

525 Golden Gate Avenue, 13th Floor San Francisco, CA 94102 Τ 415.554.3155 F 415.554.3161 ττγ 415.554.3488

September 1, 2015

The Honorable Assembly Member Mike A. Gipson, Chair The Honorable Assembly Member Richard D. Roth, Vice-Chair California State Assembly Joint Legislative Audit Committee 1020 N. Street, Room 107 Sacramento, CA 95814

The Honorable Timothy Strack, Chair California Seismic Safety Commission 1755 Creekside Oaks Drive, Suite 100 Sacramento, CA 95833

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

Subject: San Francisco Public Utilities Commission Fiscal Year 2014-2015 Annual Report Water System Improvement Program

Dear Assembly Member Gipson, Senator Roth, Commissioner Strack, and Dr. Smith:

In accordance with Section 73502(c) of the California Water Code, the San Francisco Public Utilities Commission (SFPUC) is pleased to submit the Annual Report describing progress made on the implementation of the Water System Improvement Program (WSIP) during Fiscal Year (FY) 2014-2015.

The WSIP is a multi-billion dollar, multi-year program to upgrade the SFPUC's Regional and Local Water Systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner 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. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability through the year 2030, and meet water supply objectives until the year 2018.

Section 1 of the attached report describes the overall progress made on the WSIP's Regional Program during FY 2014-2015 (July 1, 2014 through June 30, 2015) and Section 2 focuses on the major programmatic initiatives undertaken during that time period. Included in Section 3 is a summary of controlling and tracking the WSIP project schedules during FY 2014-2015. The achievements and challenges encountered while implementing the program during FY 2014-2015 are summarized in Section 4. Finally, Section 5 of the report highlights the current status of the specific projects mentioned in California Assembly Bill (AB) 1823.

Edwin M. Lee Mayor

Ann Moller Caen President

Francesca Vietor Vice President

> Vince Courtney Commissioner

> > Anson Moran Commissioner

Ike Kwon Commissioner

Harlan L. Kelly, Jr. General Manager



SFPUC – WSIP FY 2014-2015 Annual Report September 1, 2015

Significant progress was made on the implementation of the WSIP during FY 2014-2015. Between July 1, 2014 and June 30, 2015 the overall completion of the Regional Program increased from 81.4% to 88.7%. We are on track to complete the construction of a new seismically-designed lifeline that will carry water from the Sunol Valley in the East Bay to the mid-Peninsula by the end of 2015. That lifeline involves six segments contracted out separately and construction activities have now been completed on five of these segments.

A relatively small amount of pre-construction work (planning, environmental review/permitting, real estate acquisition, engineering design, and bid & award) remains on the WSIP and the focus of the program continues to be on construction as well as administrative closeout activities of some of the larger projects that have recently completed construction. As of the end of the reporting period, planning activities are complete at 100%, whereas environmental, design, and construction efforts are 97.0%, 98.1%, and 87.7% complete, respectively.

During the reporting period, SFPUC awarded one construction contract and issued the construction Notice-to-Proceed (NTP). Furthermore, four construction contracts reached substantial completion, another four construction contracts reached final completion, and five projects reached final administrative closeout/completion. As of June 30, 2015, construction was in progress on 13 regional projects valued at \$2.5 billion, while construction had been completed on 32 other regional projects valued at \$1.096 billion.

As requested in the California Seismic Safety Commission's letter of October 13, 2014 to the Joint Legislative Audit Committee, the SFPUC is pleased to continue to report on the status of all phases of the Peninsula Pipeline Seismic Upgrade (PPSU) project. Specifically, Phases 1 and 2 will complete construction by the end of 2015 with final administrative closeout in July 2016. Phase 3, a non-WSIP project that makes a relatively small contribution to regional seismic level of services (LOS) goals under WSIP, is on track for completion by June 2018.

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

Sincerely,

Harlan L. Kelly, Jr. General Manager San Francisco Public Utilities Commission

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Attachment

CC: The Honorable Ann Moller Caen- President, SFPUC Commission

The Honorable Francesca Vietor - Vice-President, SFPUC Commission

The Honorable Vince Courtney - Commissioner, SFPUC Commission

The Honorable Anson Moran - Commissioner, SFPUC Commission

The Honorable Ike Kwon- Commissioner, SFPUC Commission

Nicole Sandkulla - Chief Executive Officer and General Manager, BAWSCA

Mark Starr - Deputy Director, Center for Environmental Health, California Department of Public Health

William Draper – Division Chief, Drinking Water & Radiation Laboratory Branch, California Department of Public Health

Cindy Forbes – Deputy Director, Division of Drinking Water, State Water Resources Control Board

Bruce Burton – Assistant Deputy Director, Northern California Drinking Water Field Operations Branch, State Water Resources Control Board

Stefan Cajina - Region Chief, Northern California Drinking Water Field Operations Branch, State Water Resources Control Board

Robert Brownwood - San Francisco District Engineer, Drinking Water Field Operations Branch, State Water Resources Control Board

Richard McCarthy - Executive Director, California Seismic Safety Commission



HETCH HETCHY WATER SYSTEM IMPROVEMENT PROGRAM

2014-15 Annual Report

Water System Improvement Program

Rebuilding Today for a Better Tomorrow



Regional Water System

September 1, 2015

ANNUAL REPORT WATER SYSTEM IMPROVEMENT PROGRAM

EXECUTIVE SUMMARY

Pursuant to the reporting requirements of the Wholesale Regional Water System Security and Reliability Act, the San Francisco Public Utilities Commission (SFPUC) submits this report documenting the progress achieved on the Water System Improvement Program (WSIP) during Fiscal Year (FY) 2014-2015 (July 1, 2014 through June 30, 2015). This report only addresses the WSIP regional projects (referred to as the Regional Program). These are the projects that benefit both San Francisco retail customers and the SFPUC's suburban wholesale customers. The Wholesale Regional Water System Security and Reliability Act does not require the SFPUC to report on the WSIP local projects (referred to as the Local Program), which primarily benefits San Francisco retail customers.

The WSIP is a multi-billion dollar, multi-year program to upgrade the SFPUC's Regional and Local Water Systems. The program will deliver capital improvements that enhance the SFPUC's ability to provide reliable, affordable, high quality drinking water in an environmentally sustainable manner 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. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability goals through the year 2030, and fulfill water supply objectives until the year 2018.

Significant progress was made on the implementation of the WSIP during FY 2014-2015. Between July 1, 2014 and June 30, 2015, the overall completion of the Regional Program increased from 81.4% to 88.7%. We are on track to complete the construction of a new seismically-designed lifeline that will carry water from the Sunol Valley in the East Bay to the mid-Peninsula by the end of 2015. That lifeline involves six segments contracted out separately and construction activities have now been completed on five of these segments. Construction of the remaining segment - New Irvington Tunnel – is forecasted to be substantially complete by the end of September 2015.

Minimal pre-construction work (planning, environmental review/permitting, real estate acquisition, engineering design, and bid & award) remains on the WSIP and as the last few years, the focus of the program has been on construction activities. Construction of 13 regional projects valued at \$2.5 billion was in progress as of the end of FY 2014-15; and construction of 32 regional projects has been completed as of the end of FY2014-15. A major focus of the program going forward will be administrative closeout of major projects that will complete construction over the next several years. As of the end of the reporting period, planning activities are complete at 100.0%, whereas environmental, design and construction efforts are 97.0%, 98.1% and 87.7% complete, respectively.

