch HDPE pipeline through an existing abandoned 60-inch pipe directed to the stilling basin
    - Coordination and facilitation of access for a piezometer drilling contractor during periods of concurrent work in the stilling basin
    - Addition of tree, shrub, and grass plantings along the creek bank in accordance with the approved re-vegetation plan

- **LCSD Valve H53 / Pipeline Investigation & Fisheries Release Valve** – As stipulated by the US Army Corps of Engineers 404 permit and the associated biological opinion by NOAA's National Marine Fisheries Service (NMFS) covering the SFPUC activities at the Crystal Springs Pump Station (CSPS), the SFPUC is to take measures to protect the threatened Central California Coast (CCC) steelhead present in San Mateo Creek at CSPS site. One measure requires the release of fresh water at a rate of 3 to 17 cubic feet per second (cfs) depending on the season in recorded dry and wet years. This sub-project will utilize modification of an existing pipeline to release the required flows to the LCSD stilling basin feeding San Mateo Creek. Specifically, this sub-project consists of:
    - Condition assessment of the existing 60-in diameter pipeline from Valve H-53 to the stilling basin. In addition, valve H-53 will be exposed and visually inspected to determine its condition, requiring excavation and shoring of a pit approximately 20 feet long by 20 feet wide by 20 feet deep.
    - Depending on the verified condition, viable alternatives, including abandonment of the option to use H-53 pipeline, will be evaluated.
    - The approved option will include a SCADA controlled 12-inch valve installed at the discharge end of the pipeline. Depending on the condition of the pipeline, the approved option may also include repairs to the pipeline lining. Options may also include slip-lining the existing line with a smaller diameter pipeline such as 12 to 24-in diameter flexible polypropylene pipe.
    - Use of a temporary pipeline "line stop" and associated shoring upstream of Valve H-53 to allow for potential installation of a permanent blind flange.

- Replacement of leaking plug valves that discharge from an existing concrete vault to the stilling basin with new knife gate valves.
- Installation of new flow control valves, isolation valves and appurtenances for Pool 2.
- Connections to the existing 72-inch pipeline using hot taps.
- Construction of a new concrete walkway from the access road to the existing stairs at the flow dissipation structure adjacent to the stilling basin.

- **New Crystal Springs Bypass Tunnel Electrical Modifications** – The New Crystal Springs Bypass Tunnel (CUW35601) was commissioned in July 2011 and the project administratively closed in August 2012. Various inspections of the above ground facilities discovered excessive groundwater intrusion and resultant corrosion of equipment and electrical components. Preliminary inspections identified the following in the South Shaft: groundwater seepage into the venturi meter and valve G32 vaults through pipe/conduit wall penetrations, resulting in coating failure and localized corrosion. In the North Shaft, preliminary investigations identified surface runoff is entering electrical boxes. In addition, groundwater was seeping through wall penetrations into G36 and G38 vaults. Due to the high moisture, some electrical switches and two (2) actuators failed and required replacement. This sub-project developed a thorough documentation of the above ground facilities at the north and south shafts and designed and implemented repairs as warranted. Repairs included replacement of damaged equipment and electrical components, water proofing of the affected vaults, and rechanneling of surface runoff as necessary. This subproject is 100% complete and has been closed out.

- **Closeout of DSOD Permit Applications for LCSDI and CSSA Projects** – California Department of Water Resources, Division of Safety of Dams (DSOD) issued Alteration Permits allowing the start of construction of CUW35401, Lower Crystal Springs Dam Improvements (LCSDI) Project (Application No. 10-6) and the construction of CUW37101, Crystal Springs / San Andreas Transmission Upgrade (CSSA) Project (Application No.10-10). In June 2015, DSOD issued an approval of the completed work and requested the SFPUC to submit the final documentation of each project. Under this sub-project, the following information and documents will be extracted from the project files and submitted in a format acceptable to DSOD: affidavit of actual costs of construction and design; full size as-built drawings stamped and signed by a California registered Civil Engineer; and final concrete testing summary reports.

- **Coordination with San Mateo County Bridge Construction over LCSI** - The implementation of the CUW35401 Lower Crystal Springs Dam Improvement (LCSDI) Project required the demolition of an existing San Mateo County (SMC) Bridge that spanned over the LCSD crest. With the completion of the LCSDI Project, SMC awarded the construction contract for the new bridge and gave notice-to-proceed to the construction contractor in January 2016. To support this, SMC and the SFPUC executed a Memorandum of Understanding outlining the roles and responsibilities and expectations of both organizations. Accordingly, this sub-project will support the coordination between the SFPUC and SMC Bridge Project team. Typical activities may include response to relevant Requests for Information (RFI) such as existing site conditions, existing dam design, coordination with SFPUC Operations and Watershed groups; field inspection of placement of the bridge piers over the dam and the

construction of the SFPUC funded catwalk; and attendance of construction meetings and participating in other activities concerning the water quality in Lower Crystal Springs Reservoir, security measures, and other aspects affecting SFPUC assets.

- **Harry Tracy Water Treatment Plant (HTWTP) Improvements (new sub-project in 2018)** - The Harry Tracy Long-Term Improvements Project (CUW36701) was completed in 2014. Since 2014, the following needs were identified to address construction issues and improve operations at the plant to fully meet the LOS goals and objectives:
    - Automate the 12-inch gate valve at the High Rate Clarifiers' filter to waste manhole to eliminate the need for Operations to manually operate the valve on a frequent basis
    - Modify Sludge Tank No. 1 piping to eliminate cavitation in the washwater pumps
    - Upgrade the filters of three (3) emergency generators from passive filters to active filters to increase the effectiveness of the exhaust filtration and to reduce the need for Operations to constantly clean the filters
    - Repair leaks in the filter gallery channels where stainless steel angle plates were added to support several concrete walls
    - Automate flushing of the sludge transfer pumps and piping to eliminate the need for Operations to manually flush on a frequent basis
    - Replace and relocate failed variable frequency drives (VFDs) for the wash water and sludge transfer pumps to address an over-heating issue
    - Install double containment for the diesel fuel supply lines for the exterior generator to protect against leaks into the environment
    - Provide training and programming modifications to the Raw Water Pump Station switchgear equipment to enable remote SCADA control
    - Install vibration control monitoring system on the electrical panels at the Raw Water Pump Station to replace the existing obsolete system
    - Evaluate/Assess condition of failed mixers in the equalization basin

- **Crystal Springs/San Andreas Pipeline (CSSA) Erosion Repairs (new sub-project in 2018)** - The heavy winter storms of 2017 exacerbated erosion at two (2) watershed culvert locations, OW-13 and OW-18, along the CSSA Pipeline. Erosion has caused the CSSA Pipeline to be exposed and potentially undermined. The scope of this sub-project is to repair the erosion with systems consistent with the requirements of permitting agencies such as the State Water Resources Control Board.

Scope Refinements
There are no scope refinements to this project.

San Francisco Regional Region

30103, Regional Groundwater Storage and Recovery

Background
The project is provided in response to the Water Supply LOS goals. The purpose of the project is to develop groundwater supply in the South Westside Basin for use during drought conditions. In normal and wet years, the SFPUC will supply supplemental surface water to Daly City, San

Bruno, and the California Water Service Company (South San Francisco District) to be used in place of groundwater pumping. The reduced pumping during the normal and wet years will thereby increase the volume of groundwater in storage that can be pumped in dry years.

Description

The original scope of the Regional Groundwater Storage and Recovery (RGWSR) project was planned to be constructed in two (2) phases. The original scope of Phase 1 included construction of 13 new deep groundwater wells, and the original scope of Phase 2 included construction of 2 to 3 additional wells, depending upon well yield.

Based on the modelling data inputs and results, it is projected that the 13 new wells constructed in Phase 1 would produce approximately 6.2 mgd of dry year supply over 7.5 years. Operating the RGSR Project during times of drought will provide data and insights into how much water can be reasonably expected to be produced by the project and if additional well stations are needed to reach the desired drought period pumping capacity.

In addition to the need for collecting operational data to determine the pumping capacity of the 13 new wells, the Daly City Recycled Water Expansion Project proposes to serve recycled water to existing irrigated properties (gold courses and cemeteries) in the Colma area for irrigation use. Replacing groundwater with recycled water for irrigation use will decrease or eliminate the cemeteries' use of the aquifer, creating more in lieu storage in the aquifer for water supply use. The SFPUC will identify potential benefits to the aquifer resulting from the Daly City Recycled Water Expansion Project during project planning and design, as well as monitor operation of the project.

Given the considerations noted above, the SFPUC modified the scope of Phase 2 in 2018 to install up to three (3) test wells (Ludeman North, Ludeman South, and Centennial Trail), complete the South San Francisco Main well and pipeline, and complete other Phase 1 scope items, including chemical system monitoring, sampling, and storage at various sites. The test wells will allow for determination as to whether the identified sites could be viable production wells, and will provide valuable information related to water quality and potential pumping capacities that can be used for future planning and decision making. The test wells would not be converted to production wells at this time.

Proceeding with these changes to Phase 2 will allow all 13 new Phase 1 RGWSR wells to be operated to gain experience and insight into the pumping capacities of each individual well in addition to how the wells work in combination with each other and existing municipal and irrigation wells. Staff will gain valuable experience regarding the relationship of RGWSR drought year pumping to the management of the groundwater basin. Operational experience will allow refinement of the modelled dry year water supply yield of the RGWSR project.

The changes to RGWSR Phase 2 also allow for the collection of test well data at up to 3 locations for use in future planning if the operatnal experience with the 13 wells shows the need for more pumping capacity. This option also allows for the basin effects of the Daly City Recycled Water Expansion Project to be identified and may provide greater flexibility in the future to utilize the basin for water supply.

The approved scope for the RGWSR remains the same as approved in April 2018. However, since 2018 several scope refinements and some additions have been required for successful implementation of the project. Two out of three of the proposed test wells, Ludeman North and Centennial Trail, were installed. The third well, Ludeman South, was not built due to siting and constructability issues. The initial test results from the two test wells indicated that the combined yield of the two wells might be up to 0.6 mgd. Based on the relatively low yield from both

locations and additional costs required to upsize the Millbrae treatment facility in order to accept and treat these additional flows, it was decided that the test wells would not be converted to production wells at this time. However, these wells will provide valuable information related to water quality and potential pumping capacities that can be used for future planning and decision making.

Phase 2 work has been separated into two construction contracts due to the long lead-time required for easements and permits for construction at the South San Francisco well site. Phase 2A contract includes miscellaneous improvement work at multiple existing well sites such as installation of cathodic protection, variable frequency drives, and flowmeters; modification of valves; and rehabilitation of some wells. Phase 2B contract consists of work at the South San Francisco (SSF) Main Well and all related pipeline installation to connect the well to Cal Water's treatment facility and also installation of electrical equipment to be connected to PG&E power.

Scope Refinements

The approved scope for the RGWSR remains the same as approved in March 2022. However, since 2022 several scope refinements and some additions have been required for successful implementation of the project.

A subproject "Phase 1 (Varies) – Regional Groundwater Remaining Work" is created to compile the remaining and additional work. The remaining work consists of the construction of electrical system to provide power to the remote sample station for the Treasure Island Well Station, monitoring and mitigation program that includes, installation of flowmeters and transducers for 6 cemeteries and a golf course, reimbursement for design and construction of Westlake Facility Expansion in City of Daly City, and reimbursement for design and construction of emergency water tank with City of San Bruno. Additional work consists of fencing and gates at several well stations.

For Phase 2A, the additional work consists of removal of the well pump system at the Hickey, Funeral Home and Treasure Island Well Stations. These well pump system will be placed in long term storage due to a continued lack of staffing, and operational challenges related to pipeline minimal flows for Hickey and Treasure Island well facilities, and detection of elevated ammonia concentrations at the Funeral Home Well Station. All three pumps will have their major components stored at Treasure Island Well Station.

For Phase 2B, the additional work consists of the design and installation of ammonia treatment at Linear Park Well Station. This work was transferred to this phase from the Regional Groundwater Treatment Improvements project under the Water Enterprise Capital Improvement Program. Improvements have been identified to address the high levels of ammonia by incorporating an ammonia contact chamber to the process to remove raw water ammonia.

35801, Sunset Reservoir Upgrades - North Basin

Background

The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. Sunset Reservoir is one of three (3) terminal reservoirs in the Regional Water System that is located in San Francisco. The reservoir, which was constructed in 1938, is seismically vulnerable and in need of general rehabilitation. This upgrade project will address both areas of need.

Description

This project is 100% complete and has been closed out. The project primarily consists of:

- Seismic rehabilitation, which includes stabilization of the soil dam embankment; a retrofit of the walls and roof using seismic joints, shear walls, diagonal bracing, and struts; and foundation improvements.
- General rehabilitation, which includes repairs of deteriorated concrete, replacement of part of the reservoir lining material, replacement of the inlet piping, installation of security fencing, landscaping upgrades, and other miscellaneous site improvements.

Scope Refinements

There are no scope refinements to this project.

37201, University Mound Reservoir Upgrades - North Basin

Background
The project is 100% complete and has been closed out. The project is provided in response to the Seismic Reliability and Delivery Reliability LOS goals. The University Mound Reservoir is one of three (3) terminal reservoirs of the Regional Water System that is located in San Francisco. The reservoir, which was constructed in 1885, is seismically vulnerable and in need of general rehabilitation. This upgrade project addresses both areas of need.

Description
The project primarily consists of:

- Seismic rehabilitation of the reservoir walls and roof using seismic joints, shear walls, diagonal bracing, and struts and foundation improvements. A geotechnical investigation was conducted that verified that the reservoir embankments are not subject to seismically induced failure.
- General rehabilitation, which includes repairs of deteriorated concrete; replacement of the reservoir lining material; replacement of the inlet/outlet, drain, and overflow piping; replacement of outlet and drain valves; landscaping upgrades and other miscellaneous site improvements.

Scope Refinements
There are no scope refinements to this project.

Support Projects

36302, System Security Upgrades

Background
This project is provided in response to the Delivery Reliability LOS goals. It is being implemented to reduce the risk of unplanned system outages associated with potential breaches of security.

Description
The purpose of this project is to develop and integrate security components at critical water system facilities including those identified in previous vulnerability assessments and to ensure that security functions such as deterrence, detection, assessment, delay, and response will be effective. As part of this project, SFPUC Security has evaluated all WSIP projects. The project includes the identification of all necessary security components including security fencing, intrusion detection, and vehicle barriers for applicable WSIP projects. The project provides for the necessary planning and design of these facilities, while the individual WSIP projects will fund the installation and construction of civil security work such as conduit lay out, fencing, gate installation. This project will however fund the furnishing and installing Access Control and Alarm Monitoring System (ACAMS) and Digital Video Surveillance System (DVSS) equipment, and necessary security systems.

Scope Refinements

There are no scope refinements to this project.

38801, Programmatic Environmental Impact Report

This project includes the preparation of a Programmatic Environmental Impact Report (PEIR) in compliance with the California Environmental Quality Act (CEQA). The WSIP establishes LOS goals and system performance objectives and includes a number of projects that will improve the Regional Water System in respect to water quality, seismic reliability, delivery reliability, and water supply to meet delivery needs through the year 2030. The PEIR will (1) identify and analyze, at a programmatic level, the potential environmental impacts of proposed system improvements, (2) describe and evaluate feasible alternatives to the proposed program, and (3) propose mitigation measures.

The PEIR was certified by the San Francisco Planning Commission on October 30, 2008. On that same day the SFPUC approved the WSIP Goals and Objectives and adopted the CEQA Findings, including a statement of overriding consideration and the Mitigation Monitoring and Reporting Program (MMRP).

Phased WSIP Variant

At the request of the SFPUC, the San Francisco Planning Department studied the Phased WSIP Variant as part of the environmental analysis. The Phased WSIP Variant establishes a mid-term planning milestone in 2018 when the SFPUC will reevaluate water demands through 2030 in the context of then-current information, analysis and available water resources. The SFPUC currently delivers approximately 265 mgd from local watersheds (Peninsula and Alameda Creek) and the Tuolumne River Watershed. By 2030, demand on the SFPUC system is expected to increase to 300 mgd. The Phased WSIP Variant will meet the 2018 purchase requests of 285 mgd by capping purchases at 265 mgd. The remaining 20 mgd will be met through water conservation, recycling and groundwater use - 10 mgd by wholesale customers and 10 mgd in San Francisco. Before 2018, the SFPUC and its 26 wholesale customers will engage in a new planning process to reevaluate water system demands and supply options, including conducting additional studies and environmental reviews necessary to address water supply needs after 2018.

Scope Refinements

There are no scope refinements to this project.

38802, Bioregional Habitat Restoration Project

The Bioregional Habitat Restoration project 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 SFPUC Regional Water System. The previously approved scope of the Bioregional Habitat Restoration project included projects to preserve, enhance, restore, or create approximately 2,350 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.

The project description includes development of compensation sites to preserve, enhance, restore, or create approximately 2,350 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.

The wide variety of the types of impacts from WSIP projects resulted in the need for development of 18 compensation sites on SFPUC property and contracting with 7 property owners to secure compensation on property outside the Alameda and Peninsula watersheds. There are 7 compensation sites on SFPUC property in the Alameda watershed with an average size of 250 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 and the fountain thistle. The increase in habitat compensation addresses the addition of mitigation for the fountain thistle and changes in the Calaveras Dam Replacement Project.

Scope Refinements
There are no scope refinements to this project.

38803, Vegetation Restoration of WSIP Construction Sites

Background
The Vegetation Restoration of WSIP Construction Sites is a WSIP project that received Commission approval on October 9, 2012. This project is required to comply with the CEQA and resource agency permit requirements to restore and re-vegetate habitat areas temporarily impacted by construction at the various WSIP sites to preconstruction condition.

Description
The purpose of this project is to provide maintenance, monitoring and reporting of onsite habitat restoration installed at the various WSIP construction sites after project construction work is completed.

Scope Refinements
There are no scope refinements to this project.

38804, Long Term Mitigation Endowment

Background
The scope of work and budget for this Long Term Mitigation Endowment was previously included and reported within the WSIP Regional project CUW38802 Bioregional Habitat Restoration; however, the office of the City Controller has established a separate project, specific for this endowment fund in project CUW38804 Long Term Mitigation Endowment.

Description
This perpetual endowment fund was requested by the United States Army Corps of Engineers and California Department of Fish and Wildlife to provide a secure source of funds for the

perpetual monitoring and maintenance of the Bioregional Habitat Restoration sites constructed in the SFPUC watershed.

Scope Refinements
There are no scope refinements to this project.

39401, Watershed and Environmental Improvement Program

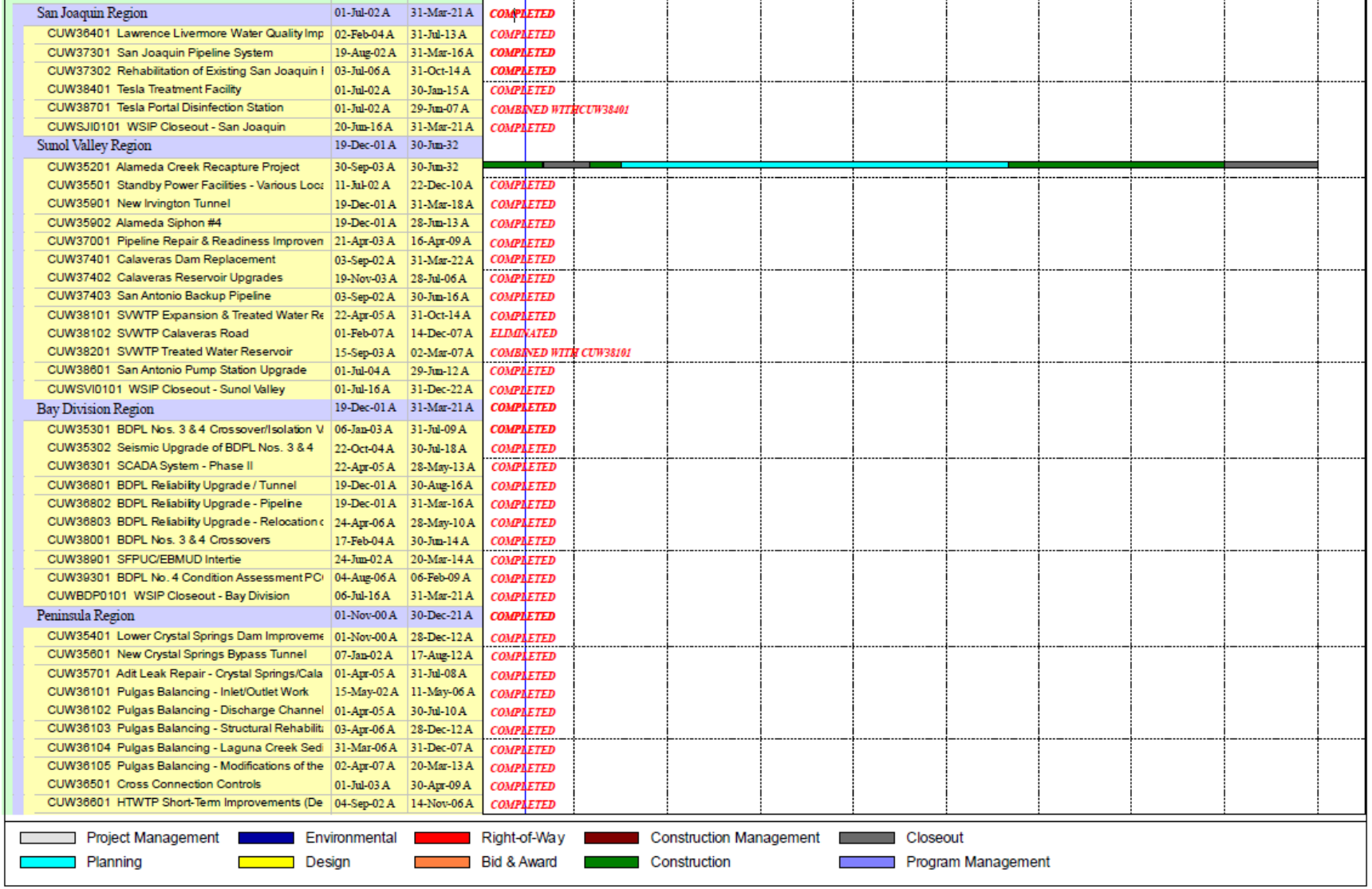
The Watershed and Environmental Improvement Program (WEIP) includes the comprehensive identification and protection of critical watershed lands and ecosystem restoration needs within the hydrologic boundaries of the Alameda Creek, Peninsula (San Mateo and Pilarcitos Creeks) and Tuolumne River watersheds, and prioritizes the protection and/or restoration of these lands. Projects under this program will protect source water quality, native species and their habitat; and identify critical watershed lands for protection by purchasing fee title and/or perpetual conservation easements. The program also supports projects that enhance public awareness and provide education opportunities related to water quality, water supply, conservation, and environmental stewardship issues. These projects include construction of the proposed Alameda Creek Watershed Center and improved public access (e.g., trail connections) compatible with watershed management plans and policies.