Notable achievements during FY 2014-2015 include:

- Planning Phase completion of one project
- Completion of Environmental Review and Approval of two projects
- Advertisement of two contracts

- Award approval of one contract
- Construction notice-to-proceed (NTP) of one contract
- Construction substantial completion of four contracts
- Construction final completion of four contracts
- Project completion/administrative closeout of five projects

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APPE		B: Current Approved WSIP Schedule - Regional Projects

LIST OF ACRONYMS

AB	Assembly Bill
APWA	American Public Works Association
ARM	Active Risk Management
BAWSCA	Bay Area Water Supply and Conservation Agency
BDPL	Bay Division Pipeline
BHR	Bioregional Habitat Restoration
CAMP	Comprehensive Air Monitoring Plan
CDRP	Calaveras Dam Replacement Project
CEQA	California Environmental Quality Act
CM	Construction Management
CMAA	Construction Management Association of America
CSPL2	Crystal Springs Pipeline No. 2
CS/SA	Crystal Springs/San Andreas
EIR	Environmental Impact Report
ENR	Engineering News-Record
FY	Fiscal Year
HTWTP	Harry Tracy Water Treatment Plant
JOC	Job Order Contract
LOS	Level of Service
NIT	New Irvington Tunnel
NOA	Natural Occurring Asbestos
NOC	Notice of Change
NTP	Notice to Proceed
PCCP	Pre-stressed Concrete Cylinder Pipe
PTFE	Polytetrafluoroethylene
RBOC	Revenue Bond Oversight Committee
ROW	Right-of-Way
RWBC	R.W. Block Consulting, Inc.
SFPUC	San Francisco Public Utilities Commission
SSIP	Sewer System Improvement Program
SJPL	San Joaquin Pipeline
SVWTP	Sunol Valley Water Treatment Plant
WSIP	Water System Improvement Program
WSTD	Water Enterprise, Water Supply and Treatment Division

1.0 OVERALL PROGRAM PROGRESS (FY 2014-2015)

Significant progress has been made on the implementation of the Water System Improvement Program (WSIP) during Fiscal Year (FY) 2014-2015 (July 1, 2014 through June 30, 2015) with overall progress increasing from 81.4% to 88.7%. Overall, actual performance (88.7%) on the Regional Program is 0.3% behind of planned performance (89.0%) based on the approved March 2014 Revised WSIP.

As indicated in Table 1-1, planning activities are complete at 100.0%, whereas environmental, design and construction efforts are 97.0%, 98.1% and 87.7% complete, respectively.

Phase	June 3	0, 2014	June 30, 2015		
T Huse	% Planned ²	% Actual	% Planned	% Actual	
Planning	99.2%	99.0%	100.0%	100.0%	
Environmental	97.1%	97.1%	97.6%	97.0%	
Design	97.4%	97.1%	99.5%	98.1%	
Bid & Award	93.1%	93.1%	96.6%	96.2%	
Construction	78.7%	80.0%	87.8%	87.7%	
Closeout	49.2%	45.1%	63.2%	57.1%	
Program Cumulative	80.4%	81.4%	89.0%	88.7%	

Table 1-1: WSIP Regional Program Performance¹

¹ Percent completion does not include Support Projects in the WSIP Regional Program.

² Incorporates the March 2014 Revised WSIP schedule revisions approved by the Commission in April 2014 and reported in the Notice of Change (NOC) report dated June 20, 2014.

Minimal pre-construction work (planning, environmental review/permitting, real estate acquisition, design, and bid & award) remains on the WSIP and as of the last few years, the focus of the program has been on construction activities and administrative closeout of completed projects. Table 1-2 compares the number of projects in each phase and their corresponding total approved value at the beginning of the reporting period (June 30, 2014) to those at the end of the reporting period (June 30, 2015). As of the end of the reporting period, 13 regional projects are in construction with a total value of \$2,517 million and 32 additional projects with a total value of \$1,096 million have been completed. One regional project is in pre-construction.

Project	June 30, 2	014 Status	June 30, 2015 Status		
Phase	No. of Projects	Total Project Value (\$M) ¹	No. of Projects ³	Total Project Value (\$M)	
Planning	1	\$30	0	\$0	
Design	1	\$117	1	\$30	
Bid & Award	0	\$0	0	\$0	
Construction	14	\$2,725	13	\$2,517	
Closeout	3	\$219	0	\$0	
Completed	27	\$551	32	\$1,096	
Not Applicable ²	2	\$32	2	\$32	
Total	48	\$3,674	48	\$3,675	

Table 1-2: Status of WSIP Regional Projects

¹ Based on budget approved as part of the March 2014 Revised WSIP.

² The "Not Applicable" category is for two Support projects, the Long-Term Mitigation Endowment and the Watershed Environmental Improvement Program, that do not have construction activities.

³ The Long-Term Mitigation Endowment project was added to the program in FY 2013-2014. This project was previously part of the Bioregional Habitat Restoration Project.

To better illustrate the progress made during the FY 2014-2015, some of the key programlevel data included in Table 1-2 are graphically presented in Figures 1-1 and 1-2.

Figure 1-1: Progress Made in Terms of No. of Regional Projects





Figure 1-2: Progress Made in Terms of Regional Project Values

During the reporting period, the San Francisco Public Utilities Commission (SFPUC) Commission ("Commission") issued one Notice to Proceed (NTP) construction contract. Furthermore, four construction contracts reached substantial completion, four construction contracts reached final completion, and five project reached completion. These milestones, as well as other important milestones reached during the reporting period, are summarized below.

Planning Phase Completion:

• Alameda Creek Recapture Project (November 14, 2014)

Environmental Phase (Environmental Review and Permitting) Completion:

- BDPL Reliability Upgrade/Tunnel (July 31, 2014)
- Bioregional Habitat Restoration (February 13, 2015)

Advertisement:

• Regional Groundwater Storage and Recovery (WD-2668) (September 22, 2014)

Construction Award:

• Regional Groundwater Storage and Recovery (WD-2668) (February 2, 2015)

Construction NTP:

• Regional Ground Water Storage and Recovery (WD-2668) (April 6, 2015)

Construction Substantial Completion:

- Bioregional Habitat Restoration (WD-2652) San Antonio Creek (September 4, 2014)
- San Antonio Backup Pipeline (December 31, 2014)
- Bioregional Habitat Restoration (WD-2641R) Homestead Pond, San Andreas Reservoir Wetlands, Adobe Gulch Grasslands (February 28, 2015)
- BDPL Reliability Upgrade/Tunnel (May 20, 2015)

Construction Final Completion:

- Bioregional Habitat Restoration (WD-2644) Goat Rock (September 4, 2014)
- Tesla Treatment Facility Project (October 31, 2014)
- Crystal Spring/San Andreas Transmission Upgrade (December 31, 2014)
- San Joaquin Pipeline System (HH-935A, Crossovers) (May 12, 2015)

Project Administrative Closeout/Completion:

- SVWTP Expansion and Treated Water Reservoir (October 31, 2014)
- Rehabilitation of Existing San Joaquin Pipelines (October 31, 2014)
- Crystal Springs Pipeline No.2 Replacement (December 31, 2014)
- Tesla Treatment Facility Project (January 30, 2015)
- Crystal Springs/San Andreas Transmission Upgrade (June 30, 2015)

2.0 PROGRAMMATIC INITIATIVES (FY 2014-2015)

This section describes some of the more important programmatic initiatives undertaken during FY 2014-2015.

2.1 Program Lessons Learned Audit by RBOC (FY 2014-2015)

The SFPUC Revenue Bond Oversight Committee (RBOC) engaged R.W. Block Consulting, Inc. (RWBC) to conduct an evaluation of the knowledge management practices utilized by the WSIP and the applicability of such lessons learned to the Sewer System Improvement Program (SSIP). The focus of this engagement was to capture lessons learned from the WSIP and, through a comparison of program features and characteristics between the WSIP and SSIP, provide recommendations as to which WSIP lessons learned are most applicable to the SSIP program.

RWBC visited five active WSIP construction projects (New Irvington Tunnel; Crystal Springs/San Andreas Transmission Upgrade; Harry Tracy Water Treatment Plant Long-Term Improvements; Calaveras Dam Replacement Project; and Bay Tunnel) in the course of their data gathering. In addition to visiting sites and interviewing project staff, RWBC requested numerous project and program reports, documents and records which were provided by WSIP program management. RWBC also interviewed WSIP and SSIP executive staff, performed extensive document reviews and issued follow-up document requests.

RWBC distilled 585 lessons learned into 10 executive level knowledge management themes and prioritized these 10 themes based on the potential impact they would have on the SSIP and WSIP, indicating the point in the capital development cycle where each theme would impact the SSIP and WSIP. RWBC received RBOC and SFPUC comments on their submitted Final Draft Report, from which the following summary comments and recommendations are abstracted:

- Budgeting: consider the utilization of a 'stress test' of future programs budgets that is, conducting an evaluation of impacts to project/program budgets utilizing scenario analysis such as modifying contingency rates, application of historical WSIP change order rates to forecast construction costs, etc. to evaluate potential budget impacts.
- Application of Contingency: consider utilization of a more flexible approach to assignment of contingency to project budgets to be reflective of project-specific risk profiles.
- The Lessons Learned Process: could be further enhanced to fully leverage the amount of lessons learned being generated through various presentations, forms, and shutdown reports, in a more formal knowledge transfer process.
- **Project Delivery:** consider development of performance metrics (such as daily unit costs for key project delivery costs) against which various elements of project delivery performance can be measured.
- **Contracting:** consider added coordination of requirements set forth under the technical specifications and general conditions to ensure that potential for conflicting terms or conditions contained in these two key contract documents is minimized.
- **Change Management:** in general, the change management process utilized by the WSIP is robust and has shown to work well on a wide range of projects and difficult negotiating conditions.
- **Bidding:** the traditional design-bid-build with selected qualification utilized on WSIP to deliver most of the projects worked well. Bid results show over \$400 million in bid savings realized on the WSIP utilizing this methodology.
- **Financial and Scheduling Reporting:** the WSIP has developed comprehensive financial and scheduling reporting at all levels of the program. The WSIP has demonstrated very robust capability in this area.
- **Risk Assessment:** the Risk Assessment process is well developed and has evolved into a mature approach to evaluation of project and program risk.
- **Design:** RWBC interviews and project data reviewed showed that benefits could be gained by added owner involvement in the design development process through added involvement in review of design deliverables, especially at the 35% and 65% levels.

Publication of the Final RWBC Lessons Learned report is pending RBOC approval.

2.2 Risk Management

During FY 2014-2015, the WSIP team continued to implement and refine its Risk Management Program. New risk registers, with a total of 23 risks, were developed and entered in the Active Risk Management (ARM) software application for one construction contract:

• Regional Groundwater Storage and Recovery Project

A total of 99 risks were closed during the reporting period. In addition, the risk registers for the following construction contract has been closed:

• Crystal Springs/San Andreas Transmission Upgrade Project

This brought the total of active construction risk registers and individual risks managed through ARM as of the end of the reporting period to eight and 160, respectively.

Whenever new risk registers are developed, cost impact estimates are prepared to quantify each risk. Risk assessment workshops are held with the project teams responsible to update and track the risk registers. Table 2-1 summarizes the WSIP's active construction risks registers loaded into the ARM software application as of the end of the reporting period.

Construction Contract ¹	² Date	No. of ³ Risks	Risk Value (\$M) ^⁴
Calaveras Dam Replacement	Feb-12	41	31.9
HTWTP Long-Term Improvements	Aug-11	14	0.88
Regional Groundwater Storage and Recovery	June-15	23	2.1
New Irvington Tunnel	Jun-11	13	5.9
BDPL Reliability Upgrade - Tunnel	Nov-10	7	0.49
Seismic Upgrades of BDPL Nos. 3 & 4	May-13	14	0.66
Peninsula Pipeline Seismic Upgrades	April-14	40	0.30
San Antonio Backup Pipeline	Dec-13	8	0.45
Cumulative active projects @ 80% confidence level		160	42 .7 ⁵

 Table 2-1: Summary of Active Construction Risk Registers as of June 30, 2015

^{1.} Excludes WSIP Local Region, Bioregional Habitat Restoration, and Security contracts.

^{2.} Date when construction risk register was first created and loaded in ARM.

^{3.} Number of individual risks recorded in register as of June 30, 2015.

^{4.} Total value of all risks at eighty percent (80%) confidence level as of June 30, 2015.

^{5.} Active projects 80% confidence level when analyzed as a whole program.

As shown in Figure 2-1, the reporting period began with a cumulative 80% confidence level of \$43.1M in July 2014, then reached a peak of \$52.7M in November 2014, and ended the reporting period at \$42.7M, which represents a 19% decrease from the peak. The average risk exposure at the 80% confidence level during the reporting period was \$45.9M, which

compares to an average of \$52.7M in the previous year, an indication of the overall risk reduction in WSIP over the last reporting period as some of the larger WSIP projects with relatively high risks are coming to a close.

The WSIP Risk Management System ranks risks based on a combination of the likelihood of occurrence and the potential cost impact to the SFPUC. On that basis, the program's top 10 risks as of June 30, 2015 belong to two projects: Calaveras Dam Replacement and New Irvington Tunnel. Table 2-2 lists the projects with the largest risks and Table 2-3 provides a description of the program's 10 largest risks.



Figure 2-1: WSIP 80% Confidence Level Construction Risks for FY 2014-2015

Table 2-2.	Summary	of Ton	10 Risks		Regional	Projects	(as of Jur	ne 30 2015)
Table 2-2.	Summary	or rop	10 11949	UI WUSIF	Regional	FIUJECIS	las oi sui	ie 30, 2013)

Project	No. of Top 10 Risks	Percent Completion ¹	
Risk Ranking Based on Likelihood of Occu	rrence and Poter	ntial Cost Impact	
Calaveras Dam Replacement	9	70%	
New Irvington Tunnel	1	97%	

Refers to percent completion of the construction contract (base bid plus approved change orders) as of June 30, 2015

Mitigation plans are developed for each risk identified in the risk register associated with all WSIP construction contracts. Action items derived from the risk mitigation plans are individually assigned to construction management (CM) team members and tracked in the ARM software through completion.

Based on the risk summaries above, the two contracts that carry the greatest potential to impact the Program's overall cost and schedule are CDRP and NIT Projects.

Calaveras Dam Replacement (Revised Contract Cost \$508M)

The CDRP represents the greatest number of risks in the Program's top 10. These include potential impacts from secondary faulting affecting the outlet works; potential geologic features found beneath the approach channel and intake tower; weather delays in excess of contractual allowance; potential impacts due to mitigation of naturally occurring asbestos (NOA); quantity overrun for remnants of slide area B; potential for required acceleration due to embankment quantity overrun; instability of cut slopes below different benches; delay to the start of the 2016 shutdown; and access constraints due to the potential for nesting birds in Borrow Area B and along the west haul road.