Initially, specific projects were identified, including the Repair or Replacement of Niles Gage and Watershed Road Management Plan and Improvements – both in the Alameda Creek watershed. After further research and planning, the program's focus has shifted towards permanently protecting Alameda Creek watershed lands through conservation easements and/or fee title purchase of property from willing landowners and providing education opportunities that will further the goals of the Water Enterprise Environmental Stewardship Policy. Opportunities that are consistent with the WEIP description and purpose in the Peninsula and Tuolumne watersheds will be considered as well.

Scope Refinements
There are no scope refinements to this project.

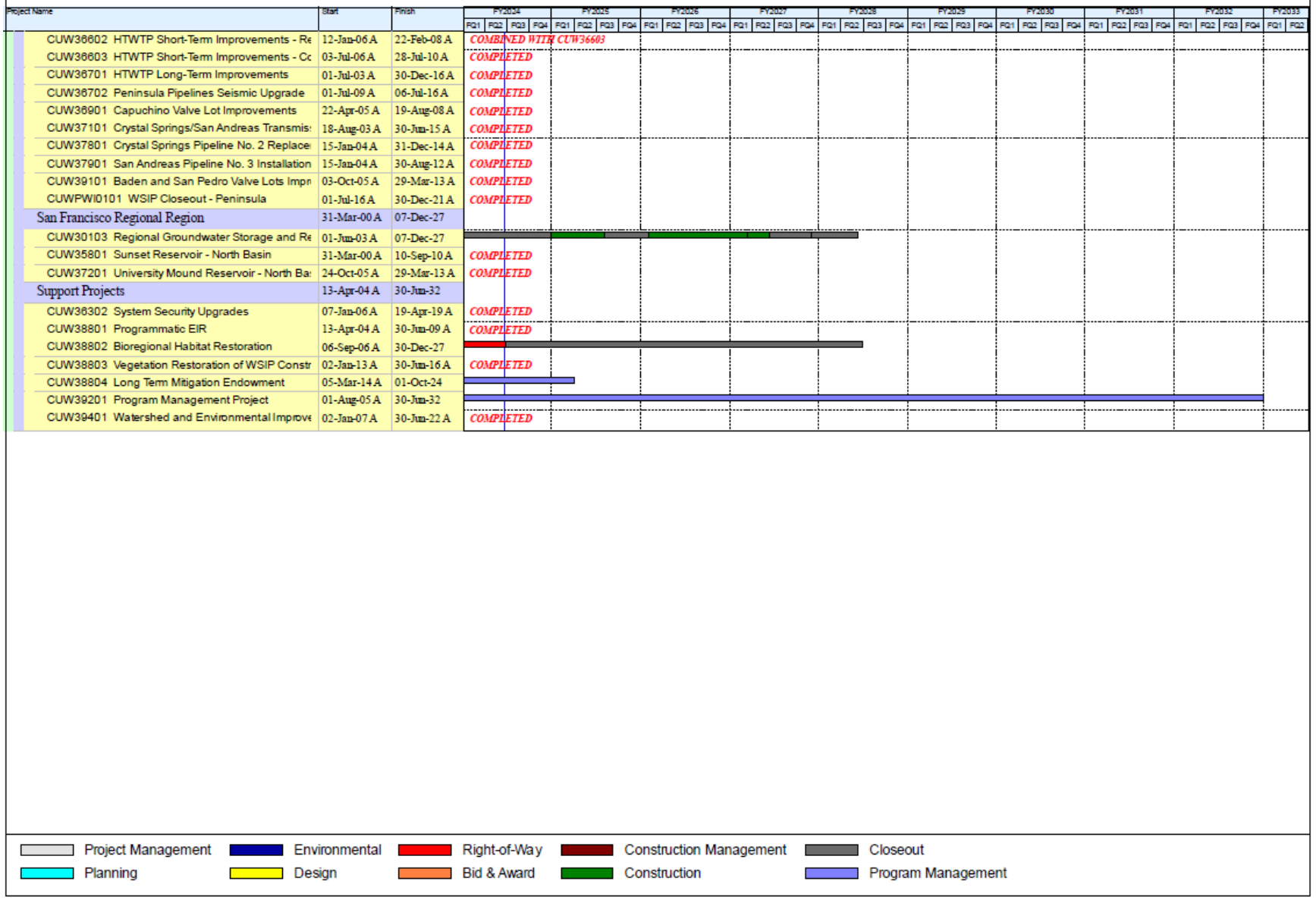
Attachment 9: March 2024 Proposed Revised WSIP Project-Level Schedules

Project Name	Start	Finish	
Regional Improvement Projects	31-Mar-00 A	30-Jun-32	
San Joaquin Region	01-Jul-02 A	31-Mar-21 A	COMPLETED
CUW36401 Lawrence Livermore Water Quality Imp	02-Feb-04 A	31-Jul-13 A	COMPLETED
CUW37301 San Joaquin Pipeline System	19-Aug-02 A	31-Mar-16 A	COMPLETED
CUW37302 Rehabilitation of Existing San Joaquin I	03-Jul-06 A	31-Oct-14 A	COMPLETED
CUW38401 Tesla Treatment Facility	01-Jul-02 A	30-Jan-15 A	COMPLETED
CUW38701 Tesla Portal Disinfection Station	01-Jul-02 A	29-Jun-07 A	COMBINED WITH CUW38401
CUWSJI0101 WSIP Closeout - San Joaquin	20-Jun-16 A	31-Mar-21 A	COMPLETED
Sunol Valley Region	19-Dec-01 A	30-Jun-32	
CUW35201 Alameda Creek Recapture Project	30-Sep-03 A	30-Jun-32	
CUW35501 Standby Power Facilities - Various Loca	11-Jul-02 A	22-Dec-10 A	COMPLETED
CUW35901 New Irvington Tunnel	19-Dec-01 A	31-Mar-18 A	COMPLETED
CUW35902 Alameda Siphon #4	19-Dec-01 A	28-Jun-13 A	COMPLETED
CUW37001 Pipeline Repair & Readiness Improven	21-Apr-03 A	16-Apr-09 A	COMPLETED
CUW37401 Calaveras Dam Replacement	03-Sep-02 A	31-Mar-22 A	COMPLETED
CUW37402 Calaveras Reservoir Upgrades	19-Nov-03 A	28-Jul-06 A	COMPLETED
CUW37403 San Antonio Backup Pipeline	03-Sep-02 A	30-Jun-16 A	COMPLETED
CUW38101 SVWTP Expansion & Treated Water Re	22-Apr-05 A	31-Oct-14 A	COMPLETED
CUW38102 SVWTP Calaveras Road	01-Feb-07 A	14-Dec-07 A	ELIMINATED
CUW38201 SVWTP Treated Water Reservoir	15-Sep-03 A	02-Mar-07 A	COMBINED WITH CUW38101
CUW38601 San Antonio Pump Station Upgrade	01-Jul-04 A	29-Jun-12 A	COMPLETED
CUWSVI0101 WSIP Closeout - Sunol Valley	01-Jul-16 A	31-Dec-22 A	COMPLETED
Bay Division Region	19-Dec-01 A	31-Mar-21 A	COMPLETED
CUW35301 BDPL Nos. 3 & 4 Crossover/Isolation V	06-Jan-03 A	31-Jul-09 A	COMPLETED
CUW35302 Seismic Upgrade of BDPL Nos. 3 & 4	22-Oct-04 A	30-Jul-18 A	COMPLETED
CUW36301 SCADA System - Phase II	22-Apr-05 A	28-May-13 A	COMPLETED
CUW36801 BDPL Reliability Upgrade / Tunnel	19-Dec-01 A	30-Aug-16 A	COMPLETED
CUW36802 BDPL Reliability Upgrade - Pipeline	19-Dec-01 A	31-Mar-16 A	COMPLETED
CUW36803 BDPL Reliability Upgrade - Relocation c	24-Apr-06 A	28-May-10 A	COMPLETED
CUW38001 BDPL Nos. 3 & 4 Crossovers	17-Feb-04 A	30-Jun-14 A	COMPLETED
CUW38901 SFPUC/EBMUD Intertie	24-Jun-02 A	20-Mar-14 A	COMPLETED
CUW39301 BDPL No. 4 Condition Assessment PC	04-Aug-06 A	06-Feb-09 A	COMPLETED
CUWBDP0101 WSIP Closeout - Bay Division	06-Jul-16 A	31-Mar-21 A	COMPLETED
Peninsula Region	01-Nov-00 A	30-Dec-21 A	COMPLETED
CUW35401 Lower Crystal Springs Dam Improveme	01-Nov-00 A	28-Dec-12 A	COMPLETED
CUW35601 New Crystal Springs Bypass Tunnel	07-Jan-02 A	17-Aug-12 A	COMPLETED
CUW35701 Adit Leak Repair - Crystal Springs/Cala	01-Apr-05 A	31-Jul-08 A	COMPLETED
CUW36101 Pulgas Balancing - Inlet/Outlet Work	15-May-02 A	11-May-06 A	COMPLETED
CUW36102 Pulgas Balancing - Discharge Channel	01-Apr-05 A	30-Jul-10 A	COMPLETED
CUW36103 Pulgas Balancing - Structural Rehabilit	03-Apr-06 A	28-Dec-12 A	COMPLETED
CUW36104 Pulgas Balancing - Laguna Creek Sedi	31-Mar-06 A	31-Dec-07 A	COMPLETED
CUW36105 Pulgas Balancing - Modifications of the	02-Apr-07 A	20-Mar-13 A	COMPLETED
CUW36501 Cross Connection Controls	01-Jul-03 A	30-Apr-09 A	COMPLETED
CUW36601 HTWTP Short-Term Improvements (De	04-Sep-02 A	14-Nov-06 A	COMPLETED



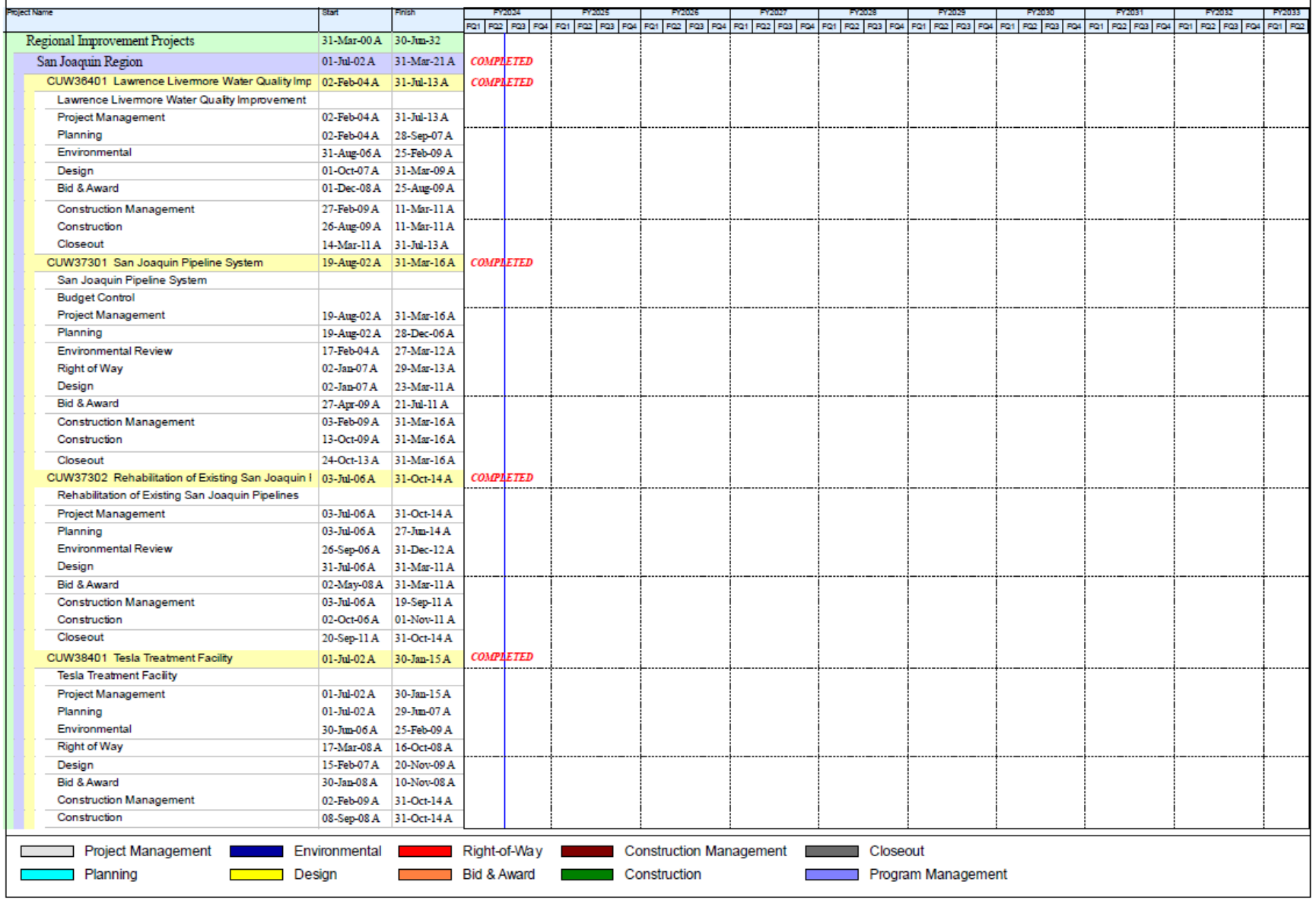
Attachment 9: March 2024 Proposed Revised WSIP Project-Level Schedules

Project Name	Start	Finish	
CUW36602 HTWTP Short-Term Improvements - Re	12-Jan-06 A	22-Feb-08 A	COMBINED WITH CUW36603
CUW36603 HTWTP Short-Term Improvements - Cc	03-Jul-06 A	28-Jul-10 A	COMPLETED
CUW36701 HTWTP Long-Term Improvements	01-Jul-03 A	30-Dec-16 A	COMPLETED
CUW36702 Peninsula Pipelines Seismic Upgrade	01-Jul-09 A	06-Jul-16 A	COMPLETED
CUW36901 Capuchino Valve Lot Improvements	22-Apr-05 A	19-Aug-08 A	COMPLETED
CUW37101 Crystal Springs/San Andreas Transmis	18-Aug-03 A	30-Jun-15 A	COMPLETED
CUW37801 Crystal Springs Pipeline No. 2 Replace	15-Jan-04 A	31-Dec-14 A	COMPLETED
CUW37901 San Andreas Pipeline No. 3 Installation	15-Jan-04 A	30-Aug-12 A	COMPLETED
CUW39101 Baden and San Pedro Valve Lots Impr	03-Oct-05 A	29-Mar-13 A	COMPLETED
CUWPWI0101 WSIP Closeout - Peninsula	01-Jul-16 A	30-Dec-21 A	COMPLETED
San Francisco Regional Region	31-Mar-00 A	07-Dec-27	
CUW30103 Regional Groundwater Storage and Re	01-Jun-03 A	07-Dec-27	
CUW35801 Sunset Reservoir - North Basin	31-Mar-00 A	10-Sep-10 A	COMPLETED
CUW37201 University Mound Reservoir - North Ba	24-Oct-05 A	29-Mar-13 A	COMPLETED
Support Projects	13-Apr-04 A	30-Jun-32	
CUW36302 System Security Upgrades	07-Jan-06 A	19-Apr-19 A	COMPLETED
CUW38801 Programmatic EIR	13-Apr-04 A	30-Jun-09 A	COMPLETED
CUW38802 Bioregional Habitat Restoration	06-Sep-06 A	30-Dec-27	
CUW38803 Vegetation Restoration of WSIP Constr	02-Jan-13 A	30-Jun-16 A	COMPLETED
CUW38804 Long Term Mitigation Endowment	05-Mar-14 A	01-Oct-24	
CUW39201 Program Management Project	01-Aug-05 A	30-Jun-32	
CUW39401 Watershed and Environmental Improve	02-Jan-07 A	30-Jun-22 A	COMPLETED



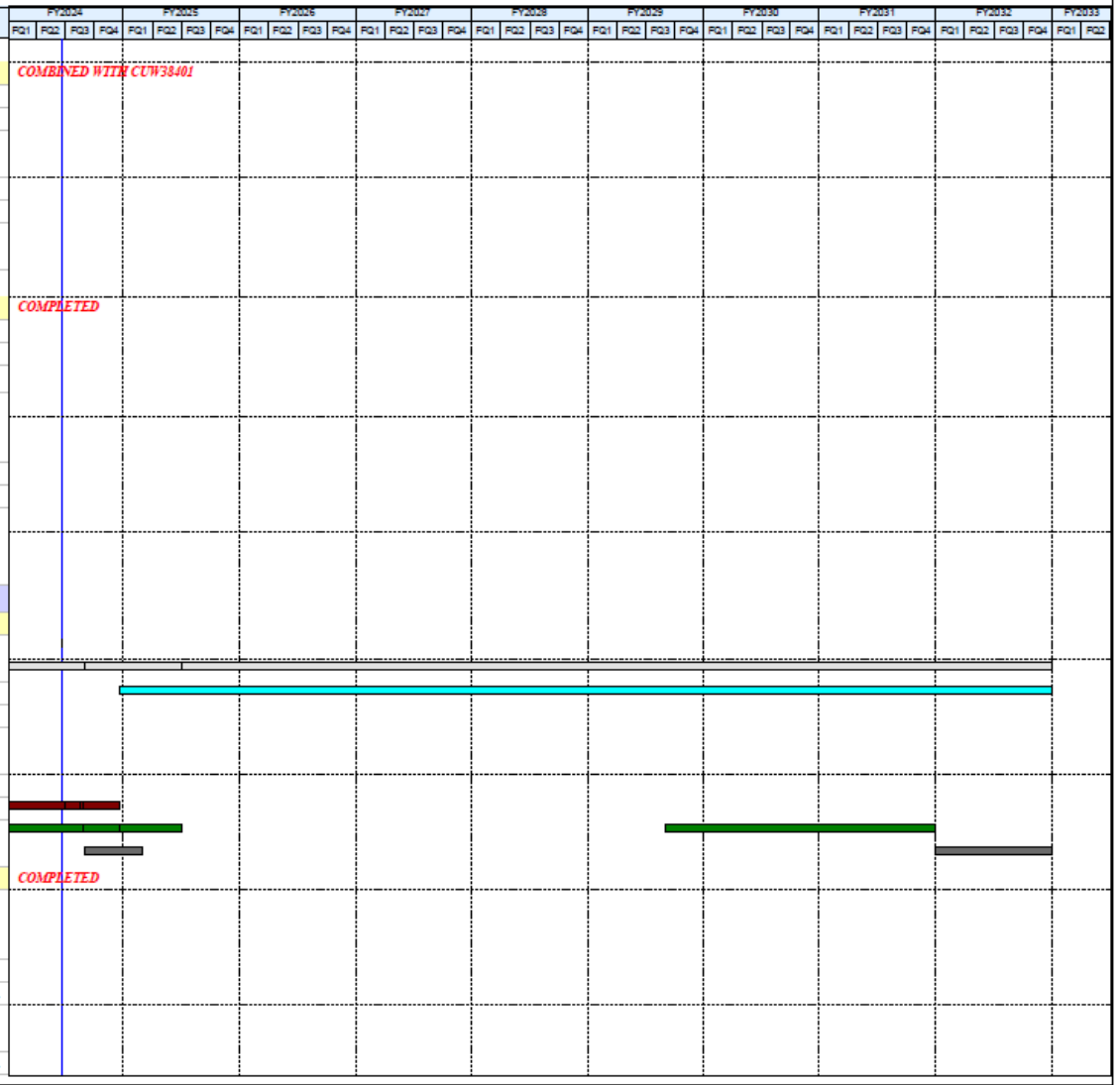
Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
Regional Improvement Projects	31-Mar-00 A	30-Jun-32	
San Joaquin Region	01-Jul-02 A	31-Mar-21 A	COMPLETED
CUW36401 Lawrence Livermore Water Quality Imp	02-Feb-04 A	31-Jul-13 A	COMPLETED
Lawrence Livermore Water Quality Improvement			
Project Management	02-Feb-04 A	31-Jul-13 A	
Planning	02-Feb-04 A	28-Sep-07 A	
Environmental	31-Aug-06 A	25-Feb-09 A	
Design	01-Oct-07 A	31-Mar-09 A	
Bid & Award	01-Dec-08 A	25-Aug-09 A	
Construction Management	27-Feb-09 A	11-Mar-11 A	
Construction	26-Aug-09 A	11-Mar-11 A	
Closeout	14-Mar-11 A	31-Jul-13 A	
CUW37301 San Joaquin Pipeline System	19-Aug-02 A	31-Mar-16 A	COMPLETED
San Joaquin Pipeline System			
Budget Control			
Project Management	19-Aug-02 A	31-Mar-16 A	
Planning	19-Aug-02 A	28-Dec-06 A	
Environmental Review	17-Feb-04 A	27-Mar-12 A	
Right of Way	02-Jan-07 A	29-Mar-13 A	
Design	02-Jan-07 A	23-Mar-11 A	
Bid & Award	27-Apr-09 A	21-Jul-11 A	
Construction Management	03-Feb-09 A	31-Mar-16 A	
Construction	13-Oct-09 A	31-Mar-16 A	
Closeout	24-Oct-13 A	31-Mar-16 A	
CUW37302 Rehabilitation of Existing San Joaquin I	03-Jul-06 A	31-Oct-14 A	COMPLETED
Rehabilitation of Existing San Joaquin Pipelines			
Project Management	03-Jul-06 A	31-Oct-14 A	
Planning	03-Jul-06 A	27-Jun-14 A	
Environmental Review	26-Sep-06 A	31-Dec-12 A	
Design	31-Jul-06 A	31-Mar-11 A	
Bid & Award	02-May-08 A	31-Mar-11 A	
Construction Management	03-Jul-06 A	19-Sep-11 A	
Construction	02-Oct-06 A	01-Nov-11 A	
Closeout	20-Sep-11 A	31-Oct-14 A	
CUW38401 Tesla Treatment Facility	01-Jul-02 A	30-Jan-15 A	COMPLETED
Tesla Treatment Facility			
Project Management	01-Jul-02 A	30-Jan-15 A	
Planning	01-Jul-02 A	29-Jun-07 A	
Environmental	30-Jun-06 A	25-Feb-09 A	
Right of Way	17-Mar-08 A	16-Oct-08 A	
Design	15-Feb-07 A	20-Nov-09 A	
Bid & Award	30-Jan-08 A	10-Nov-08 A	
Construction Management	02-Feb-09 A	31-Oct-14 A	
Construction	08-Sep-08 A	31-Oct-14 A	



Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

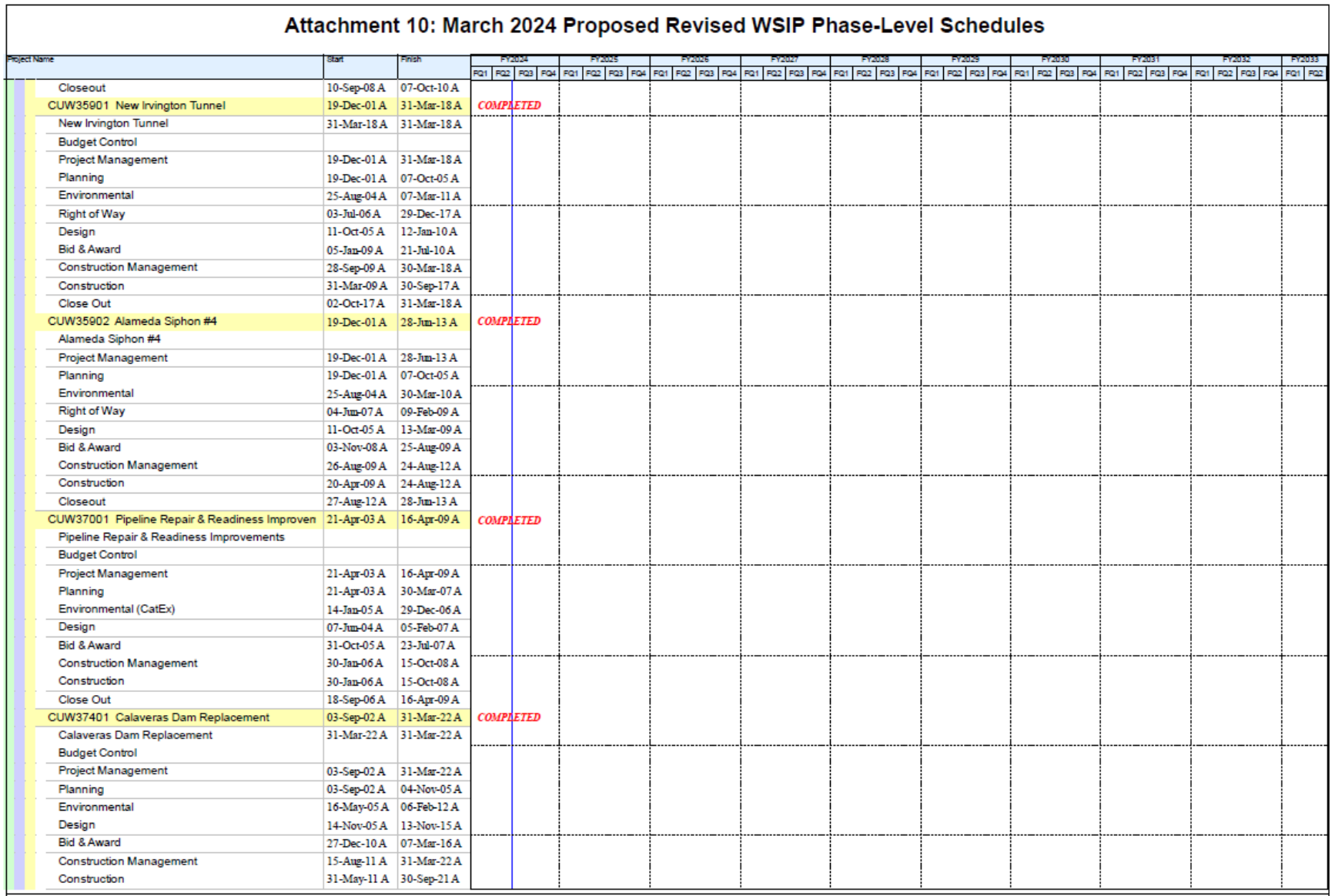
Project Name	Start	Finish
Closeout	01-Jul-11 A	30-Jan-15 A
CUW38701 Tesla Portal Disinfection Station	01-Jul-02 A	29-Jun-07 A
Tesla Portal Disinfection Station		
Project Management	01-Jul-02 A	29-Jun-07 A
Planning	01-Jul-02 A	29-Jun-07 A
Environmental	19-Aug-04 A	29-Dec-06 A
Design		
Bid & Award		
Construction Management		
Construction		
Closeout		
CUWSJI0101 WSIP Closeout - San Joaquin	20-Jun-16 A	31-Mar-21 A
WSIP Closeout - San Joaquin		
San Joaquin Region		
Project Management	20-Jun-16 A	31-Mar-21 A
Planning		
Environmental		
Right of Way		
Design	02-Oct-17 A	21-Sep-19 A
Bid & Award (JOC Process)	23-Sep-19 A	28-Feb-20 A
Construction Management	09-May-17 A	31-Mar-21 A
Construction	09-May-17 A	31-Mar-21 A
Close Out	01-May-18 A	31-Mar-21 A
Sunol Valley Region	19-Dec-01 A	30-Jun-32
CUW35201 Alameda Creek Recapture Project	30-Sep-03 A	30-Jun-32
Alameda Creek Recapture Project	23-Dec-23	23-Dec-23
Project Management	30-Sep-03 A	30-Jun-32
Planning	30-Sep-03 A	30-Jun-32
Environmental	23-Apr-10 A	13-Apr-21 A
Right of Way		
Design	01-Jul-10 A	18-Dec-20 A
Bid & Award	17-Jan-17 A	21-Jun-21 A
Construction Management	01-Jun-21 A	18-Jun-24
Construction	21-Jun-21 A	30-Jun-31
Closeout	01-Mar-24	30-Jun-32
CUW35501 Standby Power Facilities - Various Loca	11-Jul-02 A	22-Dec-10 A
Standby Power Facilities - Various Locations		
Project Management	11-Jul-02 A	22-Dec-10 A
Planning	11-Jul-02 A	30-Jun-05 A
Environmental (CatEx)	26-May-05 A	23-Sep-05 A
Design	01-Jul-05 A	04-May-07 A
Bid & Award	16-Apr-07 A	31-Dec-07 A
Construction Management	10-Dec-07 A	22-Jun-10 A
Construction	10-Dec-07 A	28-May-10 A



Project Management
Environmental
Right-of-Way
Construction Management
Closeout
Planning
Design
Bid & Award
Construction
Program Management

Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish
Closeout	10-Sep-08 A	07-Oct-10 A
CUW35901 New Irvington Tunnel	19-Dec-01 A	31-Mar-18 A
New Irvington Tunnel	31-Mar-18 A	31-Mar-18 A
Budget Control		
Project Management	19-Dec-01 A	31-Mar-18 A
Planning	19-Dec-01 A	07-Oct-05 A
Environmental	25-Aug-04 A	07-Mar-11 A
Right of Way	03-Jul-06 A	29-Dec-17 A
Design	11-Oct-05 A	12-Jan-10 A
Bid & Award	05-Jan-09 A	21-Jul-10 A
Construction Management	28-Sep-09 A	30-Mar-18 A
Construction	31-Mar-09 A	30-Sep-17 A
Close Out	02-Oct-17 A	31-Mar-18 A
CUW35902 Alameda Siphon #4	19-Dec-01 A	28-Jun-13 A
Alameda Siphon #4		
Project Management	19-Dec-01 A	28-Jun-13 A
Planning	19-Dec-01 A	07-Oct-05 A
Environmental	25-Aug-04 A	30-Mar-10 A
Right of Way	04-Jun-07 A	09-Feb-09 A
Design	11-Oct-05 A	13-Mar-09 A
Bid & Award	03-Nov-08 A	25-Aug-09 A
Construction Management	26-Aug-09 A	24-Aug-12 A
Construction	20-Apr-09 A	24-Aug-12 A
Closeout	27-Aug-12 A	28-Jun-13 A
CUW37001 Pipeline Repair & Readiness Improven	21-Apr-03 A	16-Apr-09 A
Pipeline Repair & Readiness Improvements		
Budget Control		
Project Management	21-Apr-03 A	16-Apr-09 A
Planning	21-Apr-03 A	30-Mar-07 A
Environmental (CatEx)	14-Jan-05 A	29-Dec-06 A
Design	07-Jun-04 A	05-Feb-07 A
Bid & Award	31-Oct-05 A	23-Jul-07 A
Construction Management	30-Jan-06 A	15-Oct-08 A
Construction	30-Jan-06 A	15-Oct-08 A
Close Out	18-Sep-06 A	16-Apr-09 A
CUW37401 Calaveras Dam Replacement	03-Sep-02 A	31-Mar-22 A
Calaveras Dam Replacement	31-Mar-22 A	31-Mar-22 A
Budget Control		
Project Management	03-Sep-02 A	31-Mar-22 A
Planning	03-Sep-02 A	04-Nov-05 A
Environmental	16-May-05 A	06-Feb-12 A
Design	14-Nov-05 A	13-Nov-15 A
Bid & Award	27-Dec-10 A	07-Mar-16 A
Construction Management	15-Aug-11 A	31-Mar-22 A
Construction	31-May-11 A	30-Sep-21 A



Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
Closeout	12-Jul-19 A	31-Mar-22 A	
CUW37402 Calaveras Reservoir Upgrades	19-Nov-03 A	28-Jul-06 A	COMPLETED
Calaveras Reservoir Upgrades			
Project Management	19-Nov-03 A	28-Jul-06 A	
Planning	19-Nov-03 A	18-Nov-05 A	
Environmental	21-May-04 A	18-Nov-05 A	
Design	16-Dec-04 A	18-Nov-05 A	
Bid & Award	28-Jan-05 A	18-Nov-05 A	
Construction Management	27-Jun-05 A	14-Feb-06 A	
Construction	27-Jun-05 A	14-Feb-06 A	
Close Out	07-Oct-05 A	28-Jul-06 A	
CUW37403 San Antonio Backup Pipeline	03-Sep-02 A	30-Jun-16 A	COMPLETED
San Antonio Backup Pipeline	23-Jun-16 A	24-Jun-16 A	
Project Management	03-Sep-02 A	30-Jun-16 A	
Planning	17-Dec-03 A	11-May-07 A	
Environmental	02-Oct-06 A	29-Mar-13 A	
Right of Way			
Design	01-Mar-07 A	24-Sep-12 A	
Bid & Award	18-May-11 A	29-Mar-13 A	
Construction Management	26-Oct-12 A	31-Dec-15 A	
Construction	29-Mar-13 A	31-Dec-15 A	
Close Out	31-Aug-15 A	30-Jun-16 A	
CUW38101 SVWTP Expansion & Treated Water Re	22-Apr-05 A	31-Oct-14 A	COMPLETED
SVWTP Expansion & Treated Water Reservoir			
Project Management	22-Apr-05 A	12-Jun-14 A	
Planning	22-Apr-05 A	29-Jun-07 A	
Environmental Review	21-Jul-06 A	30-Jun-10 A	
Right of Way	03-Jul-06 A	16-Jun-09 A	
Design	16-Jan-07 A	10-Dec-09 A	
Bid & Award	23-Nov-09 A	22-Jun-10 A	
Construction Management	30-Apr-10 A	20-Sep-13 A	
Construction	23-Jun-10 A	20-Sep-13 A	
Closeout	23-Sep-13 A	31-Oct-14 A	
CUW38102 SVWTP Calaveras Road	01-Feb-07 A	14-Dec-07 A	ELIMINATED
SVWTP Calaveras Road			
Budget Control - Cal. Road Improvements			
Project Management Cal. Road Improvements	12-Mar-07 A	14-Dec-07 A	
Environmental (CatEx) - Cal. Road Improvements	01-Feb-07 A	30-Jul-07 A	
Design - Cal. Road Improvements	02-Apr-07 A	14-Dec-07 A	
CUW38201 SVWTP Treated Water Reservoir	15-Sep-03 A	02-Mar-07 A	COMPLETED
SVWTP Treated Water Reservoir			
Project Management	15-Sep-03 A	02-Mar-07 A	
Planning	15-Sep-03 A	29-Sep-04 A	
Environmental	26-Mar-04 A	09-Feb-07 A	
Design	03-Nov-04 A	02-Mar-07 A	

FY2024 FY2025 FY2026 FY2027 FY2028 FY2029 FY2030 FY2031 FY2032 FY2033

FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2

Project Management | Environmental | Right-of-Way | Construction Management | Closeout

Planning | Design | Bid & Award | Construction | Program Management

Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
			FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2
CUW38601 San Antonio Pump Station Upgrade	01-Jul-04 A	29-Jun-12 A	COMPLETED									
San Antonio Pump Station Upgrade												
Project Management	01-Jul-04 A	29-Jun-12 A										
Planning	01-Jul-04 A	12-Jan-07 A										
Environmental (CatEx)	02-Jan-07 A	21-Jun-07 A										
Design	06-Jul-07 A	15-May-09 A										
Bid & Award	14-Apr-09 A	30-Oct-09 A										
Construction Management	02-Nov-09 A	30-Sep-11 A										
Construction	02-Nov-09 A	30-Sep-11 A										
Close-Out	03-Oct-11 A	29-Jun-12 A										
CUWSVI0101 WSIP Closeout - Sunol Valley	01-Jul-16 A	31-Dec-22 A	COMPLETED									
WSIP Closeout - Sunol Valley												
Project Management	01-Jul-16 A	30-Dec-22 A										
Planning	01-Jul-16 A	30-Jun-19 A										
Environmental	01-Jul-16 A	17-Jul-20 A										
Design	13-Jan-17 A	30-Jun-22 A										
Bid & Award	03-Apr-17 A	30-Jun-21 A										
Construction Management	01-Jul-16 A	30-Dec-22 A										
Construction	07-Apr-17 A	31-Dec-22 A										
Close Out	26-Jun-17 A	25-Dec-21 A										
Bay Division Region	19-Dec-01 A	31-Mar-21 A	COMPLETED									
CUW35301 BDPL Nos. 3 & 4 Crossover/Isolation V	06-Jan-03 A	31-Jul-09 A	COMPLETED									
BDPL Nos. 3 & 4 Crossover/Isolation Valves												
Budget Control												
Project Management	06-Jan-03 A	31-Jul-09 A										
Planning - Phase A	06-Jan-03 A	20-Jul-04 A										
Environmental - Phase A	16-Jul-03 A	28-Feb-06 A										
Right of Way Phase A												
Design - Phase A	03-May-04 A	16-May-06 A										
Bid & Award - Phase A	16-May-05 A	18-Aug-06 A										
Construction Management - Phase A	23-Jan-06 A	03-Apr-09 A										
Construction - Phase A	11-Oct-05 A	19-Mar-08 A										
Close Out - Phase A	20-Mar-08 A	31-Jul-09 A										
CUW35302 Seismic Upgrade of BDPL Nos. 3 & 4	22-Oct-04 A	30-Jul-18 A	COMPLETED									
Seismic Upgrade of BDPL Nos. 3 & 4												
Project Management	22-Oct-04 A	30-Jul-18 A										
Planning - Phase B	22-Oct-04 A	12-Dec-08 A										
Environmental (EIR) - Phase B	11-Sep-06 A	17-Mar-12 A										
Right of Way Phase B	03-Jul-06 A	26-Aug-11 A										
Design - Phase B	05-Mar-07 A	02-Feb-15 A										
Bid and Award - Phase B	03-Nov-08 A	04-Sep-12 A										
Construction Management - Phase B	03-May-10 A	28-Jun-18 A										
Construction - Phase B	12-Jan-10 A	28-Jun-18 A										
Close Out - Phase B	01-May-18 A	30-Jul-18 A										
CUW36301 SCADA System - Phase II	22-Apr-05 A	28-May-13 A	COMPLETED									

Project Management | Environmental | Right-of-Way | Construction Management | Closeout
Planning | Design | Bid & Award | Construction | Program Management

Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
			FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2
SCADA System - Phase II												
Budget Control												
Project Management	22-Apr-05 A	28-May-13 A										
Project Management-From BRA												
Planning	26-Apr-05 A	24-Dec-07 A										
Environmental	30-Oct-07 A	15-Jul-09 A										
Right of Way	10-Apr-07 A	01-Jun-09 A										
Design	26-Dec-07 A	27-Jul-09 A										
Bid & Award	22-Jun-09 A	11-Dec-09 A										
Construction Management	23-Sep-08 A	28-Feb-11 A										
Construction	25-Jul-08 A	28-Dec-12 A										
Close Out	01-Mar-11 A	28-May-13 A										
CUW36801 BDPL Reliability Upgrade / Tunnel	19-Dec-01 A	30-Aug-16 A	COMPLETED									
BDPL Reliability Upgrade / Tunnel												
Budget Control												
Project Management	19-Dec-01 A	30-Aug-16 A										
Planning	19-Dec-01 A	31-May-06 A										
Environmental	18-Nov-04 A	31-Jul-14 A										
Right of Way	03-Jul-06 A	30-Aug-16 A										
Design - BAY TUNNEL	01-Aug-05 A	03-Aug-09 A										
Bid & Award - BAY TUNNEL	01-May-09 A	31-Mar-10 A										
Construction Management - BAY TUNNEL	24-Jun-08 A	30-Aug-16 A										
Construction - BAY TUNNEL	17-Jul-09 A	30-May-16 A										
Close Out - BAY TUNNEL	26-Oct-15 A	30-Aug-16 A										
CUW36802 BDPL Reliability Upgrade - Pipeline	19-Dec-01 A	31-Mar-16 A	COMPLETED									
BDPL Reliability Upgrade - Pipeline	28-Mar-16 A	29-Mar-16 A										
Project Management	03-Jan-06 A	31-Mar-16 A										
Planning	19-Dec-01 A	31-May-06 A										
Environmental	18-Nov-04 A	12-Feb-10 A										
Right of Way	03-Jul-06 A	08-Dec-10 A										
Design - PIPELINE	03-Jan-06 A	17-Aug-09 A										
Bid and Award	22-Apr-09 A	09-Mar-10 A										
Construction Management	23-Sep-08 A	31-Mar-16 A										
Construction	04-Jan-10 A	31-Mar-16 A										
Closeout	14-Jun-12 A	31-Mar-16 A										
CUW36803 BDPL Reliability Upgrade - Relocation c	24-Apr-06 A	28-May-10 A	COMPLETED									
BDPL Reliability Upgrade - Relocation of BDPL No												
Project Management	24-Apr-06 A	28-May-10 A										
Right of Way	28-May-10 A	28-May-10 A										
Design	24-Apr-06 A	16-Jan-07 A										
Bid and Award	17-Jan-07 A	06-Jan-10 A										
Construction Management	02-Jul-07 A	28-May-10 A										
Construction	15-Nov-06 A	28-May-10 A										
Closeout	28-May-10 A	28-May-10 A										
CUW38001 BDPL Nos. 3 & 4 Crossovers	17-Feb-04 A	30-Jun-14 A	COMPLETED									

Project Management | Environmental | Right-of-Way | Construction Management | Closeout
Planning | Design | Bid & Award | Construction | Program Management

Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
BDPL Nos. 3 & 4 Crossovers			
Budget Control			
Project Management	17-Feb-04 A	30-Jun-14 A	
Planning	17-Feb-04 A	14-Nov-06 A	
Environmental	28-Aug-06 A	31-Dec-08 A	
Right of Way	04-Sep-07 A	30-Jun-14 A	
Design	04-Dec-06 A	20-Jul-09 A	
Bid & Award	05-Nov-08 A	10-Jul-09 A	
Construction Management	23-Sep-08 A	30-Apr-14 A	
Construction	30-Jan-09 A	11-Sep-13 A	
Close Out	31-Dec-12 A	30-Jun-14 A	
CUW38901 SFPUC/EBMUD Intertie	24-Jun-02 A	20-Mar-14 A	COMPLETED
SFPUC/EBMUD Intertie			
Project Management	24-Jun-02 A	20-Mar-14 A	
Planning	24-Jun-02 A	11-Oct-02 A	
Environmental	14-Oct-02 A	31-Mar-03 A	
Design	01-Apr-03 A	30-Jul-04 A	
Bid & Award	02-Aug-04 A	21-Dec-04 A	
Construction Management	18-Jan-05 A	31-Jan-08 A	
Construction	18-Jan-05 A	20-Mar-14 A	
Close Out	01-Feb-08 A	20-Mar-14 A	
CUW39301 BDPL No. 4 Condition Assessment PC	04-Aug-06 A	06-Feb-09 A	COMPLETED
BDPL No. 4 Condition Assessment PCCP Section			
Budget Control			
Project Management	04-Aug-06 A	06-Feb-09 A	
Planning	04-Aug-06 A	06-Feb-09 A	
Environmental	16-Jul-07 A	30-Sep-08 A	
Design			
Bid & Award			
Construction Management			
Construction			
Close Out			
CUWBDP0101 WSIP Closeout - Bay Division	06-Jul-16 A	31-Mar-21 A	COMPLETED
WSIP Closeout - Bay Division			
Project Management	06-Jul-16 A	31-Mar-21 A	
Planning	06-Jul-16 A	30-Jun-20 A	
Environmental	06-Jul-16 A	30-Jun-20 A	
Right of Way			
Design	06-Jul-16 A	30-Jun-20 A	
Bid & Award (JOC Process)	06-Jul-16 A	30-Sep-19 A	
Construction Management	06-Jul-16 A	31-Mar-21 A	
Construction	06-Jul-16 A	31-Mar-21 A	
Equipment and Material Purchase			
Close Out	25-Apr-17 A	31-Mar-21 A	
Peninsula Region	01-Nov-00 A	30-Dec-21 A	COMPLETED