New Irvington Tunnel (Revised Contract Cost \$256M)

The greatest remaining project risk associated with the NIT project stems from a claim of differing site conditions for ground classifications overruns/underruns. Namely, the contractor is seeking compensation for excessive hard rock encountered during the tunnel mining effort beyond that which was baselined in the contract documents. An additional significant risk is a contractor claim for repairs of buckled liner in two locations as well as re-grouting of defective cellular grout backfill that was placed in the annular space between the tunnel liner and the excavation. Negotiations are currently underway for both of these issues.

Table 2-3: Top 10 WSIP Risks as of June 30, 2015

Project	Risk Description	Occurrence Probability	Risk Value ¹ (\$M)	Mitigation
Calaveras Dam Replacement	Potential secondary faulting impacting outlet works	95%	7.5	URS to investigate issues and develop mitigation measures
New Irvington Tunnel	Differing site conditions for ground classifications overruns/underruns.	50%	5.0	Negotiate cost with contractor
Calaveras Dam Replacement	Potential geologic features found beneath, approach channel, and near intake tower (possibly L1)	50%	4.0	Geologist to provide active mapping
Calaveras Dam Replacement	Adverse weather in excess of contractual allowance for rain or dust	50%	3.1	Plan and sequence work to minimize impacts to critical path
Calaveras Dam Replacement	Natural Occurring Asbestos: Conditions beyond Contractors control lead to difficulty in complying with CAMP, H&S or other permit requirements.	50%	3.01	Minimize dust generated during any and all construction activities.
Calaveras Dam Replacement	Residual risk for addressing slide B removal for quantity overrun not anticipated on PCO 34 and additional mitigation beneath pipe bench.	40%	4.0	Continuous mapping and monitoring of on- going foundation excavation
Calaveras Dam Replacement	Potential for acceleration due to embankment activity quantity overrun.	40%	3.5	Continuous monitoring of embankment to track areas of over excavation
Calaveras Dam Replacement	Instability of cut slopes below Bench F/G during construction	5%	15.3	Continuous mapping and monitoring of final cut slope.
Calaveras Dam Replacement	Delay to start of CDR6 (2016) Shutdown and activities and acceleration before the shutdown, and/or a reduction in shutdown duration.	20%	14.2	Work with contractor and WSIP Management to identify needed coordination and prepare SOR.
Calaveras Dam Replacement	Access Constraints: Eagle Nesting Impacts construction and use of West Haul Road	10%	7.8	Develop effective means to prevent nesting raptors within the project limits within the restriction of the various permits and resource agencies.

^{1.} Most likely cost of each risk. The lowest and highest costs of each risk are also recorded in ARM.

2.3 Shutdown Management

During FY 2014-2015, the WSIP team continued to actively manage the WSIP shutdowns.

During the current 12-month reporting period, 15 WSIP shutdowns were started and 20 system shutdowns were completed as shown in Table 2-4, excluding the Local Region. For this reporting period, no hot taps were performed. Eleven WSIP shutdowns were added and six shutdowns were deleted from the Master System Shutdown Schedule to accomplish the required construction activities. In February 2015, the SFPUC completed the last of the HTWTP Long-Term Improvements Project shutdowns. Overall to date, 186 (or 92%) of the 202 WSIP system shutdowns and hot taps have been completed as shown in Figure 2-2. Nine shutdowns are planned during the coming fiscal year.

To mitigate operational risks, the SFPUC continues to carefully plan and stagger outages at the various water facilities. Whenever there is a forecasted change to a project NTP date, a pre-purchased equipment delivery date, or a contractor's equipment delivery date, the impact on the schedule of a contract's shutdowns is analyzed. We have found that in most cases, existing shutdowns can be maintained or work-around strategies can be identified. In the rare cases where a shutdown window needs to be moved, a program-level analysis is undertaken to assess the potential impact on other system shutdowns. Due to a decrease in the number of WSIP shutdowns, the monthly WSIP Shutdown Coordination Meeting was discontinued in February 2015. Consequently, potential changes to the overall WSIP Master System Shutdown Schedule are discussed at weekly Water Enterprise, Water Supply and Treatment Division (WSTD) Operations Meetings and at contract specific break-out meetings, which include representatives from the WSIP team and WSTD Operations staff. Also, part of the shutdown coordination effort involves juggling WSIP shutdowns.

			Shutdowns and	
	Shutdowns and		Hot Taps	Date
	Hot Taps Started	Date Started	Completed	Completed
1	SABPL/7	7/1/14	HTWTPLT/20	7/2/2014
2	HTWTPLT/7	7/25/14	CSSATU/2	7/15/2014
3	HTWTPLT/28	7/30/14	SUBDPL34/1	8/4/2014
4	Sutro/3 (Local Region)	8/1/14	HTWTPLT/25	8/13/2014
5	SABPL/2	8/30/14	SABPL/7	8/21/2014
6	SABPL/3	8/30/14	CSSATU/6	9/2/2014
7	HTWTPLT/7	10/11/14	HTWTPLT/12	10/12/2014
8	PPSU/1	10/14/14	CSSATU/10	11/3/2014
9	BDPL5T/3	10/27/14	BDPL5T/3	11/19/2014
10	GW/4 (Local Region)	11/12/14	Sutro/4 (Local Region)	12/11/2014
11	BDPL5T/5	11/20/14	HTWTPLT/7	12/16/2014
12	BDPL5T/6	12/2/14	HTWTPLT/28	12/16/2014
13	PPSU/3	1/9/15	PPSU/1	1/5/2015
14	PPSU/4	1/9/15	PPSU/3	1/29/2015
15	BDPL5T/4	1/31/15	BDPL5T/6	1/31/2015
16	PPSU/2	2/12/15	NIT/10	2/25/2015
17	NOIT/9	3/9/15	HTWTPLT/29	2/18/2015
18	GW/3 (Local Region)	4/10/15	HTWTPLT/32	2/26/2015
19			Sutro/2 (Local Region)	3/12/2015
20			GW/4 (Local Region)	3/13/2015
21			PPSU/6	3/24/2015
22			PPSU/4	5/21/2015
23			PPSU/2	6/22/2015

Table 2-4- Summary of Shutdowns and Hot Taps Started & Completed in FY14-15





2.4 Environmental Program

<u>CEQA</u>

The total number of California Environmental Quality Act (CEQA) documents approved to date for WSIP regional projects is as follows: 15 Environmental Impact Reports (EIRs), seven Initial Study/Mitigated Negative Declarations, and 13 Categorical Exemptions.

Resource Agency Permits

Only two WSIP projects, out of 35 which required resource agency permits, remain to be permitted: The Alameda Creek Recapture Project and the permitting of potential fish passage modifications in the "Little Yosemite Reach" of Upper Alameda Creek. Overall, WSIP resource agency permitting is now 94% complete, with 98 resource agency permits obtained since the start of the program and up to seven additional permits anticipated (for two projects).

Environmental Construction Compliance

The WSIP environmental construction compliance staff actively supported WSIP construction activities for three Sunol Region projects, two Bay Division Region projects, three Peninsula Region projects, one San Francisco Region and multiple habitat compensation sites in the Sunol and Peninsula Regions. Support for these projects encompassed resource agency coordination and resource agency permit amendments, implementing required State and federal reporting, and several minor project modifications for changes during construction. Additionally, 15 WSIP projects that are now in the post-construction phase are under the umbrella of the Vegetation Restoration of WSIP Construction Sites Project. Re-vegetation is underway on over 200 acres of land that was used temporarily during construction and over 1,500 trees to replace those removed by projects have been planted. Staff continued implementation of site assessments, invasive plant species, remedial seeding and planting as needed, and monitoring and reporting to ensure successful landscaping and revegetation in accordance with CEQA mitigation measures and resource agency permit conditions.