FY2024 FY2025 FY2026 FY2027 FY2028 FY2029 FY2030 FY2031 FY2032 FY2033
FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2

Project Management
Planning
Environmental
Design
Right-of-Way
Bid & Award
Construction Management
Construction
Closeout
Program Management

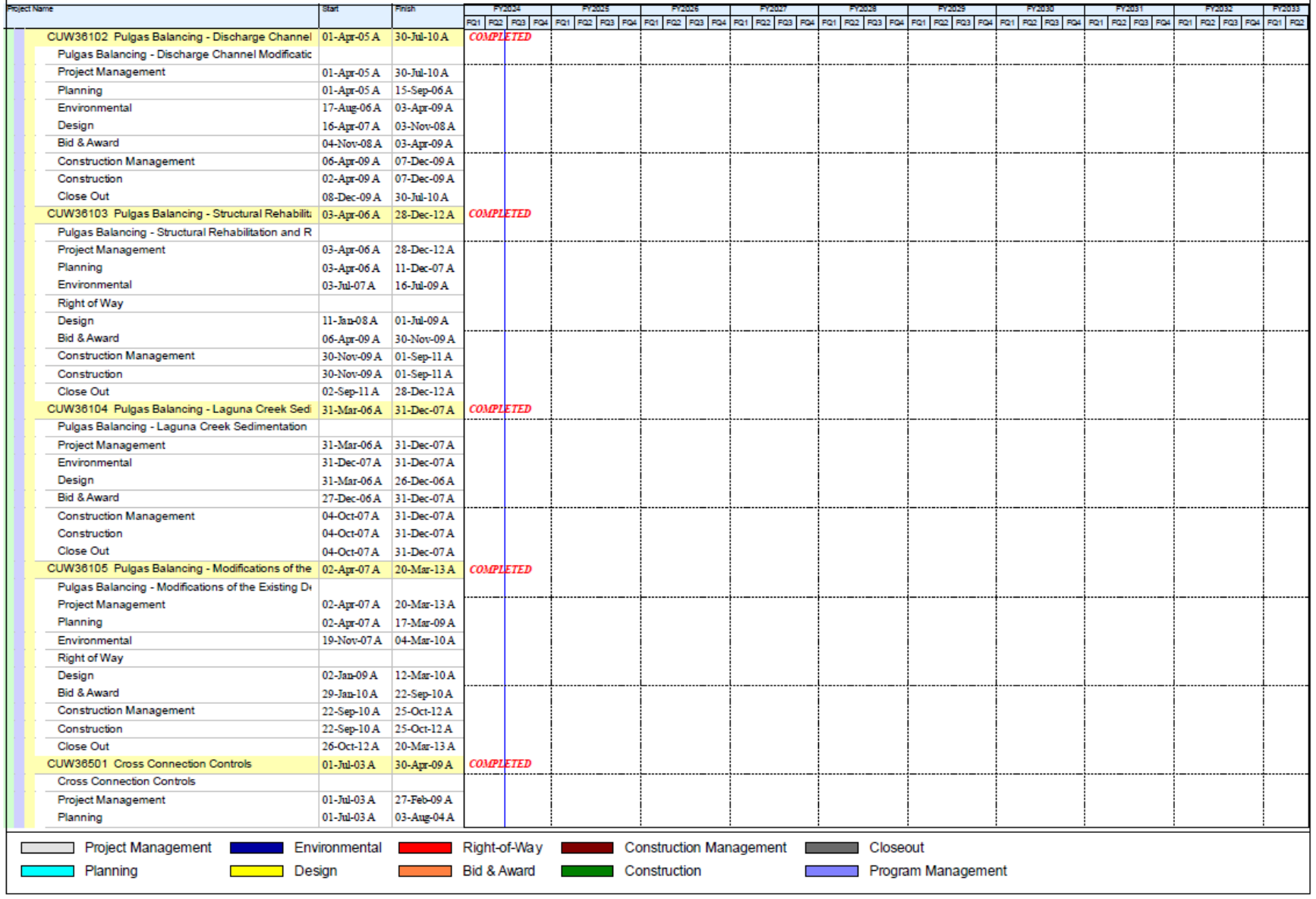
Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033
			FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2
CUW35401 Lower Crystal Springs Dam Improveme	01-Nov-00 A	28-Dec-12 A	COMPLETED									
Lower Crystal Springs Dam Improvements												
Budget Control												
Project Management	01-Nov-00 A	28-Dec-12 A										
Planning	01-Nov-00 A	30-Dec-04 A										
Environmental Review	03-Jan-05 A	28-Apr-11 A										
Right of Way	03-Jul-06 A	30-Jun-10 A										
Design	08-Mar-07 A	30-Sep-10 A										
Bid & Award	20-Aug-10 A	28-Jan-11 A										
Construction Management	31-Jan-11 A	01-May-12 A										
Construction	31-Jan-11 A	01-May-12 A										
Close Out	02-May-12 A	28-Dec-12 A										
San Mateo County Bridge Removal/Replacement												
CUW35601 New Crystal Springs Bypass Tunnel	07-Jan-02 A	17-Aug-12 A	COMPLETED									
New Crystal Springs Bypass Tunnel												
Budget Control												
Project Management	07-Jan-02 A	17-Aug-12 A										
Planning	07-Jan-02 A	05-Aug-04 A										
Environmental	18-Sep-03 A	09-Oct-08 A										
Right of Way	03-Jul-06 A	16-Sep-08 A										
Design	01-Jun-04 A	05-Jun-08 A										
Bid & Award	05-Jun-08 A	01-Dec-08 A										
Construction Management	01-Dec-08 A	26-Oct-11 A										
Construction	01-Dec-08 A	17-Aug-12 A										
Close Out	29-Sep-11 A	17-Aug-12 A										
CUW35701 Adit Leak Repair - Crystal Springs/Cala	01-Apr-05 A	31-Jul-08 A	COMPLETED									
Adit Leak Repair - Crystal Springs/Calaveras												
Budget Control												
Project Management	01-Apr-05 A	31-Jul-08 A										
Planning	01-Apr-05 A	27-Mar-06 A										
Environmental	01-Jul-05 A	30-Jun-06 A										
Design	01-Sep-05 A	15-Sep-06 A										
Bid & Award	28-Aug-06 A	30-Mar-07 A										
Construction Management	02-Apr-07 A	05-Mar-08 A										
Construction	09-Apr-07 A	05-Mar-08 A										
Close Out	12-Mar-08 A	08-Jul-08 A										
CUW36101 Pulgas Balancing - Inlet/Outlet Work	15-May-02 A	11-May-06 A	COMPLETED									
Pulgas Balancing - Inlet/Outlet Work												
Project Management	01-Jul-03 A	11-May-06 A										
Planning	15-May-02 A	01-Aug-05 A										
Environmental	02-May-04 A	02-May-04 A										
Bid & Award	05-Mar-04 A	06-Sep-05 A										
Construction Management	07-Sep-05 A	02-Feb-06 A										
Construction	06-Sep-05 A	02-Feb-06 A										
Close Out	03-Feb-06 A	11-May-06 A										

Project Management | Environmental | Right-of-Way | Construction Management | Closeout
Planning | Design | Bid & Award | Construction | Program Management

Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
CUW36102 Pulgas Balancing - Discharge Channel	01-Apr-05 A	30-Jul-10 A	COMPLETED
Pulgas Balancing - Discharge Channel Modificatic			
Project Management	01-Apr-05 A	30-Jul-10 A	
Planning	01-Apr-05 A	15-Sep-06 A	
Environmental	17-Aug-06 A	03-Apr-09 A	
Design	16-Apr-07 A	03-Nov-08 A	
Bid & Award	04-Nov-08 A	03-Apr-09 A	
Construction Management	06-Apr-09 A	07-Dec-09 A	
Construction	02-Apr-09 A	07-Dec-09 A	
Close Out	08-Dec-09 A	30-Jul-10 A	
CUW36103 Pulgas Balancing - Structural Rehabilit	03-Apr-06 A	28-Dec-12 A	COMPLETED
Pulgas Balancing - Structural Rehabilitation and R			
Project Management	03-Apr-06 A	28-Dec-12 A	
Planning	03-Apr-06 A	11-Dec-07 A	
Environmental	03-Jul-07 A	16-Jul-09 A	
Right of Way			
Design	11-Jan-08 A	01-Jul-09 A	
Bid & Award	06-Apr-09 A	30-Nov-09 A	
Construction Management	30-Nov-09 A	01-Sep-11 A	
Construction	30-Nov-09 A	01-Sep-11 A	
Close Out	02-Sep-11 A	28-Dec-12 A	
CUW36104 Pulgas Balancing - Laguna Creek Sedi	31-Mar-06 A	31-Dec-07 A	COMPLETED
Pulgas Balancing - Laguna Creek Sedimentation			
Project Management	31-Mar-06 A	31-Dec-07 A	
Environmental	31-Dec-07 A	31-Dec-07 A	
Design	31-Mar-06 A	26-Dec-06 A	
Bid & Award	27-Dec-06 A	31-Dec-07 A	
Construction Management	04-Oct-07 A	31-Dec-07 A	
Construction	04-Oct-07 A	31-Dec-07 A	
Close Out	04-Oct-07 A	31-Dec-07 A	
CUW36105 Pulgas Balancing - Modifications of the	02-Apr-07 A	20-Mar-13 A	COMPLETED
Pulgas Balancing - Modifications of the Existing D			
Project Management	02-Apr-07 A	20-Mar-13 A	
Planning	02-Apr-07 A	17-Mar-09 A	
Environmental	19-Nov-07 A	04-Mar-10 A	
Right of Way			
Design	02-Jan-09 A	12-Mar-10 A	
Bid & Award	29-Jan-10 A	22-Sep-10 A	
Construction Management	22-Sep-10 A	25-Oct-12 A	
Construction	22-Sep-10 A	25-Oct-12 A	
Close Out	26-Oct-12 A	20-Mar-13 A	
CUW36501 Cross Connection Controls	01-Jul-03 A	30-Apr-09 A	COMPLETED
Cross Connection Controls			
Project Management	01-Jul-03 A	27-Feb-09 A	
Planning	01-Jul-03 A	03-Aug-04 A	



Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
Environmental	01-Jul-03 A	05-Aug-08 A	
Right of Way	03-Sep-07 A	30-Sep-08 A	
Design	03-Aug-04 A	30-Dec-05 A	
Bid & Award	01-Apr-05 A	31-May-05 A	
Construction Management	01-Jun-05 A	26-Nov-08 A	
Construction	01-Jun-05 A	26-Nov-08 A	
Close Out	01-Dec-08 A	30-Apr-09 A	
CUW36601 HTWTP Short-Term Improvements (De	04-Sep-02 A	14-Nov-06 A	COMPLETED
HTWTP Short-Term Improvements (Demo Filters)			
Project Management	04-Sep-02 A	14-Nov-06 A	
Planning	04-Sep-02 A	30-Apr-03 A	
Environmental	01-Aug-03 A	08-Aug-05 A	
Design	01-Aug-03 A	11-Feb-05 A	
Bid & Award	14-Feb-05 A	08-Sep-05 A	
Construction Management	09-Sep-05 A	27-Feb-06 A	
Construction	09-Sep-05 A	27-Feb-06 A	
Close Out	12-Jan-06 A	13-Nov-06 A	
CUW36602 HTWTP Short-Term Improvements - Re	12-Jan-06 A	22-Feb-08 A	COMBINED WITH CUW36603
HTWTP Short-Term Improvements - Remaining Fi			
Project Management	12-Jan-06 A	31-Jan-08 A	
Planning	12-Jan-06 A	22-Aug-07 A	
Environmental			
Design	03-Mar-07 A	22-Feb-08 A	
Bid & Award			
Construction Management			
Construction			
Close Out			
CUW36603 HTWTP Short-Term Improvements - Cc	03-Jul-06 A	28-Jul-10 A	COMPLETED
HTWTP Short-Term Improvements - Coagulation &			
Project Management	03-Jul-06 A	28-Jul-10 A	
Planning	03-Jul-06 A	22-Aug-07 A	
Environmental	03-Jul-06 A	28-Jul-10 A	
Design	13-Jul-07 A	22-Feb-08 A	
Bid & Award 2 & 3	03-Sep-07 A	09-Jul-08 A	
Construction Management 2& 3	18-Jun-08 A	31-Mar-10 A	
Construction 2 & 3	19-Feb-08 A	31-Mar-10 A	
Close Out 2 & 3	01-Apr-10 A	28-Jul-10 A	
CUW36701 HTWTP Long-Term Improvements	01-Jul-03 A	30-Dec-16 A	COMPLETED
HTWTP Long-Term Improvements			
Budget Control			
Project Management	01-Jul-03 A	30-Dec-16 A	
Planning	01-Jul-03 A	29-Aug-08 A	
Environmental	09-Jan-07 A	15-Mar-11 A	
Design	02-Sep-08 A	15-Oct-10 A	
Bid & Award	01-Jul-10 A	15-Mar-11 A	

FY2024 FY2025 FY2026 FY2027 FY2028 FY2029 FY2030 FY2031 FY2032 FY2033

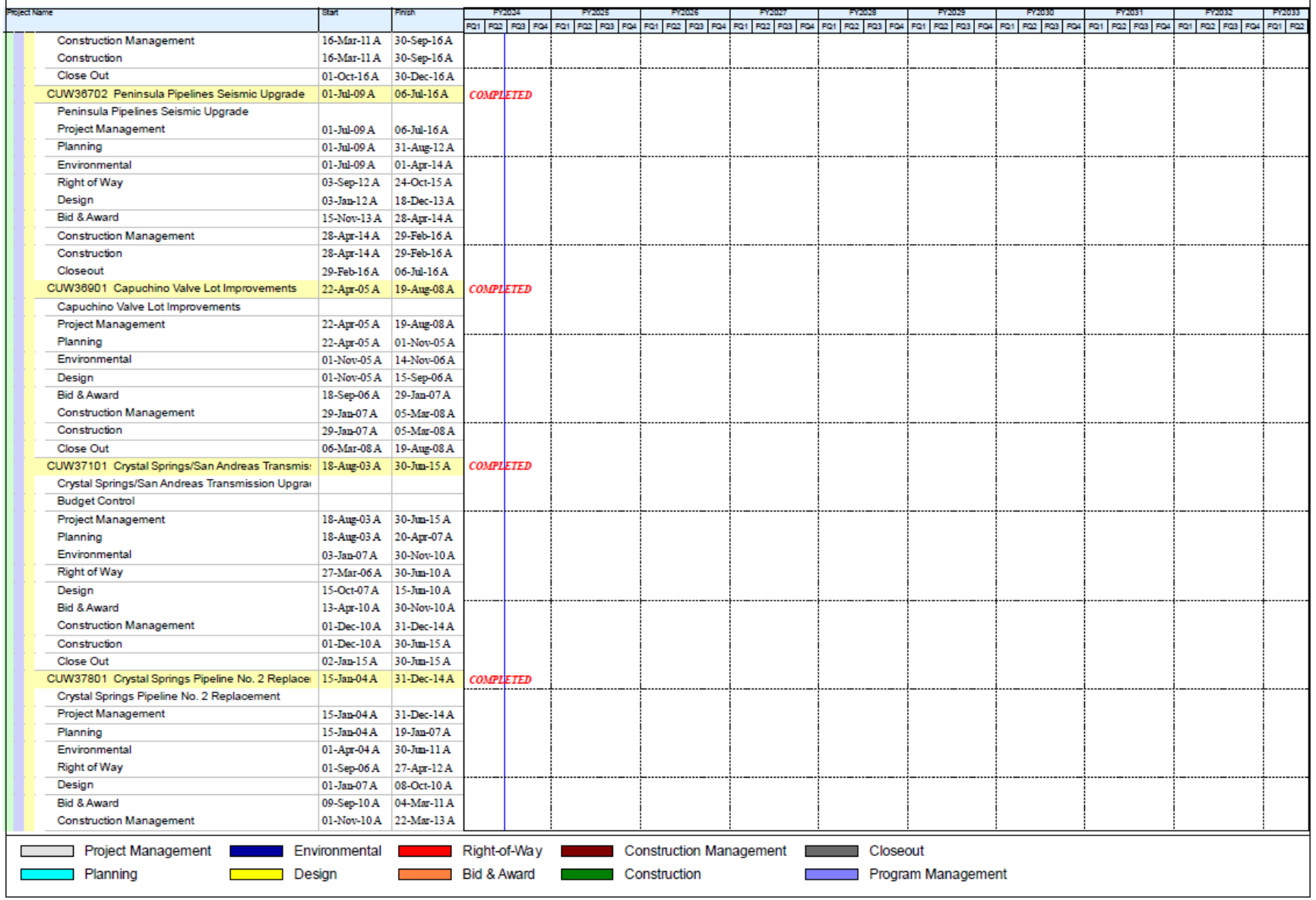
FQ1 FQ2 FQ3 FQ4

Project Management | Environmental | Right-of-Way | Construction Management | Closeout

Planning | Design | Bid & Award | Construction | Program Management

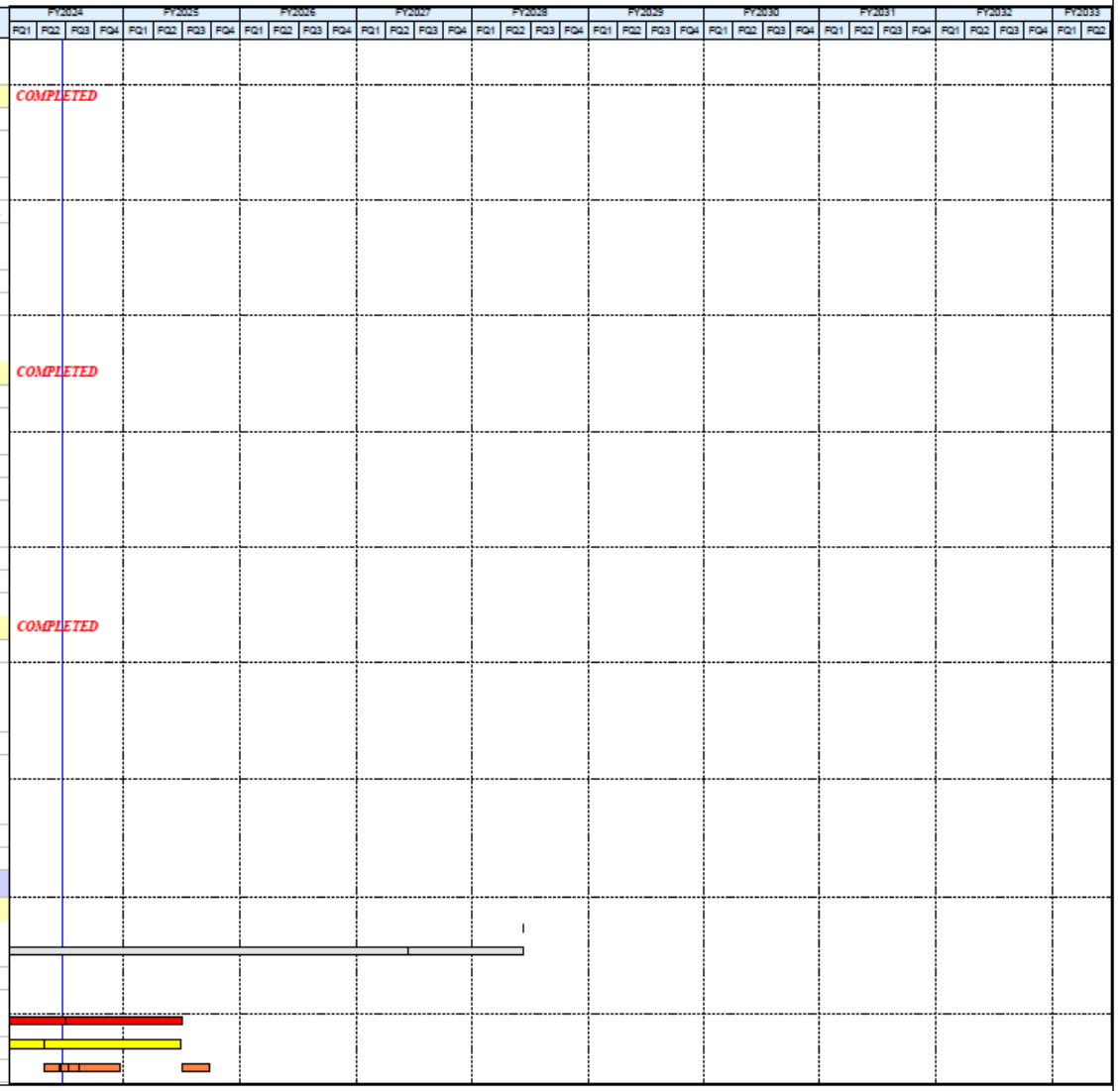
Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