The WSIP environmental construction compliance staff, under direction of the SFPUC Bureau of Environmental Management, has effectively anticipated and managed potential challenges during construction activities, including continued discovery of cultural and paleontological resources, migratory birds, and construction water handling while still complying with all mandated mitigation measures and permit conditions and thereby minimizing possible delays. Based on the 2,109 environmental field inspections conducted during FY 2014-2015 for the WSIP projects under construction, the WSIP is 99.5% compliant and has not received any violations from the seven resource agencies that issued project permits (i.e., the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, the National Marine Fisheries Service, the Regional Water Quality Control Board, the State Historic Preservation Office, and the Bay Conservation and Development Commission). The less than 1% of non-compliance issues have since been resolved by implementation of corrective actions by the construction contractor that sometimes also includes additional environmental training.

2.5 Public Outreach Program

The Public Outreach team for the WSIP kept pace with the significant milestones achieved by the projects in FY 2014-15.

One of the most important, yet least publicized, aspects of the WSIP is its safety record. To date, construction teams working on projects that are part of the WSIP have performed a total of more than 7.5 million working hours with a lost time incident rate at less than one-half the industry average. This accomplishment was formally acknowledged by the SFPUC Commission during the reporting period, and was picked up by media stories in industry trade magazines.

On October 15, 2014, the WSIP Communications team helped organize a celebration with our Bay Area partners to celebrate and watch the first water delivered through the new Bay Tunnel to be discharged into Crystal Springs Reservoir. The event was at the same location where the SFPUC celebrated the first water from Hetch Hetchy Reservoir to reach the Peninsula 80 years ago. This significant milestone, coming the same week as the 25th Anniversary of the Loma Prieta Earthquake, was widely covered by newspaper, radio, and television news outlets, including the front page of the San Francisco Chronicle.

In March 2015, the 3.5-mile-long, seismically-improved New Irvington Tunnel (NIT) began delivering water to 2.6 million people in the San Francisco Bay Area. The NIT Project completes the last of three new tunnels constructed under WSIP, creating a water lifeline able to withstand earthquakes on the Hayward, Calaveras and San Andreas faults. This milestone was highlighted in a feature, in-depth KQED story that debuted on TV in early March titled, "A New, Stronger Tunnel to Bring Hetch Hetchy Water to the Bay Area". It was also covered by local TV media and numerous local and trade articles.

Over 100 project team members, local officials and representatives from the media gathered on top of a newly-completed 11-million-gallon treated water reservoir in San Bruno in April 2015 to celebrate the completion of the Harry Tracy Water Treatment Plant (HTWTP) Long-Term Improvements Project. The Plant treats water from the Crystal Springs Reservoir and serves over one million customers in San Francisco and San Mateo counties. The event generated numerous local TV and print media stories.

For the projects still in active construction, the WSIP Communications team worked closely with the CM teams from the Sunol Valley to the City of San Francisco to plan and execute public events and tours on a regular basis to showcase the investment made in upgrading the Hetch Hetchy Regional Water System. The WSIP Communications team has been instrumental in responding to and coordinating in a timely manner with stakeholders. The team continues to focus on working with the media to inform and educate the public about this dynamic program while working with the various CM teams to ensure a safe and timely delivery of the program.

Construction activities continued to capture the attention of the local and trade media. The WSIP Communications team coordinated a number of tours to the various project sites to educate and inform the general public and subsequent articles and media coverage about the significance of the WSIP and the Hetch Hetchy Regional Water System. This year, numerous project site tours were hosted to educate wholesale customers and other regional

and State officials about particular projects, lessons learned and how WSIP staff addressed various challenges encountered in the field.

The WSIP Communications team utilized various social media channels and multi-media platforms to communicate important information about the WSIP. Our @WSIPInTheNews Twitter handle shared milestones, highlighted media coverage and reinforced the WSIP's key messages with photos and videos. We continue posting regular updates to increase the WSIP's presence and influence with media, stakeholders and industry leaders. In the reporting period, we posted 2,107 tweets highlighting Sunol, Bay Division and Peninsula Region projects as well as program-wide milestones. An additional platform, Blogger, is utilized to implement construction outreach, communication and coordination with stakeholders.

To further our audience reach, the WSIP Communications team works in conjunction with the SFPUC's social media efforts to achieve complimentary content for the SFPUC's Facebook page, YouTube channel and Twitter handle. The team has planned for and implemented consistent public outreach and constant communication and coordination with residents, businesses, agricultural interests, elected officials, SFPUC wholesale and retail customers, partnering agencies and other park and irrigation districts.

The WSIP Communications team has also supported the project teams' submittals for industry awards. In fact, the WSIP program received seven prestigious industry awards during the reporting period. In February 2015, the Sutro Reservoir Upgrade Project was selected as "Project of the Year" from the Northern California Chapter of the American Public Works Association (APWA). The SFPUC Project Manager for the Bay Tunnel Project also won the "Manager of the Year" award for that Chapter.

Two WSIP projects, the Bay Tunnel Project and Crystal Springs/San Andreas Transmission Project received project honors from the Silicon Valley Chapter of APWA. In April, the National APWA awarded the Bay Tunnel Project with the "*Public Works Projects of the Year for 2014*" award. In May 2014, the Bay Tunnel Project won the project achievement award from the Northern California Chapter of the Construction Management Association of America (CMAA).

At the program level, in January 2015, Engineering News Record (ENR) Magazine honored the significant accomplishments of the program by naming the WSIP Director as one of the Top 25 Newsmakers of the year.

3.0 PROJECT SCHEDULES (FY 2014-2015)

As of June 30, 2015, the overall WSIP is forecasted to be completed in May 2019, which is consistent with the schedule approved as part of the March 2014 Revised WSIP. All but three projects with Level of Service (LOS) goals involving construction activities (CDRP, Alameda Creek Recapture, and Regional Groundwater Storage and Recovery) are forecasted to be completed by 2016. Four other support projects (the Bioregional Habitat Restoration (BHR) Program; the Vegetation Restoration Program; the Watershed Environmental Improvement Program and the Long-Term Mitigation Endowment) will extend past 2016; however, these projects do not directly contribute to the system's LOS.

As can be seen in the attached WSIP Q4 FY14-15 Quarterly Report, all Regional Projects with LOS goals that are in active construction are still forecast to meet the latest final completion milestone dates approved by the Commission (March 2014 Revised WSIP). Two projects that have already achieved construction substantial completion milestones are forecast to have delays to final completion dates due to ongoing litigation as of the end of the reporting period.

It is important to note that the construction substantial completion date is the most important schedule-related date because this is when new facilities or improvements to existing facilities become fully useable. The project completion date includes the remaining period between construction substantial and final completions, as well as the closeout period needed to complete all required documentation and take care of remaining administrative matters related to the project.

3.1 Tracking and Controlling Project Schedules

The overall program completion schedule remains unchanged, with completion forecast for May 2019. The overall schedule is driven by the final administrative closeout completion date for the CDRP which remains unchanged at May 24, 2019.

The WSIP Management Team continues to pro-actively monitor and control program and project schedules. Detailed business processes, well defined procedures and best practices are in place to support early identification of schedule issues and timely development of recovery plans to mitigate any forecast delays as required.

The WSIP uses best practices common in the industry to forecast dates that are presented as the best available information at a given moment in time as reported in the WSIP Quarterly Reports. It is important to note that forecast dates can move every month based on the latest best available data from the individual project teams (including information from the construction contractor in the field). When warranted, the WSIP Director will direct a project team to accelerate selected construction activities to mitigate forecasted delays.