Project Name	Start	Finish	
Construction Management	16-Mar-11 A	30-Sep-16 A	
Construction	16-Mar-11 A	30-Sep-16 A	
Close Out	01-Oct-16 A	30-Dec-16 A	
CUW36702 Peninsula Pipelines Seismic Upgrade	01-Jul-09 A	06-Jul-16 A	COMPLETED
Peninsula Pipelines Seismic Upgrade			
Project Management	01-Jul-09 A	06-Jul-16 A	
Planning	01-Jul-09 A	31-Aug-12 A	
Environmental	01-Jul-09 A	01-Apr-14 A	
Right of Way	03-Sep-12 A	24-Oct-15 A	
Design	03-Jan-12 A	18-Dec-13 A	
Bid & Award	15-Nov-13 A	28-Apr-14 A	
Construction Management	28-Apr-14 A	29-Feb-16 A	
Construction	28-Apr-14 A	29-Feb-16 A	
Closeout	29-Feb-16 A	06-Jul-16 A	
CUW36901 Capuchino Valve Lot Improvements	22-Apr-05 A	19-Aug-08 A	COMPLETED
Capuchino Valve Lot Improvements			
Project Management	22-Apr-05 A	19-Aug-08 A	
Planning	22-Apr-05 A	01-Nov-05 A	
Environmental	01-Nov-05 A	14-Nov-06 A	
Design	01-Nov-05 A	15-Sep-06 A	
Bid & Award	18-Sep-06 A	29-Jan-07 A	
Construction Management	29-Jan-07 A	05-Mar-08 A	
Construction	29-Jan-07 A	05-Mar-08 A	
Close Out	06-Mar-08 A	19-Aug-08 A	
CUW37101 Crystal Springs/San Andreas Transmis:	18-Aug-03 A	30-Jun-15 A	COMPLETED
Crystal Springs/San Andreas Transmission Upgra			
Budget Control			
Project Management	18-Aug-03 A	30-Jun-15 A	
Planning	18-Aug-03 A	20-Apr-07 A	
Environmental	03-Jan-07 A	30-Nov-10 A	
Right of Way	27-Mar-06 A	30-Jun-10 A	
Design	15-Oct-07 A	15-Jun-10 A	
Bid & Award	13-Apr-10 A	30-Nov-10 A	
Construction Management	01-Dec-10 A	31-Dec-14 A	
Construction	01-Dec-10 A	30-Jun-15 A	
Close Out	02-Jan-15 A	30-Jun-15 A	
CUW37801 Crystal Springs Pipeline No. 2 Replace	15-Jan-04 A	31-Dec-14 A	COMPLETED
Crystal Springs Pipeline No. 2 Replacement			
Project Management	15-Jan-04 A	31-Dec-14 A	
Planning	15-Jan-04 A	19-Jan-07 A	
Environmental	01-Apr-04 A	30-Jun-11 A	
Right of Way	01-Sep-06 A	27-Apr-12 A	
Design	01-Jan-07 A	08-Oct-10 A	
Bid & Award	09-Sep-10 A	04-Mar-11 A	
Construction Management	01-Nov-10 A	22-Mar-13 A	

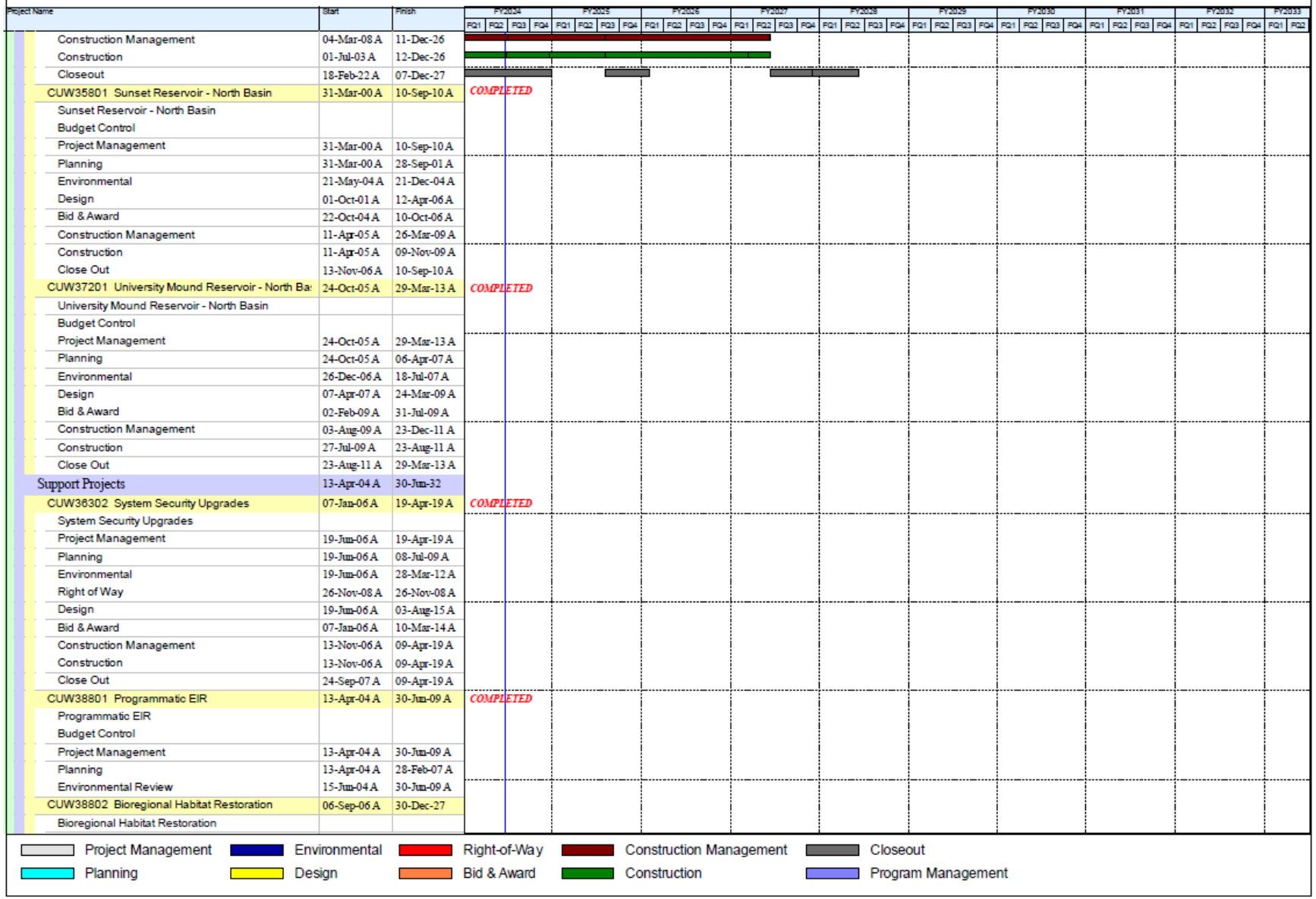


Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules

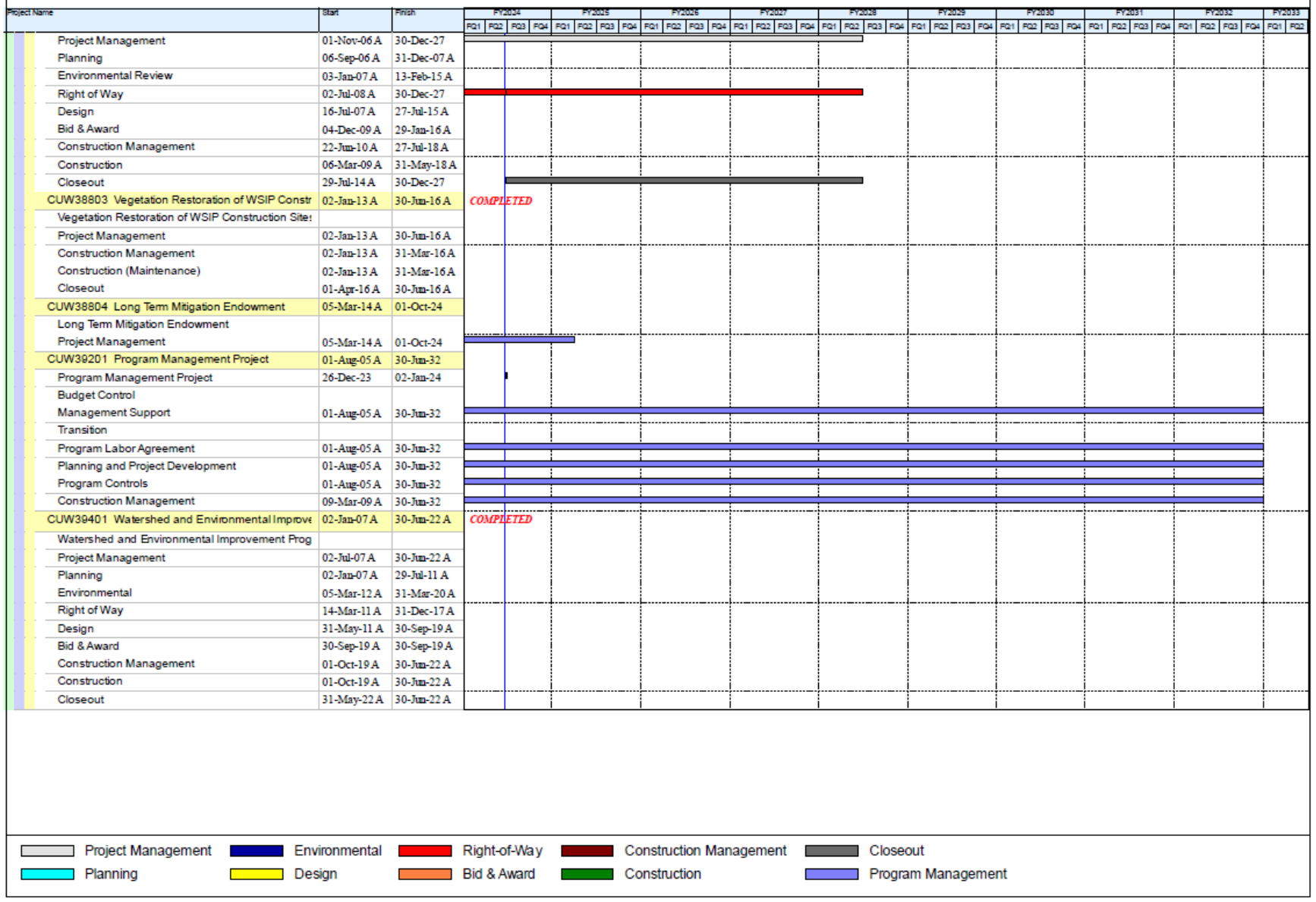
Project Name	Start	Finish
Construction	07-Feb-11 A	31-Dec-14 A
Close Out	24-Mar-13 A	31-Dec-14 A
CUW37901 San Andreas Pipeline No. 3 Installation	15-Jan-04 A	30-Aug-12 A
San Andreas Pipeline No. 3 Installation		
Budget Control		
Project Management	15-Jan-04 A	30-Aug-12 A
Planning	15-Jan-04 A	28-Apr-05 A
Environmental	01-Apr-04 A	15-May-09 A
Right of Way	01-Aug-06 A	13-Aug-09 A
Design	01-May-05 A	17-Apr-09 A
Bid & Award	20-Apr-09 A	26-Aug-09 A
Construction Management	26-Aug-09 A	30-Jun-11 A
Construction	26-Aug-09 A	30-Jun-11 A
Closeout	01-Jul-11 A	30-Aug-12 A
CUW39101 Baden and San Pedro Valve Lots Impr	03-Oct-05 A	29-Mar-13 A
Baden and San Pedro Valve Lots Improvements		
Project Management	03-Oct-05 A	29-Mar-13 A
Planning	03-Oct-05 A	03-Nov-06 A
Environmental	05-Oct-06 A	21-Oct-08 A
Right of Way	05-Oct-06 A	31-Mar-08 A
Design	29-Mar-07 A	12-Jan-09 A
Bid & Award	29-Sep-08 A	07-Apr-09 A
Construction Management	08-Apr-09 A	30-Dec-11 A
Construction	03-Apr-09 A	30-Dec-11 A
Close Out	31-Dec-11 A	29-Mar-13 A
CUWPWI0101 WSIP Closeout - Peninsula	01-Jul-16 A	30-Dec-21 A
WSIP Closeout - Peninsula	30-Dec-21 A	30-Dec-21 A
Project Management	01-Jul-16 A	30-Dec-21 A
Planning		
Environmental	01-Jul-16 A	30-Dec-21 A
Right of Way		
Design	01-Jul-16 A	30-Dec-21 A
Bid & Award	27-Dec-16 A	22-Jan-19 A
Construction Management	01-Jul-16 A	30-Dec-21 A
Construction	01-Jul-16 A	30-Dec-21 A
Close Out	01-Jul-17 A	30-Dec-21 A
San Francisco Regional Region	31-Mar-00 A	07-Dec-27
CUW30103 Regional Groundwater Storage and Re	01-Jun-03 A	07-Dec-27
Regional Groundwater Storage and Recovery	07-Dec-27	07-Dec-27
Project Management	01-Jul-05 A	07-Dec-27
Planning	01-Jun-03 A	24-Feb-20 A
Environmental	15-Oct-07 A	01-Apr-23 A
Right of Way	07-Apr-08 A	31-Dec-24
Design	02-Jan-08 A	27-Dec-24
Bid & Award	11-Mar-09 A	28-Mar-25



Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules



Attachment 10: March 2024 Proposed Revised WSIP Phase-Level Schedules



Attachment 11: March 2024 Proposed WSIP - Project Level Cost Summary

PROJECT NO.	Project Name	CONSTRUCTION COSTS [1]	DELIVERY COSTS[2]	OTHER COSTS[3]	TOTAL PROJECT COSTS
San Joaquin Region		**$221,226,284**	**$116,456,540**	**$8,184,486**	**$345,867,311**
CUW36401	Lawrence Livermore Water Quality Improvement *(Completed)*	$1,481,801	$2,716,446	-	$4,198,247
CUW37301	San Joaquin Pipeline System *(Completed)*	$125,965,937	$73,779,846	$3,431,968	$203,177,750
CUW37302	Rehabilitation of Existing San Joaquin Pipelines *(Completed)*	$11,434,583	$9,710,215	$24,000	$21,168,797
CUW38401	Tesla Treatment Facility *(Completed)*	$81,291,242	$27,205,570	$4,728,519	$113,225,331
CUW38701	Tesla Portal Disinfection Station *(Combined with CUW38401)*	-	$2,081,278	-	$2,081,278
CUWSJI0101	WSIP Closeout - San Joaquin *(Completed)*	$1,052,722	$963,186	-	$2,015,908
Sunol Valley Region		**$1,102,395,758**	**$363,752,280**	**$8,066,007**	**$1,474,214,046**
CUW35201	Alameda Creek Recapture Project	$19,922,454	$26,940,191	$2,104,750	$48,967,395
CUW35501	Standby Power Facilities - Various Locations *(Completed)*	$9,602,901	$3,347,665	-	$12,950,566
CUW35901	New Irvington Tunnel *(Completed)*	$272,174,407	$65,309,240	$2,461,876	$339,945,523
CUW35902	Alameda Siphon #4 *(Completed)*	$41,479,253	$22,989,306	$261,978	$64,730,538
CUW37001	Pipeline Repair & Readiness Improvements *(Completed)*	$2,763,325	$2,415,141	-	$5,178,466
CUW37401	Calaveras Dam Replacement *(Completed)*	$617,904,149	$173,387,684	$2,767,546	$794,059,379
CUW37402	Calaveras Reservoir Upgrades *(Completed)*	$1,274,600	$415,953	-	$1,690,552
CUW37403	San Antonio Backup Pipeline *(Completed)*	$33,339,396	$20,222,782	-	$53,562,178
CUW38101	SVWTP Expansion & Treated Water Reservoir *(Completed)*	$94,121,180	$35,002,638	$469,856	$129,593,674
CUW38102	SVWTP Calaveras Road *(Eliminated)*	-	$34,654	-	$34,654
CUW38201	SVWTP Treated Water Reservoir *(Combined with CUW38101)*	-	$5,056,596	-	$5,056,596
CUW38601	San Antonio Pump Station Upgrade *(Completed)*	$7,516,865	$5,369,275	-	$12,886,140
CUWSVI0101	WSIP Closeout - Sunol Valley*(Completed)*	$2,297,229	$3,261,155	-	$5,558,385
Bay Division Region		**$463,282,443**	**$172,293,255**	**$8,014,106**	**$643,589,803**
CUW35301	BDPL Nos. 3 & 4 Crossover/Isolation Valves *(Completed)*	$20,649,649	$6,395,977	-	$27,045,626
CUW35302	Seismic Upgrade of BDPL Nos. 3 & 4 *(Completed)*	$40,802,363	$29,648,653	$73,316	$70,524,332
CUW36301	SCADA System - Phase II *(Completed)*	$5,390,903	$4,063,686	$18,450	$9,473,039
CUW36801	BDPL Reliability Upgrade - Tunnel *(Completed)*	$220,454,710	$50,077,878	$1,831,502	$272,364,089
CUW36802	BDPL Reliability Upgrade - Pipeline *(Completed)*	$148,651,118	$62,592,578	$5,551,929	$216,795,625
CUW36803	BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2 *(Completed)*	$2,363,366	$683,615	-	$3,046,981
CUW38001	BDPL Nos. 3 & 4 Crossovers *(Completed)*	$14,794,660	$14,579,481	$538,909	$29,913,049
CUW38901	SFPUC/EBMUD Intertie *(Completed)*	$8,489,689	$677,617	-	$9,167,306
CUW39301	BDPL No. 4 Condition Assessment PCCP Sections *(Completed)*	-	$1,937,599	-	$1,937,599
CUWBDP0101	WSIP Closeout - Bay Division *(Completed)*	$1,685,985	$1,636,171	-	$3,322,156
Peninsula Region		**$544,132,521**	**$257,127,277**	**$2,940,047**	**$804,199,845**
CUW35401	Lower Crystal Springs Dam Improvements *(Completed)*	$20,357,967	$14,452,105	$50,000	$34,860,072
CUW35601	New Crystal Springs Bypass Tunnel *(Completed)*	$57,409,887	$23,901,998	$123,725	$81,435,610
CUW35701	Adit Leak Repair - Crystal Springs/Calaveras *(Completed)*	$1,706,478	$1,080,845	$0	$2,787,322
CUW36101	Pulgas Balancing - Inlet/Outlet Work *(Completed)*	$638,020	$1,127,918	$0	$1,765,938
CUW36102	Pulgas Balancing - Discharge Channel Modifications *(Completed)*	$903,240	$1,942,236	$64,531	$2,910,007
CUW36103	Pulgas Balancing - Structural Rehabilitation and Roof Replacement *(Completed)*	$13,283,050	$6,792,914	$151,483	$20,227,447

Attachment 11: March 2024 Proposed WSIP - Project Level Cost Summary

PROJECT NO.	Project Name	CONSTRUCTION COSTS [1]	DELIVERY COSTS[2]	OTHER COSTS[3]	TOTAL PROJECT COSTS
CUW36104	Pulgas Balancing - Laguna Creek Sedimentation *(Eliminated)*	-	$505,127	-	$505,127
CUW36105	Pulgas Balancing - Modifications of the Existing Dechloramination Facility *(Completed)*	$2,054,696	$3,286,657	$50,000	$5,391,353
CUW36501	Cross Connection Controls *(Completed)*	$1,835,224	$2,089,993	$23,509	$3,948,727
CUW36601	HTWTP Short-Term Improvements (Demo Filters) *(Completed)*	$1,683,042	$1,384,862	-	$3,067,903
CUW36602	HTWTP Short-Term Improvements - Remaining Filters *(Combined with CUW36603)*	-	$1,424,510	-	$1,424,510
CUW36603	HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters *(Completed)*	$15,214,291	$3,390,646	-	$18,604,937
CUW36701	HTWTP Long-Term Improvements *(Completed)*	$196,529,072	$76,381,693	$983,837	$273,894,602
CUW36702	Peninsula Pipelines Seismic Upgrade *(Completed)*	$23,048,700	$15,168,937	$562,136	$38,779,772
CUW36901	Capuchino Valve Lot Improvements *(Completed)*	$1,576,733	$1,226,420	-	$2,803,153
CUW37101	Crystal Springs/San Andreas Transmission Upgrade *(Completed)*	$133,465,522	$56,047,461	$136,590	$189,649,573
CUW37801	Crystal Springs Pipeline No. 2 Replacement *(Completed)*	$34,750,123	$20,932,509	$387,877	$56,070,509
CUW37901	San Andreas Pipeline No. 3 Installation *(Completed)*	$17,087,803	$10,025,554	$406,359	$27,519,716
CUW39101	Baden and San Pedro Valve Lots Improvements *(Completed)*	$15,646,639	$9,346,839	-	$24,993,478
CUWPWI0101	WSIP Closeout - Peninsula *(Completed)*	$6,942,034	$6,618,051	-	$13,560,086
San Francisco Regional Region		**$177,784,744**	**$80,998,519**	**$7,104,207**	**$265,887,470**
CUW30103	Regional Groundwater Storage and Recovery	$93,846,341	$57,399,885	$7,104,207	$158,350,433
CUW35801	Sunset Reservoir - North Basin *(Completed)*	$52,777,386	$11,493,339	-	$64,270,725
CUW37201	University Mound Reservoir - North Basin *(Completed)*	$31,161,017	$12,105,295	-	$43,266,312
Support Projects		**$5,600,947**	**$177,090,134**	**$91,616,107**	**$274,307,188**
CUW36302	System Security Upgrade *(Completed)*	$5,600,947	$8,796,947	-	$14,397,894
CUW38801	Programmatic EIR *(Completed)* [4]	-	$10,734,567	-	$10,734,567
CUW38802	Bioregional Habitat Restoration	-	$38,095,960	$55,246,023	$93,341,983
CUW38803	Vegetation Restoration of WSIP Construction Sites *(Completed)*	-	$1,177,223	$934,323	$2,111,546
CUW38804	Long Term Mitigation Endowment	-	-	$12,000,000	$12,000,000
CUW39201	Program Management Project [4]	-	$112,776,926	$8,865,121	$121,642,047
CUW39401	Watershed and Environmental Improvement Program *(Completed)*	-	$5,508,510	$14,570,640	$20,079,150
Regional Program Sub-Total		**$2,514,422,697**	**$1,167,718,005**	**$125,924,959**	**$3,808,065,661**
San Francisco Local Program					
All Original Local Projects		**$238,682,678**	**$92,311,150**	**$862,883**	**$331,856,711**
Water Supply Projects		**$183,381,095**	**$94,806,196**	**$2,674,008**	**$280,861,299**
Local Program Sub-Total		**$422,063,773**	**$187,117,346**	**$3,536,891**	**$612,718,010**
	Regional + Local Programs Sub-Total	**$2,936,486,470**	**$1,354,835,350**	**$129,461,850**	**$4,420,783,671**
Financing Cost					**$371,991,469**
PROGRAM TOTAL					**$4,792,775,140**

LEGEND:

(1) **Construction Costs** include the Construction Base Bid, Construction Contingency and owner-provided equipment/material.
(2) **Delivery Costs** include program and project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
(3) **Other Costs** include environmental mitigation, art enrichment, security Improvements, and real estate expenses.
(4) Not included in 52 regional project count.