3.2 Keeping the Public and Stakeholders Informed

To make sure the general public and stakeholders are kept informed of project status and potential changes, the WSIP Management Team publishes extensive quarterly reports that include cost and schedule forecasts for all projects. These reports are distributed to a number of oversight bodies (e.g., SFPUC Commission, RBOC and BAWSCA) and posted on the Program's Website (sfwater.org/wsip). The WSIP Director also verbally updates the Commission on the Program's current challenges and their potential impacts on WSIP delivery at a public meeting quarterly. Likewise, throughout the year, the WSIP Director addresses various boards (e.g., County Board of Supervisors, wholesale water agencies) and speaks at public forums throughout the system's service area about the Program status. Additionally, the WSIP team conducts information tours of project sites with elected officials, wholesale agency representatives and other stakeholders. Another tool used to keep the public and stakeholders and interested parties either via email or hard copies. Furthermore, these publications and outreach efforts are promoted on a regular basis through other social media platforms. Finally, the WSIP Communication team issues press

releases and organizes media events to highlight major program milestones (e.g., start of construction activities and completion of key projects).

4.0 ACHIEVEMENTS AND CHALLENGES (FY 2014-2015)

WSIP implementation is organized geographically to make program delivery more manageable and to take into account project adjacency issues. This section highlights the achievements and challenges of the Program's five regional teams.

4.1 San Joaquin Region

The status of all regional projects in the San Joaquin Region as of the end of FY 2014-2015 is summarized in Table 4-1.

Table 4-1: Status of San Joaquin Regional Projects as of June 30, 2015

Project/Contract Name	Status
Lawrence Livermore Water Quality Improvement	Completed
SJPL System - Crossovers	Closeout - Construction Completed
SJPL System - Western Segment	Completed
SJPL System - Eastern Segment	Closeout - Construction Completed
Rehabilitation of Existing SJPLs - Roselle	Completed
Tesla Treatment Facility	Completed
Tesla Portal Protection	Closeout - Construction Completed

As indicated in Table 4-1, construction is completed for all of the region's seven main construction contracts.

<u>Achievements</u>

Construction completion was achieved for San Joaquin Pipeline (SJPL) System – Eastern Segment and Tesla Portal Protection in FY 2014-2015. Final project completion was also achieved for SJPL System - Western Segment, Rehabilitation of Existing SJPLs – Roselle, and Tesla Treatment Facility Projects during the reporting period.

<u>Challenges</u>

The potential litigation on the SJPL System – Crossover Project was settled through mediation and the project was moved to closeout.

SJPL System – Eastern Segment and Tesla Portal Protection continued in the closeout phase with processing of outstanding closeout documents on minor Job Order Contract (JOC) work for solar installations and drainage issues.

4.2 Sunol Valley Region

The status of all regional projects in the Sunol Valley Region as of the end of FY 2014-2015 is summarized in Table 4-2.

Project/Contract Name	Status
Alameda Creek Recapture Project	Design
Standby Power Facilities - Various Locations	Completed
New Irvington Tunnel	Construction – 97.2% Complete ¹
Alameda Siphon #4	Completed
Pipeline Repair & Readiness Improvements	Completed
Calaveras Dam Replacement	Construction – 70.5% Complete ¹
Calaveras Reservoir Upgrades	Completed
San Antonio Backup Pipeline	Construction – Substantial Completion (98.7% Complete)
SVWTP Expansion & Treated Water Reservoir	Completed
San Antonio Pump Station Upgrade	Completed

¹ Status of construction percentage complete is based on construction base bid plus approved change orders.

As indicated in Table 4-2, only one of the 10 Sunol Valley regional projects/contracts remained in pre-construction as of the end of the reporting period. Six projects were completed, and three remained in construction as of June 30, 2015.

<u>Achievements</u>

Over 6,500,000 cubic yards of earth and rock has been excavated at the Calaveras Dam Replacement Project (CDRP) to date. Excavation was completed during the reporting period in the new spillway, stilling basin, and left abutment of the new dam foundation areas, and continued below the pipe bench to the dam foundation. Buttress materials (Zone 4A) for the right abutment landslide have been completed. Placement of the rock fill materials for the upstream shell of the new dam (Zone 5), grouting of the left abutment, and structural concrete work for the new spillway and stilling basin are all on-going. Test fill for the clay core material (Zone 1) at Borrow Area E and production of hard rock materials for the upstream shell of the dam embankment (Zone 5) at Borrow Area B commenced during the reporting period.

The New Irvington Tunnel (NIT) Project completed construction of the new tunnel and was placed into service on February 27, 2015. With the new tunnel in service, this allowed the old Irvington Tunnel to be taken out of service for long overdue inspection and repairs. The inspection was conducted in April 2015 and found the tunnel to be in relatively sound structural condition, with only corrosion of some steel manifold pipes at the downstream portal needing repairs. The repairs, estimated at \$250,000, are not considered within the scope of the WSIP and will be funded by the Water Enterprise Capital Improvement Program.

The San Antonio Backup Pipeline Project was nearly 97% complete at the end of FY 2014-2015. The only items remaining are the testing of the chemical pumps and carrier water

system, completion of operations and maintenance manuals and final approvals of equipment data sheets and final project closeout.

The Alameda Creek Recapture Project completed the 35 percent design and construction cost estimate at the end of FY 2014-2015. A technical review of the pump station hydraulics and surge analysis were also initiated and expected to be complete by September 2015. The project also completed 15 rounds of monthly water quality monitoring that will be performed over a 2-year period which is required to obtain approval from the State Department of Water Resources to operate this facility. A Draft Notice of Preparation for the EIR was also completed and a public scoping meeting was held in July 2015.

<u>Challenges</u>

During the reporting period, there were two major challenges for the CDRP. The first was the continuation of actions needed to address potential differing site conditions due to complex geology in the left abutment. In the third quarter of 2014-2015, several secondary faults were identified along the outlet pipe alignment. The design team developed mitigation measures to address this issue which included adjustment of the pipeline configuration, over excavation of the fault features, additional backfill concrete, and restoration of the left abutment haul road. The CM team is continuing to negotiate with the Contractor for the most cost effective plan to maintain the project schedule, and anticipates the fault remediation work to be completed in the first quarter of 2015-2016. The second major challenge was to control and monitor naturally occurring asbestos (NOA) emissions at the site. Various technologies, including the "Dust Boss" and "KUMA" systems were field tested onsite as possible NOA mitigation measures. After a comprehensive evaluation of the comprehensive Air Monitoring Plan (CAMP), which allows for more efficient construction operations.

The primary construction challenge for the NIT during the reporting period was the buckling failure of two 50-foot sections of steel liner within the newly constructed tunnel due to exterior groundwater pressures acting on the outside of the liner sections. Upon investigation, it was discovered that the cellular grout injected within the annular space between the steel liner and the tunnel excavation surface was compromised due to groundwater inflows that were inadequately controlled during the grouting process. Repairs have since been made and the annular space for the entire tunnel alignment has been regrouted under pressure to ensure a reliable tunnel for decades to come. Going forward, with the construction of the NIT nearly complete, the significant construction challenges have expired. However, the project faces the administrative challenge of submission of Operations and Maintenance related items, as-built documents, and negotiations of final change order issues before the scheduled final completion of the project in the fall 2015.

The primary challenge for Alameda Creek Recapture Project will be to navigate the public comments on the environmental review and permitting process without introducing additional constraints on the SFPUC's water supply goals.

4.3 Bay Division Region

The status of all regional projects in the Bay Division Region as of the end of FY 2014-2015 is summarized in Table 4-3. As indicated in the table, no Bay Division regional

projects/contracts remain in pre-construction. As of June 30, 2015, seven projects were completed, two were substantially complete and one remained in active construction.