APPENDIX B: SFPUC COMMISSION AGENDA ITEM NO. 7 FROM APRIL 9, 2024: APPROVE THE MARCH 2024 PROPOSED REVISED WATER SYSTEM IMPROVEMENT PROGRAM

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AGENDA ITEM
Public Utilities Commission
City and County of San Francisco

DEPARTMENT Infrastructure | AGENDA NO. **7**

MEETING DATE April 9, 2024

Calendar: Regular Calendar
Project Manager: Katie Miller

Approve the March 2024 Proposed Revised Water System Improvement Program.

Summary of Proposed Commission Action:	Public Hearing to consider and possible action to **approve** the scope, schedule, and budget of the March 2024 Proposed Revised Water System Improvement Program; and **direct** staff to send a Notice of Change Report to the State Water Resources Control Board and the Alfred E. Alquist Seismic Safety Commission in compliance with California Water Code Section 73500, *et seq*.
Background:	The San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP) is a $4.8 billion dollar, multi- year capital improvement program to upgrade the SFPUC's regional and local water systems. The WSIP consists of 87 projects: 35 Local projects located within San Francisco (completed in 2020) and 52 Regional projects, spread over seven counties from the Sierra foothills to San Francisco. The Wholesale Regional Water System Security and Reliability Act (Act) (Water Code Section 73500, *et seq*.) requires the SFPUC to provide written notice, no less than 30 days before a meeting of the Commission, that certain changes to the WSIP are to be considered. If the Commission adopts those changes, the Act requires the SFPUC to promptly furnish a copy of such changes and the reasons for such changes (Notice of Change Report) to the State Water Resources Control Board and the Alfred E. Alquist Seismic Safety Commission. The SFPUC last adopted program-wide revisions to the WSIP, including revisions to the program scope, schedule, and budget, on April 26, 2022, by Resolution No. 22-0080. Those revisions extended the overall WSIP completion date to February 1, 2027 (the current approved completion date). As of the end of December 2023, the WSIP is approximately 99.1% complete. All 35 projects in the Local WSIP were completed by 2020, and 48 of the 52 projects in the Regional WSIP have also been completed. During the first few months of 2024, staff undertook a comprehensive assessment of all remaining WSIP delivery efforts for completion of the program. The objectives of this internal review of all active projects were to (1) validate all project schedules and cost forecasts at completion; (2) make an accurate determination of the overall cost and schedule status of

	the program; and (3) put in place specific measures to further control costs and schedules as the program continues to ramp down. On March 8, 2024, the SFPUC posted a written notice that the Commission would consider proposed revisions to the WSIP at a public hearing on April 9, 2024 (Notice of Public Hearing). The Notice of Public Hearing, attached hereto, sets forth the SFPUC's proposed revisions to the WSIP, referred to herein as the "March 2024 Proposed Revised WSIP," and the reasons for those proposed revisions. During the public review period since the SFPUC posted the Notice of Public Hearing, the WSIP Director met with representatives of the Bay Area Water Supply & Conservation Agency (BAWSCA) to discuss the proposed revisions. The March 2024 Proposed Revised WSIP extends the overall program completion date from February 1, 2027 to June 30, 2032. The total forecast cost of the Regional WSIP projects has increased from $3,803.1 million (M) to $3,808.1M due to the projected $5M cost increase of the Alameda Creek Recapture Project. The overall program cost for the March 2024 Proposed WSIP has correspondingly increased by $5M from $4,787.8M to $4,792.8M. The March 2024 Proposed Revised WSIP includes proposed schedule extensions for three active projects and the Program Management Project as follows: 1. Regional Groundwater Storage and Recovery Project: Extend completion by 10 months to December 7, 2027; 2. Bioregional Habitat Restoration Project: Extend completion by 39 months to December 30, 2027; 3. Alameda Creek Recapture Project: Extend completion by 96.5 months to June 30, 2032; and 4. Program Management Project: Extend completion by 65 months to June 30, 2032. The proposed budget revisions include cost increases for three active projects and the Program Management Project, with minor adjustments to inactive (completed) project budgets, resulting in an overall program cost increase of $5M, detailed as follows: 1. Bioregional Habitat Restoration Project: Increase budget by $1.2M for a revised total of $93.3M; 2. Alameda Creek Recapture Project: Increase budget by $5.0M for a revised total of $49.0M; and 3. Program Management Project: Increase budget by $4.3M for a revised total of $121.6M. The project scopes remain the same as those approved in 2022, except for two projects with minor scope refinements as follows: 1. Regional Groundwater Storage and Recovery Project; and

	2. Alameda Creek Recapture Project. The March 2024 Proposed Revised WSIP does not delete any projects or change any project names.
Budget & Costs:	The forecasted cost of WSIP Regional projects has increased by $5M since the approval of the March 2022 Revised WSIP. The forecasted cost of the overall program has correspondingly increased by $5M for a total revised program budget of $4,793.8M. The additional $5M for the Alameda Creek Recapture Project was included in the FY2025-2034 10-Year Capital Plan that was approved by the Commission on February 13, 2024.
Environmental Review:	On October 30, 2008, by Motion No. 17734, the Planning Commission certified a Final Program Environmental Impact Report (Program EIR) prepared for the WSIP. On October 30, 2008, by Resolution No. 08-0200, this Commission approved the WSIP and adopted findings and a Mitigation Monitoring and Reporting Program, as required by the California Environmental Quality Act (CEQA). Environmental review of all of the individual WSIP projects has been completed. The March 2024 Proposed Revised WSIP, inclusive of minor project scope refinements, is within the scope of the Program EIR. On August 7, 2014, the Planning Commission, by Motion No. M-19209, certified the Final Environmental Impact Report (Final EIR) for the Regional Groundwater Storage and Recovery Project (Case Number 2008.1396E), which is tiered from the 2008 Program EIR. On August 12, 2014, by Resolution No. 14-0127, this Commission approved the Regional Groundwater Storage and Recovery Project and adopted findings (California Environmental Quality Act (CEQA) Findings) and a Mitigation Monitoring and Reporting Program required by the CEQA. On April 16, 2020, the Planning Commission, by Motion No. M-20684, certified a Final Environmental Impact Report (FEIR) for Project No. CUW35201, Alameda Creek Recapture Project (Case Number 2015-004827ENV). On April 28, 2020, by Resolution No. 20-0077, this Commission adopted the CEQA Findings and the Mitigation Monitoring and Reporting Program and approved the Alameda Creek Recapture Project. The Program EIR and CEQA findings can be found here: https://sfpuc.sharefile.com/d-s0ebfacb0129843cfa20d6796fa01086f The Mitigation Monitoring and Reporting Program can be found here: https://sfpuc.sharefile.com/d-s7e57248446784873906a8274143ba722 The Final EIR, Resolution No. 14-0127, CEQA Findings, and Mitigation Monitoring and Reporting Program for the Regional Groundwater Storage and Recovery Project can be found here: https://sfpuc.sharefile.com/public/share/web-s6e63926c66484367960ad5907db02130

	The Final EIR, Resolution No. 20-0077, CEQA Findings, and Mitigation Monitoring and Reporting Program for the Alameda Creek Recapture Project can be found here: https://sfpuc.sharefile.com/public/share/web-s6017ccc671a04506b79e8905d1f47f33
Attachment:	Notice of Public Hearing for the March 2024 Proposed Revised WSIP, posted on March 8, 2024 (with attachments).

APPENDIX C: MARCH 2024 REVISED WSIP COMMISSION RESOLUTION

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PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. **24-0089**

WHEREAS, On May 28, 2002, by Resolution No. 02-0101, the San Francisco Public Utilities Commission (Commission or SFPUC) approved a Long-Term Strategic Plan for Capital Improvements, a Long-Range Financial Plan and a Capital Improvement Program (CIP); and

WHEREAS, On November 5, 2002, San Francisco residents voted to approve Proposition A (Water System Improvement Revenue Bonds and Imposition of Surcharge on Retail Water Customers), a revenue bond measure to fund the Commission-approved CIP; and

WHEREAS, On February 26, 2003, pursuant to the requirements of California Assembly Bill (AB) 1823, the SFPUC submitted to the California Department of Health Services (now the California Department of Public Health) a report outlining the projects, schedule and implementation plan for the CIP; and

WHEREAS, On November 29, 2005, by Resolution No. 05-0176, this Commission approved project-level changes to the CIP and by doing so endorsed the revised scope, schedule and budget of individual projects and renamed the program the Water System Improvement Program (December 2005 WSIP or WSIP); and

WHEREAS, On February 26, 2008, by Resolution No. 08-0024, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (December 2007 Revised WSIP); and

WHEREAS, On July 28, 2009, by Resolution No. 09-0125, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (June 2009 Revised WSIP); and

WHEREAS, On July 12, 2011, by Resolution No. 11-0109, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (June 2011 Revised WSIP); and

WHEREAS, On June 12, 2012, by Resolution No. 12-0099, this Commission approved budget and schedule changes for three individual WSIP projects: New Irvington Tunnel, Bay Division Pipeline (BDPL) Reliability Upgrade – Pipeline (BDPL No. 5), and Pulgas Balancing – Modification of the Existing Dechloramination Facility; and

WHEREAS, On October 9, 2012, by Resolution No. 12-0181, this Commission approved budget changes for four individual WSIP projects: San Joaquin Pipeline (SJPL) System, Tesla Treatment Facility, Vegetation Restoration of WSIP Construction Sites (new project), and Program Management; and

WHEREAS, On January 22, 2013, by Resolution No. 13-0020, this Commission approved budget and schedule changes for one individual WSIP project, Calaveras Dam Replacement Project (CDRP), after reviewing and considering the California Environmental Quality Act (CEQA) Findings and statement of overriding considerations that it previously adopted for the WSIP and CDRP approvals, along with the CEQA Findings contained in Addendum No.1 to the CDRP Environmental Impact Report (EIR) issued by the Planning Department on December 13, 2012, and this Commission adopted those additional CEQA Findings for the CDRP modifications, which findings are incorporated in this Resolution by this reference; and

WHEREAS, On April 23, 2013, by Resolution No. 13-0060, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (March 2013 Revised WSIP); and

WHEREAS, On April 22, 2014, by Resolution No. 14-0065, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (March 2014 Revised WSIP); and

WHEREAS, On December 8, 2015, by Resolution No. 15-0263, this Commission approved schedule changes for six individual WSIP projects: San Joaquin Pipeline System, San Antonio Backup Pipeline, Seismic Upgrade of BDPL Nos. 3&4, BDPL Reliability Upgrade – Pipeline (BDPL No. 5), and Vegetation Restoration of WSIP Construction Sites; and

WHEREAS, On April 26, 2016, by Resolution No. 16-0071, this Commission approved (1) scope, schedule, and budget changes to four WSIP projects: Alameda Creek Recapture Project, Calaveras Dam Replacement Project, Bioregional Habitat Restoration, and Watershed Environmental Improvement Program; and (2) the addition of Closeout Projects to four WSIP regions; San Joaquin, Sunol Valley, Bay Division, and Peninsula (March 2016 Revised WSIP); and

WHEREAS, On February 14, 2017, by Resolution No. 17-0026, this Commission approved schedule changes to three WSIP projects: New Irvington Tunnel, Seismic Upgrade of BDPL Nos. 3&4, and Security System Upgrade; and

WHEREAS, On April 10, 2018, by Resolution No. 18-0052, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects and a revised program completion date of April 10, 2018 (March 2018 Revised WSIP); and

WHEREAS, On April 14, 2020, by Resolution No. 20-0070, this Commission approved project level changes to the schedules of five WSIP projects, also extending the program completion date to May 5, 2023 (March 2020 Revised WSIP); and

WHEREAS, On April 26, 2022, by Resolution No. 22-0080, this Commission approved project-level changes to the WSIP and by doing so endorsed the revised scope, schedule and budget of individual projects (March 2022 Revised WSIP); and

WHEREAS, On October 30, 2008, by Motion No. 17734, the Planning Commission certified a Final Program Environmental Impact Report (Program EIR) prepared for the WSIP; and

WHEREAS, On October 30, 2008, by Resolution No. 08-0200, this Commission approved the WSIP and adopted findings and a Mitigation Monitoring and Reporting Program, as required by the CEQA, which findings are incorporated in this Resolution by this reference; and

WHEREAS, On August 7, 2014, the Planning Commission, by Motion No. M-19209, certified the Final Environmental Impact Report (Final EIR) for the Regional Groundwater Storage and Recovery Project (Case Number 2008.1396E), which is tiered from the 2008 Program EIR; and

WHEREAS, On August 12, 2014, by Resolution No. 14-0127, this Commission approved the Regional Groundwater Storage and Recovery Project and adopted CEQA Findings and a Mitigation Monitoring and Reporting Program required by the CEQA; and

WHEREAS, On April 16, 2020, the Planning Commission by Motion No. M-20684 certified a Final Environmental Impact Report (FEIR) for Project No. CUW35201, Alameda Creek Recapture Project (Case Number 2015-004827ENV); and

WHEREAS, On April 28, 2020, by Resolution No. 20-0077, this Commission adopted the CEQA Findings and the Mitigation Monitoring and Reporting Program and approved the Alameda Creek Recapture Project; and

WHEREAS, The Program EIR, the Regional Groundwater Storage and Recovery Project EIR, the Alameda Creek Recapture EIR, and SFPUC Resolution Nos. 08-0200, 14-0127 and 20-0077 have been made available for review by the SFPUC and the public, and those files are part of the record before this Commission; and

WHEREAS, This Commission has reviewed and considered the information contained in the Program EIR, the Regional Groundwater Storage and Recovery Project EIR, the Alameda Creek Recapture EIR, the findings contained in SFPUC Resolution Nos. 08-0200, 14-0127 and 20-0077 and all written and oral information provided by the Planning Department, the public, relevant public agencies, SFPUC and other experts; and

WHEREAS, The SFPUC has completed environmental review of all of the individual WSIP projects; and

WHEREAS, In early 2024, SFPUC staff reviewed the status of the remaining WSIP projects and analyzed the forecasted schedules, budgets, and scopes for each project, and determined that the schedules for three WSIP projects should be extended with new completion dates, that the budgets for two projects should be revised, and that the scopes of two projects should be modified; and

WHEREAS, Under Water Code Section 73502(d)(2), the City must provide 30-days written notice of the public meeting at which the Commission will consider a change in this program and must provide an opportunity for all Bay Area wholesale customers to testify or otherwise submit comments at such meeting; and

WHEREAS, On March 8, 2024, the SFPUC posted a written notice that this Commission would consider proposed revisions to the WSIP at a public hearing on April 9, 2024 (Notice of Public Hearing), attached to this Resolution, which sets forth the SFPUC's proposed revisions to the WSIP, referred to as the "March 2024 Proposed Revised WSIP," and notified the Bay Area wholesale customers through the Bay Area Water Supply & Conservation Agency (BAWSCA) in writing that this Commission would consider changes to the WSIP at the public hearing on April 9, 2024; and

WHEREAS, The March 2024 Proposed Revised WSIP would extend the current approved project completion dates for three WSIP projects (Regional Groundwater Storage and Recovery Project, Alameda Creek Recapture Project, Bioregional Habitat Restoration Project) and extend the current overall program completion date from February 1, 2027, which was approved by the Commission on April 26, 2022 as part of the March 2022 Revised WSIP, to the new date of June 30, 2032; and

WHEREAS, The March 2024 Proposed Revised WSIP increases the total forecast cost of the Regional WSIP projects from $3,803.1 million to $3,808.1 million and correspondingly increases the overall program cost from $4,787.8 million to $4,792.8 million, due to a cost increase of $5 million for the Alameda Creek Recapture Project; and

WHEREAS, The March 2024 Proposed Revised WSIP proposes minor modifications to the scopes of two projects (Alameda Creek Recapture Project and Regional Groundwater Storage and Recovery Project); and

WHEREAS, During the 30-day public review period since the SFPUC posted the Notice of Public Hearing, the WSIP Director met with representatives of BAWSCA to discuss the proposed revisions to the WSIP; now, therefore, be it

RESOLVED, That this Commission finds that since the Program EIR, Regional Groundwater Storage and Recovery Project EIR and Alameda Creek Recapture Project EIR were finalized, there have been no substantial project changes and no substantial changes in project circumstances that would require major revisions to the EIRs due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusions set forth in the EIRs; and be it

FURTHER RESOLVED, That this Commission hereby approves the March 2024 Proposed Revised WSIP as set forth in the Notice of Public Hearing dated March 8, 2024; and be it

FURTHER RESOLVED, That this Commission hereby directs staff to send a Notice of Change Report to the State Water Resources Control Board and the Alfred E. Alquist Seismic Safety Commission in compliance with Water Code Section 73502(d)(3).

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of April 9, 2024.

Donna Hood

Secretary, Public Utilities Commission

APPENDIX D: NOVEMBER 2023 AMENDED AND UPDATED WATER ENTERPRISE LEVELS OF SERVICE GOALS AND OBJECTIVES AND RESOLUTION 23-0210

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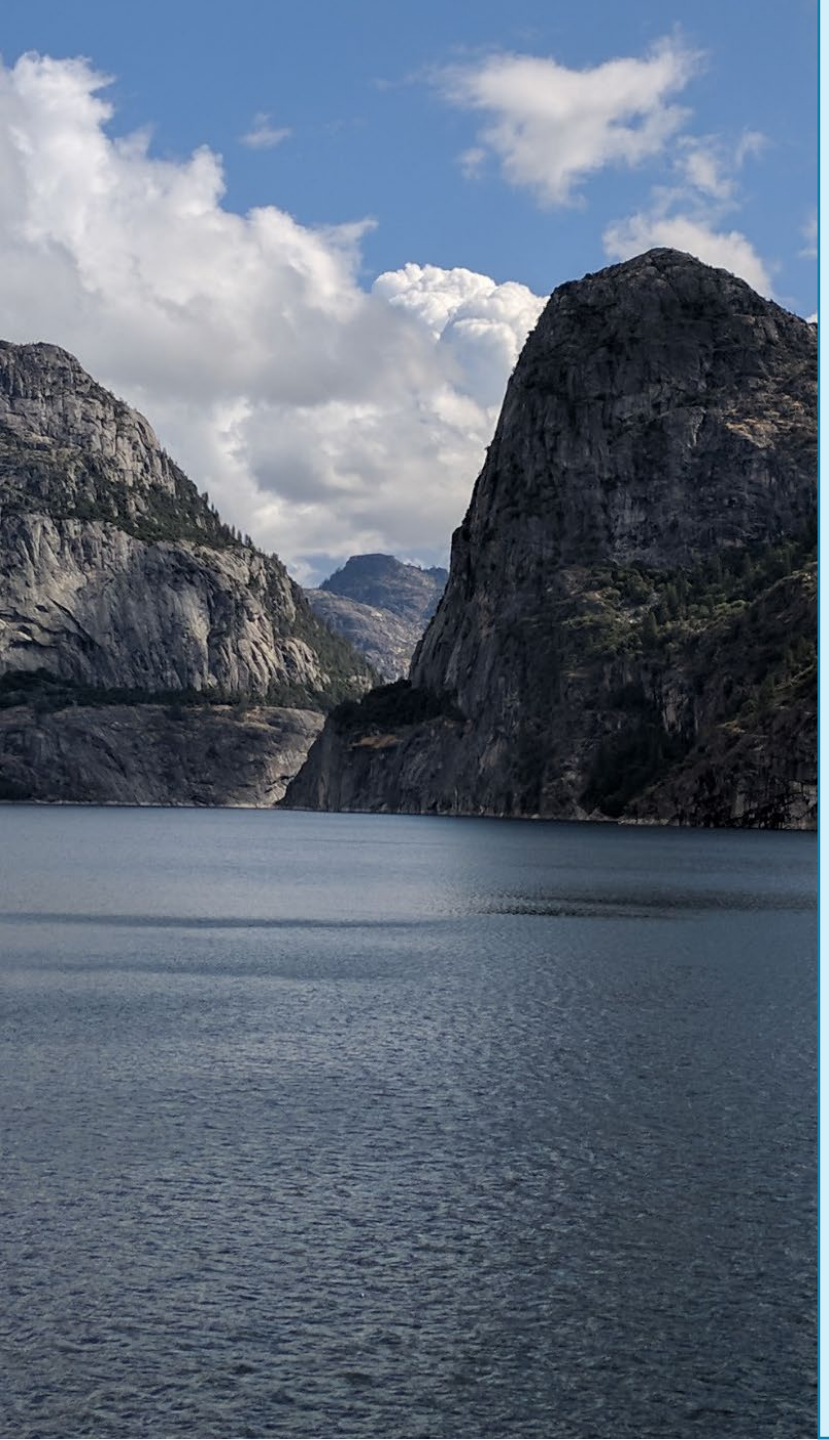


San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Levels of Service

Water and Power Enterprises

November 28, 2023

Barbara Hale, Assistant General Manager, Power

Steven Ritchie, Assistant General Manager, Water

Lance Martinez constructing Hetchy Power's Marina Middle School Solar System

What are Levels of Service?

- Actions or standards that must be met and/or managed to satisfy our mission and the expectations of ratepayers
- Required by the 2020 SFPUC Strategic Plan
- Important for accountability, transparency, strategic prioritization, and organizational learning

Power's Levels of Service

- Established in 2020
- Five goals emphasize reliable and clean energy, safe and reliable programs, effective customer service, and operational excellence and sustainability
- 19 objectives
- Nearly 100 detailed performance metrics
- First step in Power's annual planning process

Power's Levels of Service Goals and Objectives (1 of 2)

Power Supply - *Provide reliable, clean energy at competitive prices in support of City-wide climate goals*

- Provide cost-competitive GHG-free and renewable power to support or exceed City-wide climate goals
- Ensure sufficient capacity, energy supply, and flexibility to serve all existing and future load
- Reduce the carbon footprint of electricity supply through energy efficiency, local renewable generation, and fuel switching

Power Transmission - *Provide reliable and cost-effective transmission services*

- Strategically invest in transmission infrastructure and services to increase reliability of electricity services

Power Distribution - *Provide cost-effective and reliable distribution services*

- Provide reliable distribution services through interconnection with the distribution grid
- Deploy City-owned infrastructure in development and redevelopment areas poised for growth
- Effectively manage all assets by performing regular asset inventories, preventive inspections, monitoring and maintenance, and repair and replacement work
- Minimize frequency and duration of unplanned outages on the SFPUC-controlled distribution system
- Prepare for the acquisition of PG&E distribution assets in San Francisco

Power's Levels of Service Goals and Objectives (2 of 2)

City Programs - *Maintain safe and reliable streetlights and offer valuable customer programs*

- Maintain safe streetlights and implement upgrades and new projects as requested
- Respond promptly to streetlight outages and emergencies
- Incentivize customers to invest in energy efficiency, decarbonization and other measures that support local clean energy development and job creation

Power Administration - *Enhance customer and user satisfaction through effective customer service and achieve operational excellence and sustainability*

- *Customer Service* - Promptly and courteously establish service and respond to customers
- *Rates* - Ensure rates are equitable, cost-based, stable, and affordable
- *Equity* - Foster equity and support low-income customers
- *Outreach* - Provide active marketing, education, and public outreach activities
- *Planning* - Evaluate and plan for changing conditions that influence Power's ability to meet State requirements and achieve levels of service
- *Regulatory Compliance* - Meet sustainability plans, climate goals, and other regulatory requirements
- *Workforce* - Attract, develop, and retain a safe, healthy, productive, diverse, and well-equipped workforce

Power Levels of Service Metrics

KPI: Metrics that can be supported by objective data to measure the success of satisfying the LoS objective.

Target: The value of the KPI necessary to meet the associated LoS objective

Data Source: Most appropriate software or data repository for each KPI

3.3. Effectively manage all assets by performing regular asset inventories, preventive inspections, monitoring and maintenance, and repair and replacement work

	Key Performance Indicators (KPI)	FYE23 Target	FYE24 Target	Data Source	Budget Category	Responsible Manager
a.	Asset Management Plan that prioritizes cost-effective investments to replace aging infrastructure and equipment, modernize systems, and improve distribution efficiency	Update Asset Management Plan	Same	Manager report	Power Dist. – Dist. Facilities	Asset Mgmt
b.	Inventory and Assessment: % of assets entered into the CMMS database that have potential or actual value that are critical to achieving Power Enterprise's business	100% new assets	Same	Project source and Maximo	Power Dist. – Dist. Facilities; City Programs – Streetlights	

Water's Levels of Service

- Originally developed in 2008 as part of the Water System Improvement Program
- Focused on design and construction of Regional Water System improvements
- Revised over a series of years to address operations and maintenance, Local Water System, and Sustainability issues such as Workforce and Community Support
- 2023 Amended and Revised Goals and Objectives intended to inform budget process and prioritization
- Some of the Objectives are currently achievable and some are aspirational

2008 Water Enterprise Level of Service Goals

Water Quality – *maintain high water quality*

Seismic Reliability – *reduce vulnerability to earthquakes*

Delivery Reliability – *increase delivery reliability and improve ability to maintain the system*

Water Supply – *meet customer water needs in non-drought and drought periods*

Sustainability – *enhance sustainability in all system activities*

Cost-effectiveness – *achieve a cost-effective, fully operational system*

2023 Water Enterprise Level of Service Goals

Drinking Water Quality – *maintain high water quality (5 objectives)*

Regional Seismic Reliability – *maintain ability to meet current seismic standards (3 objectives)*

Regional Delivery Reliability – *maintain delivery reliability during normal operations and maintenance (9 objectives)*

In-City Seismic Reliability – *reduce vulnerability to earthquakes (3 objectives)*

In-City Delivery Reliability – *reliably deliver water to all in-City retail customers (5 objectives)*

Water Supply – *meet customer water needs in non-drought and drought periods (6 objectives)*

Environmental Stewardship - *maintain high environmental performance standards (3 objectives)*

Sustainability – *enhance sustainability in all system activities (environmental, economic, and social) (6 objectives)*

Drinking Water Quality – *maintain high water quality*

Objectives:

- Operate and maintain Regional Water System facilities to comply with or surpass all current and future federal and state drinking water quality requirements.
- Provide clean, unfiltered water originating from Hetch Hetchy Reservoir, filtered water from Bay Area watersheds, and appropriately treated water from other sources.
- Continue to implement watershed protection measures in the SFPUC's Peninsula, Alameda and Tuolumne watersheds to protect watershed ecosystems and drinking water quality.
- Maintain applied research, planning and outreach programs to ensure customer water quality expectations are met.
- Respond to 100% of In-City customer service inquiries or complaints about water quality within 2 business hours of initial contact and regional water system events upon exceedance of established threshold criteria.

Regional Seismic Reliability – *maintain ability to meet current seismic standards*

Objectives:

- Design and construct water and related power system improvements to meet current seismic standards (e.g., Division of Safety of Dams), and regularly evaluate the ability of the system to meet current seismic standards.
- Maintain or resume delivery of 229 million gallons per day (mgd) to the three regions in the SFPUC service area (East/South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 104, 44, and 81 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively.
- Restore facilities to meet a daily demand of 265 mgd within 30 days after a major earthquake.

Regional Delivery Reliability (1) – *maintain delivery reliability during normal operations and maintenance*

Objectives:

- Meet all local, state, and federal water, power, and environmental regulations to support the proper operation of the water system and proper operation of power facilities essential to the operation of the water system
- Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service.
- Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages.
- Maintain emergency response and recovery plans for major water delivery assets to minimize the duration of unplanned outages.
- Provide operational flexibility and system capacity to replenish local reservoirs as needed.

Regional Delivery Reliability (2) – *maintain delivery reliability during normal operations and maintenance*

Objectives:

- Operate and maintain Regional Water System facilities to meet a daily peak demand of 300 mgd.
- Operate and maintain Regional Water System facilities to meet a daily demand of 265 mgd under the conditions of one planned shutdown of a major facility for maintenance (a reach of a San Joaquin Pipeline or a reach of a Bay Division Pipeline) concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset.
  - During planned shutdowns of the Tuolumne River supply, the Regional Water System is able to meet full winter demands (approximately 150 mgd). In the event of an unplanned loss of one water treatment plant, the water system can still meet a minimum delivery of 115 mgd, until the Tuolumne River supply is returned to service.
  - Planned shutdowns of the Tuolumne River supply are restricted to the period November 1 through March 31, and no longer than 60 days with special exceptions for shutdowns of up to 100 days. The return-to-service goal for planned shutdowns of the Tuolumne River supply is no more than 7 days.
- Operate upcountry and Bay Area water reservoirs to optimize water supply and comply with environmental regulations while mindful of downstream conditions.
- Provide Wholesale Customers with timely information and data sufficient to support operational decision-making of their retail systems.

In-City Seismic Reliability – *reduce vulnerability to earthquakes*

Objectives:

- **Storage**. Maintain seismically reliable potable water storage to provide at least 20 pounds per square inch (psi) pressure throughout each pressure zone.
- **Fire Suppression.** In conjunction with the Emergency Firefighting Water System, within three hours of a major earthquake, provide at least 50% of anticipated water demand from post-seismic fires in each of 46 Fire Response Areas, and at least 90% of City-wide average water demand from post-seismic fires.
- **Water Supply Restoration.** Deliver basic life sustaining water supply (for hygiene, sanitation, and consumption if boiled or disinfected) and ensure potable water system restoration.
  - Within 24 hours, limited network of critical transmission mains (greater than or equal to 12-inch diameter) that serve major hospitals will be pressurized.
  - Within 72 hours, limited network of critical secondary distribution system pipelines (less than 12-inch diameter) will be pressurized.
  - Within 7 days, limited network of critical transmission and distribution mains will be disinfected and restored to potable service.
  - Within 90 days, secondary distribution system will be restored to potable service.
  - Utilize alternative water sources such as groundwater to supplement Sunset & Sutro Reservoirs.

In-City Delivery Reliability – *reliably deliver water to all in-City retail customers*

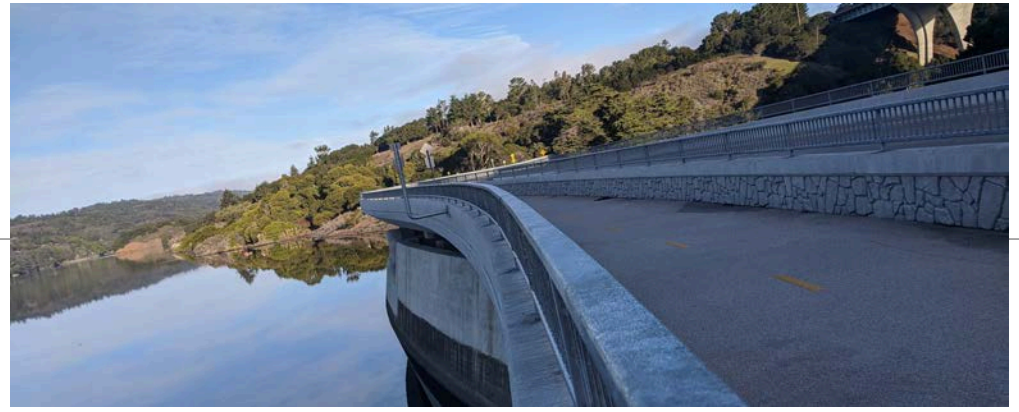
Objectives:

- Maintain potable water storage to provide at least two days of winter day demand plus minimum 2 hours of fire suppression at 3 hydrants (1,500 gallons per minute [gpm] from each hydrant) in each pressure zone with storage greater than one million gallons, and two hydrants (1,500 gpm from each hydrant) for each pressure zone with storage ≤ one million gallons.
- Maintain minimum pressure of 20 psi throughout the distribution system.
- Respond to 100% of customer service inquiries or complaints regarding water service within 2 business hours of initial contact.
- Maintain deliveries such that ≤ 1.0% of service connections are without water for up to 4 hours as a result of an unplanned outage per year.
- Maintain deliveries such that ≤ 0.5% of service connections are without water for 8 hours or longer as a result of an unplanned outage per year.

Water Supply – *meet customer water needs in non-drought and drought periods*

Objectives:

- Meet an average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non–drought years consistent with the Water Supply Agreement between San Francisco and its Wholesale Customers in Alameda, San Mateo, and Santa Clara Counties.
- Meet dry-year delivery needs while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts.
- Diversify and improve use of new water sources and drought management, including groundwater, recycled water, conservation, transfers, storage expansion, purified water, desalinated water, and technological innovations that can increase supply and/or water use efficiency.
- Maintain San Francisco retail residential potable water use below 45 gallons per capita per day.
- Realize annual Real Water Losses of less than 10% of water supplied to San Francisco.
- Meet 80% of San Francisco's Recreation and Parks Department irrigation demands with recycled water by December 31, 2025.



Environmental Stewardship – *maintain high environmental performance standards*

Objectives:

- Meet all current and anticipated environmental legal requirements.
- Manage SFPUC watershed and right of way lands to protect and restore native ecological resources, protect and preserve cultural resources, and minimize wildfire risk.
- Manage and operate the Water Enterprise assets consistent with the Water Enterprise Environmental Stewardship Policy.

Sustainability (1) – *enhance sustainability in all system activities (environmental, economic, and social)*

Objectives:

- **Energy Utilization**
  - Maintain a gravity-driven water system.
  - Minimize the carbon footprint of all water system operations through sustainable design and operational practices.
- **Strategic Planning**
  - Continually evaluate and plan for changing environmental, fiscal, and social conditions, (e.g. climate change, development, regulation and other factors outside of the SFPUC's control) that influence the ability to achieve these Levels of Service.
- **Security**
  - Comply with or surpass all current and future federal and state physical and cyber security requirements.
- **Workforce Support**
  - Attract, develop, and retain a healthy, safe, well-trained, productive, and well-equipped workforce, reflective of the communities the SFPUC serves.
  - Provide and promote opportunities for knowledge transfer and staff development in areas critical to meeting the Levels of Service.
  - Implement the Water Enterprise Racial Equity Action Plan.

Sustainability (2) – *enhance sustainability in all system activities (environmental, economic, and social)*

Objectives:

- **Community Support**
  - Be mindful of and responsive to community needs throughout the SFPUC service area, as part of operating and maintaining the water system.
  - Maintain a proactive program of public outreach regarding all aspects of the water system.
  - Provide the public with appropriate educational opportunities by providing education programs and recreational opportunities (where appropriate) in cooperation with other local, state, and federal agencies.
  - Expand targeted, thoughtful efforts to build relationships with Federally Recognized Tribes and other California Native Americans.
  - Manage watershed and right of way lands to protect cultural and tribal resources.
- **Effective Asset Management**
  - Ensure cost-effective use of funds and other resources.
  - Implement effective asset management programs for all assets (facilities, lands, and equipment) consistent with the SFPUC's Asset Management Policy.
  - Adequately maintain Regional Water System assets - annually complete 80% of preventive maintenance work, 80% of corrective maintenance work, and have <10% of assets in unserviceable state.
  - Provide water meter data for fair and timely billing of both wholesale and retail water customers, as well as effective management of water supplies.

Hetchy Power's 5MW Solar System on Sunset Reservoir

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Thank you

AGENDA ITEM
Public Utilities Commission
City and County of San Francisco

DEPARTMENT Water Enterprise AGENDA NO. **7**

MEETING DATE November 28, 2023

Calendar: Regular Calendar
Project Manager: Steven Ritchie

Approve Amended and Updated Water Enterprise Levels of Service Goals and Objectives

Summary of Proposed Commission Action:	**Approve** the Amended and Updated Water Enterprise Level of Service Goals and Objectives which were originally approved in 2008 as part of the Water System Improvement Program Environmental Impact Report.
Background:	On October 30, 2008, by Resolution No. 08-0200, this Commission approved the Water System Level of Service (LOS) Goals and Objectives as part of its approval of the Water System Improvement Program (WSIP) Environmental Impact Report (EIR). The SFPUC developed the 2008 LOS Goals and Objectives to establish the basis for design and construction of facilities primarily in the San Francisco Regional Water System. Beginning in 2019, the SFPUC's Water Enterprise began developing more comprehensive LOS Goals and Objectives that addressed the operation and maintenance of its facilities, the Local Water System, and additional policy objectives of the SFPUC. Efforts to finalize and adopt these proposed amendments to the 2008 LOS Goals and Objectives were disrupted by the onset of the COVID-19 pandemic. In the ensuing time, further refinements were made resulting in the 2023 amendments. The result of these cumulative efforts is the attached proposed 2023 Amended and Updated Water Enterprise LOS Goals and Objectives. The LOS 2008 Goals and Objectives are summarized below. The complete proposed 2023 Amended and Updated Water Enterprise LOS Goals and Objectives are attached. **LOS 2008 Goals and Objectives** Water Quality – *maintain high water quality* • Design improvements to meet current and foreseeable future federal and state water quality requirements. • Provide clean, unfiltered water originating from Hetch Hetchy Reservoir and filtered water from local watersheds. • Continue to implement watershed protection measures.

	Seismic Reliability – *reduce vulnerability to earthquakes* • Design improvements to meet current seismic standards. • Deliver basic service to the three regions in the service area (East/South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. Basic service is defined as average winter-month usage, and the performance objective for design of the regional system is 229 mgd. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 104, 44, and 81 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively. • Restore facilities to meet average-day demand of up to 300 mgd within 30 days after a major earthquake. Delivery Reliability – *increase delivery reliability and improve ability to maintain the system* • Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service. • Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages. • Provide operational flexibility and system capacity to replenish local reservoirs as needed. • Meet the estimated average annual demand of up to 300 mgd under the conditions of one planned shutdown of a major facility for maintenance concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset. Water Supply – *meet customer water needs in non-drought and drought periods* • Meet average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non –drought years for system demands through 2018. • Meet dry-year delivery needs through 2018 while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts. • Diversify water supply options during non-drought and drought periods. • Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers. Sustainability – *enhance sustainability in all system activities* • Manage natural resources and physical systems to protect watershed ecosystems. • Meet, at a minimum, all current and anticipated legal requirements for protection of fish and wildlife habitat. • Manage natural resources and physical systems to protect public health and safety. Cost-effectiveness – *achieve a cost-effective, fully operational system* • Ensure cost-effective use of funds. • Maintain gravity-driven system. • Implement regular inspection and maintenance program for all facilities.

	LOS 2023 Amended and Updated Goals and Objectives The proposed amendments to the 2008 LOS Goals and Objectives would accomplish the following purposes: • Keeping the 2008 LOS Goals and Objectives largely intact with some modifications. • Expanding the LOS Goals and Objectives from designing and constructing facilities to include operating and maintaining facilities, and periodically reviewing the standards that are referenced in the LOS Goals and Objectives. • Expanding the LOS Goals and Objectives to include seismic reliability and delivery reliability for in-City facilities. • Expanding the LOS Goals and Objectives for Water Supply to: o Delete the "through 2018" text in the LOS goal addressing the ability to ultimately deliver up to 265 MGD of average annual demand with no more than 20% rationing. o Include maintaining a low level of residential per-capita demand in-City and maintaining a low level of Real Water Loss. • Expanding and renaming the Environmental Stewardship LOS Goals and Objectives to better reflect the SFPUC's commitment to Environmental Stewardship. • Including a new Sustainability Goals and Objectives section to ensure alignment with the SFPUC's Strategic Plan for Energy Utilization, Workforce Support, Community Support, Cost-effectiveness, and Strategic Planning. The attached table shows a comparison of the 2023 Amended and Updated LOS Goals and Objectives with the 2008 LOS Goals and Objectives.
Environmental Review:	On November 14, 2023, the San Francisco Planning Department determined the proposed 2023 Amended and Updated LOS Goals and Objectives would not meet the definition of a project under CEQA Guidelines sections 15378 and 15060(c)(2) because they would not result in a direct or indirect physical change in the environment, and even if they were a project under CEQA, the LOS Goals and Objectives would not require additional review per CEQA Guidelines section 15162, as there is no indication that any of the circumstances specified therein requiring additional review have occurred. An SFPUC memo to San Francisco Planning Department concerning the Level of Service updates and the San Francisco Planning Department determination that the Level of Service updates are not a project under CEQA can be found here:https://sfpuc.sharefile.com/d-s1239042066754248a798631801724e8b
Attachments:	1. Amended and Updated Water System LOS Goals and Objectives, November 2023 2. Comparison of 2008 Levels of Service and 2023 Amended and Updated Levels of Service.

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. _____

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) Water Enterprise operates the Regional Water System, which delivers water to communities in Alameda, San Mateo and Santa Clara Counties, and customers within the City and County of San Francisco; and

WHEREAS, On October 30, 2008, by Resolution No. 08-0200, this Commission approved the Water System Improvement Program (WSIP) to upgrade San Francisco's regional and local water system and achieve Level of Service Goals and Objectives, which include meeting average annual water demand of 265 million gallons per day (mgd) through 2018; reevaluation of forecasted 2030 Regional Water System demand projections and water supply options by 2018, and SFPUC decision in 2018 regarding Regional Water System deliveries after 2018; and meeting dry year delivery needs while limiting rationing to a maximum of twenty percent system wide during droughts; and

WHEREAS, Prior to approval of the WSIP, the San Francisco Planning Department prepared a Program Environmental Impact Report for the WSIP in compliance with the California Environmental Quality Act (CEQA) and the San Francisco Planning Commission certified the WSIP Final Program Environmental Impact Report in Planning Commission Motion No. 17734; and

WHEREAS, In its Resolution 08-0200, this Commission reviewed and considered the WSIP Program Environmental Impact Report and made findings about the identified significant impacts, mitigation measures and alternatives, as well as a statement of overriding considerations, as required by CEQA, and adopted a Mitigation Monitoring and Reporting Program as part of its approval of the WSIP; and

WHEREAS, on November 14, 2023, the San Francisco Planning Department determined that the proposed 2023 Amended and Updated LOS Goals and Objectives would not meet the definition of a project under CEQA Guidelines sections 15378 and 15060(c)(2) because they would not result in a direct or indirect physical change in the environment, and even if they were a project under CEQA, the amendments would not require additional review per CEQA Guidelines section 15162, as there is no indication that any of the circumstances specified therein requiring additional review have occurred; and

WHEREAS, The 2023 Amended and Updated LOS Goals and Objectives accomplish the following purposes, with reference to the 2008 LOS Goals and Objectives:

- Keeping the 2008 LOS Goals and Objectives largely intact with some modifications.

- Expanding the LOS Goals and Objectives from designing and constructing facilities to include operating and maintaining facilities, and periodically reviewing the standards that are referenced in the 2008 LOS Goals and Objectives.
- Expanding the LOS Goals and Objectives to include seismic reliability and delivery reliability for In-City facilities.
- Expanding the LOS Goals and Objectives for Water Supply to delete the "through 2018" text in the LOS goal addressing the ability to ultimately deliver up to 265 MGD of average annual demand with no more than 20% rationing and include maintaining a low level of residential per capita demand in-City and maintaining a low level of Real Water Loss.
- Expanding and renaming the Environmental Stewardship LOS Goals and Objectives to better reflect the SFPUC's commitment to Environmental Stewardship.
- Including a new Sustainability Goals and Objectives section to ensure alignment with the SFPUC's Strategic Plan for Energy Utilization, Workforce Support, Community Support, Cost-effectiveness, and Strategic Planning;

now, therefore, be it

RESOLVED, That this Commission hereby approves the 2023 Amended and Updated LOS Goals and Objectives.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of November 28, 2023.