Project/Contract Name	Status
BDPL Nos. 3 & 4 Crossover/Isolation Valves	Completed
Seismic Upgrade of BDPL Nos. 3 & 4	Construction – 91.6% Complete ¹
SCADA System - Phase II	Completed
BDPL Reliability Upgrade - Tunnel	Construction – Substantial Completion ¹ (99.6% Complete)
BDPL Reliability Upgrade - Pipeline	Construction – Substantial Completion ²
BDPL Reliability Upgrade - Relocation of BDPL Nos. 1 & 2	Completed
BDPL Nos. 3 & 4 Crossovers	Completed
SFPUC/EBMUD Intertie	Completed
BDPL No. 4 Condition Assessment PCCP Sections	Completed
BDPL Nos. 3 & 4 Crossover/Isolation Valves	Completed

 Table 4-3: Status of Bay Division Regional Projects as of June 30, 2015

Status of construction percentage complete is based on construction base bid plus approved change orders.
 Final construction completion for the BDPL Reliability Upgrade - Pipeline has been delayed due to pending litigation. All physical construction work is complete.

<u>Achievements</u>

A major milestone for the WSIP Program occurred when the BDPL Reliability Upgrade -Tunnel (Bay Tunnel) began to convey drinking water on October 15, 2014 from the Hetch Hetchy reservoir to Crystal Springs Reservoir.

Remarkably, the Bay Tunnel came into service the week of the 25th Anniversary of the Loma Prieta Earthquake, replacing the aging BDPL Nos. 1 & 2 under the San Francisco Bay. The Substantial Completion Milestone was achieved on May 20, 2015, as the Ravenswood and Newark sites continued to be prepared for closeout at the end of the reporting period. The Final Construction Completion is anticipated at the beginning of the next fiscal year.

SFPUC Project Team and Operations went to considerable lengths to conserve water amidst our current drought. The post-construction hydrostatic testing of the pipeline was combined with the required disinfection process. Rather than treat the highly chlorinated water and discharge it to the bay as specified in the contract, the SFPUC devised a plan instead to flush the disinfection water to Crystal Springs Reservoir. This allowed saving upwards of 40 million gallons (1,375 acre feet) of water.

On the Seismic Upgrade of BDPL Nos. 3 & 4 Project, the installation of the new BDPL No.3 pipe, slip joint and ball joints inside the articulated box were installed and the new seismically reliable pipeline was placed into service. The temporary bridge over Mission Boulevard was removed and the concrete articulated box was completed and backfilled. The Alameda County Water District 12-inch and 30-inch pipelines were installed and

returned to service. The roadway re-alignment and sidewalk and site restoration started at the end of the reporting period.

<u>Challenges</u>

The biggest construction challenge on the Bay Tunnel during the reporting period was the larger than anticipated leakage through BDPL1 and BDPL2 bypasses that affected Contract Shutdown BDPL5T/6 to be able to tie-in to the new 42-inch BDPL2 bypass to the Hayward Service connection. The contractor requested an extension of time based on a change order that added Shutdown 5T/6 to the contract and potentially delayed progress for Contract Shutdown 5T/4. This resulted in a no-cost time extension to the substantial completion and final construction completion milestones.

During the reporting period the Seismic Upgrade of BDPL No. 3 and 4 Project experienced and resolved several significant challenges, including the polytetrafluoroethylene (PTFE) bonding of sliding bearings and resolution of impacts precipitated by various differing site conditions. The SFPUC project team and the construction contractor have successfully cooperated in the identification and resolution of these issues in the reporting period. In addition, the most significant remaining construction challenge on the project is to remediate voids discovered in the grouted section beneath the two sliding support bearing plates supporting the new BDPL No. 3. The pipe is not fully supported as designed with the voids in the grout. The corrective action plan was initiated and progressed to a point wherein completion is anticipated within two months after this reporting period.

4.4 Peninsula Region

The status of all regional projects in the Peninsula Region as of the end of FY 2014-2015 is summarized in Table 4-4.

As indicated in Table 4-4, of the 17 Peninsula regional projects/contracts, 15 projects have been completed, and two projects are in construction as of June 30, 2015.

Project/Contract Name	Status
Lower Crystal Springs Dam Improvements	Completed
New Crystal Springs Bypass Tunnel	Completed
Adit Leak Repair - Crystal Springs/Calaveras	Completed
Pulgas Balancing - Inlet/Outlet Work	Completed
Pulgas Balancing - Discharge Channel Modifications	Completed
Pulgas Balancing - Structural Rehabilitation and	Completed
Root Replacement	•
Pulgas Balancing - Modifications of the Existing Dechloramination Facility	Completed
Cross Connection Controls	Completed
HTWTP Short-Term Improvements - Demo Filters	Completed
HTWTP Short-Term Improvements - Coagulation & Flocculation/ Remaining Filters	Completed
HTWTP Long-Term Improvements	Construction – 97.3% Complete ¹

Table 4-4: Status of Peninsula Regional Projects as of June 30, 2015

Peninsula Pipelines Seismic Upgrade (Phases 1 & 2)	Construction – 68.4% complete ¹
Peninsula Pipelines Seismic Upgrade (Phase 3)	Design ²
Capuchino Valve Lot Improvements	Completed
Crystal Springs/San Andreas Transmission Upgrade	Completed
Crystal Springs Pipeline No. 2 Replacement	Completed
San Andreas Pipeline No. 3 Installation	Completed
Baden and San Pedro Valve Lots Improvements	Completed

¹ Status of construction percentage complete is based on construction base bid plus approved change orders.

^{2.} Although Phase 3 of the Peninsula Pipelines Seismic Upgrade is a non-WSIP project, the status is reported herein as it contributes to meeting regional Level of Service (LOS) goals under WSIP.

<u>Achievements</u>

Construction of the Peninsula Pipelines Seismic Upgrade (PPSU) (Phases 1 & 2) Project is progressing well with the completion of four of the planned five shutdowns. Construction completion is forecasted by the end of 2015 and final administrative closeout is forecast on schedule by July 2016.

The Alternative Analysis and Conceptual Engineering Reports for the Peninsula Pipelines Seismic Upgrades (Phase 3) have been completed. Detailed design and environmental review are currently underway. Final completion of this project is forecast on schedule for June 2018.

The Crystal Springs/San Andreas (CS/SA) Transmission Upgrade Project Final Completion was achieved in December 2014. The closeout activities were also completed in June 2015.

Construction of the HTWTP Long-Term Improvements Project is essentially complete except for a few residual punch-list items. Final construction completion is forecasted for the fall 2015 and administrative closeout will occur shortly thereafter.

All closeout activities on the Crystal Springs Pipeline No. 2 Replacement Project have been completed.

<u>Challenges</u>

Overall, construction activities on the two ongoing construction contracts for the HTWTP Long-Term Improvements and the PPSU projects are progressing in accordance with the currently approved plans.

The HTWTP Long-Term Improvements Project has experienced many challenges including adherence to established shutdown schedules, maintaining contractor productivity, and resolution of impacts precipitated by differing site conditions. The majority of these challenges have been resolved. The SFPUC project team and the construction contractor continue to cooperate in the resolution of the few outstanding issues. The project teams have been successful in meeting the shutdown milestones without impacting the overall system operation. The Project is currently forecasted to achieve final construction and administrative closeout within the currently approved schedule.

The remaining key challenge for the PPSU Project is the completion of the last shutdown in San Bruno. The work was initiated in June 2015; the Project Team and the Contractor have

developed detailed plans for completing the work and achieving the planned Final Completion milestone by the end of 2015.