_____

Secretary, Public Utilities Commission

DRAFT Amended and Updated Water System LOS Goals and Objectives November, 2023

In 2008, the SFPUC adopted Level of Service Goals and Objectives (Levels of Service or LOS) for the Water Enterprise in conjunction with the approval of the Water System Improvement Program Programmatic Environmental Impact Report. Those Levels of Service provided the basis for many of the WSIP project designs. These Amended and Updated LOS Goals and Objectives build from the base of those adopted in 2008. They generally retain the 2008 Levels of Service and carry them forward with additions to be sure that Levels of Service are maintained, to clarify them, and to cover areas that were not included in 2008, such as In-City Delivery Reliability and Workforce and Community Support.

GOAL: Drinking Water Quality – *maintain high water quality*

Objectives:

- Operate and maintain Regional Water System facilities to comply with or surpass all current and future federal and state drinking water quality requirements.
- Provide clean, unfiltered water originating from Hetch Hetchy Reservoir, filtered water from Bay Area watersheds, and appropriately treated water from other sources.
- Continue to implement watershed protection measures in the SFPUC's Peninsula, Alameda and Tuolumne watersheds to protect watershed ecosystems and drinking water quality.
- Maintain applied research, planning and outreach programs to ensure customer water quality expectations are met.
- Respond to 100% of In-City customer service inquiries or complaints about water quality within 2 business hours of initial contact and regional water system events upon exceedance of established threshold criteria.

GOAL: Regional Seismic Reliability – *maintain ability to meet current seismic standards*

Objectives:

- Design and construct water and related power system improvements to meet current seismic standards (e.g., Division of Safety of Dams), and regularly evaluate the ability of the system to meet current seismic standards.
- Maintain or resume delivery of 229 million gallons per day (mgd) to the three regions in the SFPUC service area (East/South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 104, 44, and 81 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively.
- Restore facilities to meet a daily demand of 265 mgd within 30 days after a major earthquake.

GOAL: Regional Delivery Reliability – *maintain delivery reliability during normal operations and maintenance*

Objectives:

- Meet all local, state, and federal water, power, and environmental regulations to support the proper operation of the water system and proper operation of power facilities[1] essential to the operation of the water system
- Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service.
- Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages.
- Maintain emergency response and recovery plans for major water delivery assets to minimize the duration of unplanned outages.
- Provide operational flexibility and system capacity to replenish local reservoirs as needed.
- Operate and maintain Regional Water System facilities to meet a daily peak demand of 300 mgd.
- Operate and maintain Regional Water System facilities to meet a daily demand of 265 mgd under the conditions of one planned shutdown of a major facility for maintenance (a reach of a San Joaquin Pipeline or a reach of a Bay Division Pipeline) concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset. During planned shutdowns of the Tuolumne River supply, the system is able to meet full winter demands (approximately 150 mgd). In the event of an unplanned loss of

[1] Kirkwood and Moccasin penstocks and powerhouses; electric transmission lines 3 – 6 and 9 - 11; and Intake, Warnerville and Calaveras substations/switchyards.

one water treatment plant, the water system can still meet a minimum delivery of 115 mgd, until the Tuolumne River supply can be returned to service. Planned shutdowns of the Tuolumne River supply are restricted to the period November 1 through March 31, and no longer than 60 days with special exceptions for shutdowns of up to 100 days. The return-to-service goal for planned shutdowns of the Tuolumne River supply is no more than 7 days.

- Operate upcountry and Bay Area water reservoirs to optimize water supply and comply with environmental regulations while mindful of downstream conditions.
- Provide Wholesale Customers with timely information and data sufficient to support operational decision-making of their retail systems.

GOAL: In-City Seismic Reliability – *reduce vulnerability to earthquakes*

Objectives:

- **Storage**. Maintain seismically reliable potable water storage to provide at least 20 pounds per square inch (psi) pressure throughout each pressure zone.
- **Fire Suppression.** In conjunction with the Emergency Firefighting Water System, within three hours of a major earthquake, provide at least 50% of anticipated water demand from post-seismic fires in each of 46 Fire Response Areas, and at least 90% of City-wide average water demand from post-seismic fires.
- **Water Supply Restoration.** Deliver basic life sustaining water supply (for hygiene, sanitation, and consumption if boiled or disinfected) and ensure potable water system restoration.
    - Within 24 hours, limited network of critical transmission mains (greater than or equal to 12-inch diameter) that serve major hospitals[2] will be pressurized.
    - Within 72 hours, limited network of critical secondary distribution system pipelines (< 12-inch diameter) will be pressurized.
    - Within 7 days, limited network of critical transmission and distribution mains will be disinfected and restored to potable service.
    - Within 90 days, secondary distribution system will be restored to potable service.
    - Utilize alternative water sources such as groundwater to supplement Sunset & Sutro Reservoirs.

GOAL: In-City Delivery Reliability – *reliably deliver water to all in-City retail customers*

Objectives:

- Maintain potable water storage to provide at least two days of winter day demand plus minimum 2 hours of fire suppression at 3 hydrants (1,500 gallons per minute [gpm] from each hydrant) in each pressure zone with storage greater than one million gallons, and two hydrants (1,500 gpm from each hydrant) for each pressure zone with storage ≤ one million gallons.
- Maintain minimum pressure of 20 psi throughout the distribution system.
- Respond to 100% of customer service inquiries or complaints regarding water service within 2 business hours of initial contact.
- Maintain deliveries such that ≤ 1.0% of service connections are without water for up to 4 hours as a result of an unplanned outage per year.
- Maintain deliveries such that ≤ 0.5% of service connections are without water for 8 hours or longer as a result of an unplanned outage per year.

GOAL: Water Supply – *meet customer water needs in non-drought and drought periods*

Objectives:

- Meet an average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non–drought years consistent with the Water Supply Agreement between San Francisco and its Wholesale Customers in Alameda, San Mateo, and Santa Clara Counties.
- Meet dry-year delivery needs while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts.
- Diversify and improve use of new water sources and drought management, including groundwater, recycled water, conservation, transfers, storage expansion, purified water, desalinated water, and technological innovations that can increase supply and/or water use efficiency.

[2] Current goal is major trauma centers (UCSF Medical Center and SF General Hospital) but may be expanded to additional critical care facilities in coordination with San Francisco Department of Emergency Management and other City agencies.

- Maintain San Francisco retail residential potable water use below 45 gallons per capita per day.
- Realize annual Real Water Losses[3] of less than 10% of water supplied to San Francisco.
- Meet 80% of San Francisco's Recreation and Parks Department irrigation demands with recycled water by December 31, 2025.

GOAL: Environmental Stewardship – ***maintain high environmental performance standards***

Objectives:

- Meet all current and anticipated environmental legal requirements.
- Manage SFPUC watershed and right of way lands to protect and restore native ecological resources, protect and preserve cultural resources, and minimize wildfire risk.
- Manage and operate the Water Enterprise assets consistent with the Water Enterprise Environmental Stewardship Policy.

GOAL: Sustainability – ***enhance sustainability in all system activities (environmental, economic, and social)***

Objectives:

- **Energy Utilization**
  - Maintain a gravity-driven water system.
  - Minimize the carbon footprint of all water system operations through sustainable design and operational practices.
- **Security**
  - Comply with or surpass all current and future federal and state physical and cyber security requirements.
- **Workforce Support**
  - Attract, develop, and retain a healthy, safe, well-trained, productive, and well-equipped workforce, reflective of the communities the SFPUC serves.
  - Provide and promote opportunities for knowledge transfer and staff development in areas critical to meeting the Levels of Service.
  - Implement the Water Enterprise Racial Equity Action Plan.
- **Community Support**
  - Be mindful of and responsive to community needs throughout the SFPUC service area, as part of operating and maintaining the water system.
  - Maintain a proactive program of public outreach regarding all aspects of the water system.
  - Provide the public with appropriate educational opportunities by providing education programs and recreational opportunities (where appropriate) in cooperation with other local, state, and federal agencies.
  - Expand targeted, thoughtful efforts to build relationships with Federally Recognized Tribes and other California Native Americans.[4]
  - Manage watershed and right of way lands to protect cultural and tribal resources.
- **Effective Asset Management**
  - Ensure cost-effective use of funds and other resources.
  - Implement effective asset management programs for all assets (facilities, lands, and equipment) consistent with the SFPUC's Asset Management Policy.
  - Adequately maintain Regional Water System assets - annually complete 80% of preventive maintenance work, 80% of corrective maintenance work, and have <10% of assets in unserviceable state.
  - Provide water meter data for fair and timely billing of both wholesale and retail water customers, as well as effective management of water supplies.
- **Strategic Planning**
  - Continually evaluate and plan for changing environmental, fiscal, and social conditions, (e.g. climate change, development, regulation and other factors outside of the SFPUC's control) that influence the ability to achieve these Levels of Service.

[3] Water that escapes the water distribution system, including leakage and storage overflows.

[4] California Governor Executive Order B-10-11 and Native American Heritage Commission

COMPARISON OF 2023 WATER LOS GOALS AND OBJECTIVES TO 2008 VERSION

2023 Drinking Water Quality – maintain high water quality

- Operate and maintain Regional Water System facilities to comply with or surpass all current and future federal and state drinking water quality requirements.
- Provide clean, unfiltered water originating from Hetch Hetchy Reservoir, filtered water from Bay Area watersheds, and appropriately treated water from other sources.
- Continue to implement watershed protection measures in the SFPUC's Peninsula, Alameda and Tuolumne watersheds to protect watershed ecosystems and drinking water quality.
- Maintain applied research, planning and outreach programs to ensure customer water quality expectations are met.
- Respond to 100% of In-City customer service inquiries or complaints regarding water quality within 2 business hours of initial contact and regional water system events upon exceedance of established threshold criteria.

2008 Water Quality – maintain high water quality

- Design improvements to meet current and foreseeable future federal and state water quality requirements.
- Provide clean, unfiltered water originating from Hetch Hetchy Reservoir and filtered water from local watersheds.
- Continue to implement watershed protection measures.

2023 Regional Seismic Reliability – maintain ability to meet current seismic standards

- Design and construct water and related power system improvements to meet current seismic standards (e.g., Division of Safety of Dams), and regularly evaluate the ability of the system to meet current seismic standards.
- Maintain or resume delivery of 229 million gallons per day (mgd) to the three regions in the SFPUC service area (East/South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 104, 44, and 81 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively.
- Restore facilities to meet a daily demand of 265 mgd within 30 days after a major earthquake.

2008 Seismic Reliability – reduce vulnerability to earthquakes

- Design improvements to meet current seismic standards.
- Deliver basic service to the three regions in the service area (East/South Bay, Peninsula, and San Francisco) within 24 hours after a major earthquake. Basic service is defined as average winter-month usage, and the performance objective for design of the regional system is 229 mgd. The performance objective is to provide delivery to at least 70 percent of the turnouts in each region, with 104, 44, and 81 mgd delivered to the East/South Bay, Peninsula, and San Francisco, respectively.
- Restore facilities to meet average-day demand of up to 300 mgd within 30 days after a major earthquake.

2023 Regional Delivery Reliability – maintain delivery reliability during normal operations and maintenance

- Meet all local, state, and federal water, power, and environmental regulations to support the proper operation of the water system and proper operation of power facilities[1] essential to the operation of the water system.
- Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service.
- Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages.
- Maintain emergency response and recovery plans for major water delivery assets to minimize the duration of unplanned outages.
- Provide operational flexibility and system capacity to replenish local reservoirs as needed.
- Operate and maintain Regional Water System facilities to meet a daily peak demand of 300 mgd.
- Operate and maintain Regional Water System facilities to meet a daily demand of 265 mgd under the conditions of one planned shutdown of a major facility for maintenance (a reach of a San Joaquin Pipeline or a reach of a Bay Division Pipeline) concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset. During planned shutdowns of the Tuolumne River supply, the system is able to meet full winter demands (approximately 150 mgd). In the event of an unplanned loss of one water treatment plant, the water system can still meet a minimum delivery of 115 mgd, until the Tuolumne River supply can be returned to service. Planned shutdowns of the Tuolumne River supply are restricted to the period November 1 through March 31, and no longer than 60 days with special exceptions for shutdowns of up to 100 days. The return-to-service goal for planned shutdowns of the Tuolumne River supply is no more than 7 days.
- Operate upcountry and Bay Area water reservoirs to optimize water supply and comply with environmental regulations while mindful of downstream conditions.
- Provide Wholesale Customers with timely information and data sufficient to support operational decision-making of their retail systems.

2008 Delivery Reliability – increase delivery reliability and improve ability to maintain the system

- Provide operational flexibility to allow planned maintenance shutdown of individual facilities without interrupting customer service.
- Provide operational flexibility to minimize the risk of service interruption due to unplanned facility upsets or outages.
- Provide operational flexibility and system capacity to replenish local reservoirs as needed.
- Meet the estimated average annual demand of up to 300 mgd under the conditions of one planned shutdown of a major facility for maintenance concurrent with one unplanned facility outage due to a natural disaster, emergency, or facility failure/upset.

[1] Kirkwood and Moccasin penstocks and powerhouses; electric transmission lines 3-6 and 9-11; and Intake, Warnerville and Calaveras substations/switchyards

2023 In-City Seismic Reliability – reduce vulnerability to earthquakes

- **Storage**. Maintain seismically reliable potable water storage to provide at least 20 pounds per square inch (psi) pressure throughout each pressure zone.
- **Fire Suppression.** In conjunction with the Emergency Firefighting Water System, within three hours of a major earthquake, provide at least 50% of anticipated water demand from post-seismic fires in each of 46 Fire Response Areas, and at least 90% of City-wide average water demand from post-seismic fires.
- **Water Supply Restoration.** Deliver basic life sustaining water supply (for hygiene, sanitation, and consumption if boiled or disinfected) and ensure potable water system restoration.
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    - Within 90 days, secondary distribution system will be restored to potable service.
    - Utilize alternative water sources such as groundwater to supplement Sunset & Sutro Reservoirs

2008 In-City Seismic Reliability – reduce vulnerability to earthquakes

Didn't exist.

[2] Current goal is major trauma centers (UCSF Medical Center and SF General Hospital) but may be expanded to additional critical care facilities in coordination with San Francisco Department of Emergency Management and other City agency planning.

2023 In-City Delivery Reliability – reliably deliver water to all in-City retail customers

- Maintain potable water storage to provide at least two days of winter day demand plus minimum 2 hours of fire suppression at 3 hydrants (1,500 gallons per minute [gpm] from each hydrant) in each pressure zone with storage greater than one million gallons, and two hydrants (1,500 gpm from each hydrant) for each pressure zone with storage ≤ one million gallons.
- Maintain minimum pressure of 20 psi throughout the distribution system.
- Respond to 100% of customer service inquiries or complaints regarding water service within 2 business hours of initial contact.
- Maintain deliveries such that ≤ 1.0% of service connections are without water for up to 4 hours as a result of an unplanned outage per year.
- Maintain deliveries such that ≤ 0.5% of service connections are without water for 8 hours or longer as a result of an unplanned outage per year.

2008 In-City Delivery Reliability – reliably deliver water to all in-City retail customers

Didn't exist

COMPARISON OF 2023 WATER LOS GOALS AND OBJECTIVES TO 2008 VERSION

2023 Water Supply – meet customer water needs in non-drought and drought periods

- Meet an average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non–drought years consistent with the Water Supply Agreement between San Francisco and its Wholesale Customers in Alameda, San Mateo, and Santa Clara Counties.
- Meet dry-year delivery needs while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts.
- Diversify and improve use of new water sources and drought management, including groundwater, recycled water, conservation, transfers, storage expansion, purified water, desalinated water, and technological innovations that can increase supply and/or water use efficiency.
- Maintain San Francisco retail residential potable water use below 45 gallons per capita per day.
- Realize annual Real Water Losses[3] of less than 10% of water supplied to San Francisco.
- Meet 80% of San Francisco's Recreation and Parks Department irrigation demands with recycled water by December 31, 2025.

2008 Water Supply – meet customer water needs in non-drought and drought periods

- Meet average annual water demand of 265 mgd from the SFPUC watersheds for retail and wholesale customers during non – drought years for system demands through 2018.
- Meet dry-year delivery needs through 2018 while limiting rationing to a maximum 20 percent system-wide reduction in water service during extended droughts.
- Diversify water supply options during non-drought and drought periods.
- Improve use of new water sources and drought management, including groundwater, recycled water, conservation, and transfers.

[3] Water that escapes the water distribution system, including leakage and storage overflows.

2023 Environmental Stewardship - maintain high environmental performance standards

- Meet all current and anticipated environmental legal requirements.
- Manage SFPUC watershed and right of way lands to protect and restore native ecological resources, protect and preserve cultural resources, and minimize wildfire risk.
- Manage and operate the Water Enterprise assets consistent with the Water Enterprise Environmental Stewardship Policy.

2008 Sustainability – enhance sustainability in all system activities

- Manage natural resources and physical systems to protect watershed ecosystems.
- Meet, at a minimum, all current and anticipated legal requirements for protection of fish and wildlife habitat.
- Manage natural resources and physical systems to protect public health and safety.

2023 Sustainability – enhance sustainability in all system activities (environmental, economic, and social)

- **Energy Utilization**
  - Maintain a gravity-driven water system.
  - Minimize the carbon footprint of all water system operations through sustainable design and operational practices.
- **Security**
  - Comply with or surpass all current and future federal and state physical and cyber security requirements.
- **Workforce Support**
  - Attract, develop, and retain a healthy, safe, well-trained, productive, and well-equipped workforce, reflective of the communities the SFPUC serves.
  - Provide and promote opportunities for knowledge transfer and staff development in areas critical to meeting the Levels of Service.
  - Implement the Water Enterprise Racial Equity Action Plan.
- **Community Support**
  - Be mindful of and responsive to community needs throughout the SFPUC service area, as part of operating and maintaining the water system.
  - Maintain a proactive program of public outreach regarding all aspects of the water system.
  - Provide the public with appropriate educational opportunities by providing education programs and recreational opportunities (where appropriate) in cooperation with other local, state, and federal agencies.
  - Expand targeted, thoughtful efforts to build relationships with Federally Recognized Tribes and other California Native Americans.[4]
  - Manage watershed and right of way lands to protect cultural and tribal resources.
- **Effective Asset Management**
  - Ensure cost-effective use of funds and other resources.
  - Implement effective asset management programs for all assets (facilities, lands, and equipment) consistent with the SFPUC's Asset Management Policy.
  - Adequately maintain Regional Water System assets - annually complete 80% of preventive maintenance work, 80% of corrective maintenance work, and have <10% of assets in unserviceable state.
  - Provide water meter data for fair and timely billing of both wholesale and retail water customers, as well as effective management of water supplies.
- **Strategic Planning**
  - Continually evaluate and plan for changing environmental, fiscal, and social conditions, (e.g., climate change, development, regulation and other factors outside of the SFPUC's control) that influence the ability to achieve these Levels of Service.

2008 Cost-effectiveness – achieve a cost-effective, fully operational system

- Ensure cost-effective use of funds.
- Maintain gravity-driven system.
- Implement regular inspection and maintenance program for all facilities.

[4] California Governor Executive Order B-10-11 and Native American Heritage Commission

PUBLIC UTILITIES COMMISSION

City and County of San Francisco

RESOLUTION NO. **23-0210**

WHEREAS, The San Francisco Public Utilities Commission (SFPUC) Water Enterprise operates the Regional Water System, which delivers water to communities in Alameda, San Mateo and Santa Clara Counties, and customers within the City and County of San Francisco; and

WHEREAS, On October 30, 2008, by Resolution No. 08-0200, this Commission approved the Water System Improvement Program (WSIP) to upgrade San Francisco's regional and local water system and achieve Level of Service Goals and Objectives, which include meeting average annual water demand of 265 million gallons per day (mgd) through 2018; reevaluation of forecasted 2030 Regional Water System demand projections and water supply options by 2018, and SFPUC decision in 2018 regarding Regional Water System deliveries after 2018; and meeting dry year delivery needs while limiting rationing to a maximum of twenty percent system wide during droughts; and

WHEREAS, Prior to approval of the WSIP, the San Francisco Planning Department prepared a Program Environmental Impact Report for the WSIP in compliance with the California Environmental Quality Act (CEQA) and the San Francisco Planning Commission certified the WSIP Final Program Environmental Impact Report in Planning Commission Motion No. 17734; and

WHEREAS, In its Resolution 08-0200, this Commission reviewed and considered the WSIP Program Environmental Impact Report and made findings about the identified significant impacts, mitigation measures and alternatives, as well as a statement of overriding considerations, as required by CEQA, and adopted a Mitigation Monitoring and Reporting Program as part of its approval of the WSIP; and

WHEREAS, on November 14, 2023, the San Francisco Planning Department determined that the proposed 2023 Amended and Updated LOS Goals and Objectives would not meet the definition of a project under CEQA Guidelines sections 15378 and 15060(c)(2) because they would not result in a direct or indirect physical change in the environment, and even if they were a project under CEQA, the amendments would not require additional review per CEQA Guidelines section 15162, as there is no indication that any of the circumstances specified therein requiring additional review have occurred; and

WHEREAS, The 2023 Amended and Updated LOS Goals and Objectives accomplish the following purposes, with reference to the 2008 LOS Goals and Objectives:

- Keeping the 2008 LOS Goals and Objectives largely intact with some modifications.

- Expanding the LOS Goals and Objectives from designing and constructing facilities to include operating and maintaining facilities, and periodically reviewing the standards that are referenced in the 2008 LOS Goals and Objectives.
- Expanding the LOS Goals and Objectives to include seismic reliability and delivery reliability for In-City facilities.
- Expanding the LOS Goals and Objectives for Water Supply to delete the "through 2018" text in the LOS goal addressing the ability to ultimately deliver up to 265 MGD of average annual demand with no more than 20% rationing and include maintaining a low level of residential per capita demand in-City and maintaining a low level of Real Water Loss.
- Expanding and renaming the Environmental Stewardship LOS Goals and Objectives to better reflect the SFPUC's commitment to Environmental Stewardship.
- Including a new Sustainability Goals and Objectives section to ensure alignment with the SFPUC's Strategic Plan for Energy Utilization, Workforce Support, Community Support, Cost-effectiveness, and Strategic Planning;

now, therefore, be it

RESOLVED, That this Commission hereby approves the 2023 Amended and Updated LOS Goals and Objectives.

I hereby certify that the foregoing resolution was adopted by the Public Utilities Commission at its meeting of November 28, 2023.

Secretary, Public Utilities Commission