4.5 San Francisco (Regional) Region

The status of all regional projects in the San Francisco Region as of the end of FY 2014-2015 is summarized in Table 4-5.

Table 4-5:	Status of San	Francisco	Regional	Projects	as of	June 30,	2015
						,	

Project/Contract Name	Status
Regional Groundwater Storage & Recovery	Construction – 6%
Sunset Reservoir - North Basin	Completed
University Mound Reservoir - North Basin	Completed

As indicated in Table 4-5, one of the three San Francisco Regional projects/contracts is in construction as of the end of the reporting period. The two other projects in this region have been completed and closed out.

<u>Achievements</u>

For the Regional Groundwater Storage & Recovery Project, the San Francisco Environmental Planning Department certified the Final EIR and the SFPUC Commission approved the project in August 2014. The construction contract was advertised in September 2014 and awarded in January 2015. The well station construction contract Notice to Proceed (NTP) was issued in April 2015. Construction has been initiated at seven of the thirteen well sites. Appraisals and offer letters have been completed for all of the forty-six easements required for well stations, access, and utility connections.

<u>Challenges</u>

The challenges associated with the Regional Groundwater Storage & Recovery project are related to finalizing required right-of-way (ROW) acquisition. ROW agreements need to be finalized with the Lake Merced Golf Club and two retail outlets. Efforts to avoid delays include ongoing outreach with these parties. In addition, identifying well sites in the San Bruno area (to serve as alternates to the Golden Gate National Cemetery proposed wells) is on the critical path in order to deliver the full complement of water supply scoped under this project.

5.0 STATUS OF AB 1823 PROJECTS

The status of the 10 projects identified in Assembly Bill (AB) 1823 is summarized in Table 5-1. As of June 30, 2015, four projects were completed and six projects remain in construction.

Project Name	Status
New Irvington Tunnel	Construction – 97.3% Complete ¹
Alameda Siphon #4	Completed

Table 5-1: Status of AB 1823 Projects as of June 30, 2015

Calaveras Dam Replacement	Construction – 70.5% Complete ¹
BDPL Nos. 3 & 4 Crossover/Isolation Valves	Completed
Seismic Upgrade of BDPL Nos. 3 & 4	Construction – 91.6% Complete ¹
BDPL Reliability Upgrade - Tunnel	Construction – Substantial Completion (99.6% Complete) ¹
BDPL Reliability Upgrade - Pipeline	Construction - Substantial Completion ²
BDPL Nos. 3 & 4 Crossovers	Completed
New Crystal Springs Bypass Tunnel	Completed
Crystal Springs/San Andreas Transmission Upgrade	Completed

Status of construction percentage complete is based on construction base bid plus approved change orders.
 Final construction completion for the BDPL Reliability Upgrade - Pipeline has been delayed due to pending litigation. All physical construction work is complete.

It should be noted that the original list of projects in AB 1823 includes the BDPL Nos. 1 & 2 - Repair of Caissons/Pipe Bridge Project. That project was removed from the WSIP following completion of a facilities condition assessment that led to the addition of a fifth conduit parallel to BDPL Nos. 1 & 2 to the SFPUC capital program. The conduit, referred to as BDPL No. 5, is currently under construction as part of the BDPL Reliability Upgrade - Tunnel and BDPL Reliability Upgrade - Pipeline Projects.

Half of the 10 projects listed in AB 1823 contribute to the construction of a new seismicallydesigned lifeline that will carry water from the Sunol Valley in the East Bay to the mid-Peninsula. That lifeline involves six segments contracted out separately to be completed by the end of 2015 - Alameda Siphon #4, New Irvington Tunnel, BDPL Reliability Upgrade (East Bay Reaches), BDPL Reliability Upgrade – Tunnel, BDPL Reliability Upgrade (Peninsula Reaches) and New Crystal Springs Bypass Tunnel. Construction activities have now been completed on five of the six segments. Construction of the remaining segment -New Irvington Tunnel is forecasted to be substantially completed by September 2015.

APPENDIX A WSIP Quarterly Report Regional Projects (Q4/FY 2014- 2015)

Report available on the SFPUC Website at the following address: <u>http://216.119.104.145/index.aspx?page=307</u>

APPENDIX B

Current Approved WSIP Schedule Regional Projects

	APP	ENDIX	B: Curre	ent Appr	oved WS	SIP Proje	ect-Leve	l Sched	ules				
Project Name	Start	Finish	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Regional Improvement Projects	31-Mar-00 A	24-May-19											
San Joaquin Region	01-Jul-02 A	31-Mar-15											
CUW36401 Lawrence Livermore Water Quality Improv	02-Feb-04 A	31-Jul-13A							COMPLETE	D			
CUW37301 San Joaquin Pipeline System	19-Aug-02 A	31-Mar-15											
CUW37302 Rehabilitation of Existing San Joaquin Pipe	03-Jul-06 A	30-Jun-14A								COMPLETE	>		
CUW38401 Tesla Treatment Facility	01-Jul-02 A	31-Jul-14A								COMPLET	ED		
Sunol Valley Region	19-Dec-01 A	24-May-19									_		
CUW35201 Alameda Creek Recapture Project	30-Sep-03 A	11-Apr-19											
CUW35501 Standby Power Facilities - Various Locatio	11-Jul-02 A	22-Dec-10A				СОМР	LETED						
CUW35901 New Irvington Tunnel	19-Dec-01 A	11-Mar-16				1							
CUW35902 Alameda Siphon #4	19-Dec-01 A	28-Jun-13A							COMPLETE	P			
CUW37001 Pipeline Repair & Readiness Improvements	21-Apr-03 A	16-Apr-09A			COMPLETED								
CUW37401 Calaveras Dam Replacement	03-Sep-02 A	24-May-19			<u>, n</u>								
CUW37402 Calaveras Reservoir Upgrades	19-Nov-03 A	28-Jul-06 A	COMPLETE										
CUW37403 San Antonio Backup Pipeline	17-Dec-03 A	30-Nov-15				<u> </u>							
CUW38101 SVWTP Expansion & Treated Water Reser	22-Apr-05 A	12-Jun-14A		;	;					COMPLETED			
CUW38601 San Antonio Pump Station Upgrade	01-Jul-04 A	29-Jun-12A						COMPLETEL	•				
Bay Division Region	19-Dec-01 A	31-Mar-16											
CUW35301 BDPL Nos. 3 & 4 Crossover/Isolation Valv	06-Jan-03 A	31-Jul-09A			COMPLETI	5D							
CUW35302 Seismic Upgrade of BDPL Nos. 3 & 4	22-Oct-04 A	09-Dec-15						,					
CUW36301 SCADA System - Phase II	22-Apr-05 A	28-May-13A				÷			COMPLETED				
CUW36801 BDPL Reliability Upgrade / Tunnel	19-Dec-01 A	31-Mar-16											
CUW36802 BDPL Reliability Upgrade - Pipeline	19-Dec-01 A	06-Apr-15											
CUW36803 BDPL Reliability Upgrade - Relocation of	24-Apr-06 A	28-May-10A				COMPLETED							
CUW38001 BDPL Nos. 3 & 4 Crossovers	17-Feb-04 A	30-Jun-14A								COMPLETE	>		
CUW38901 SFPUC/EBMUD Intertie	24-Jun-02 A	20-Mar-14A			······	·······			C(OMPLETED			
CUW39301 BDPL No. 4 Condition Assessment PCCP	04-Aug-06 A	06-Feb-09A		CO	MPLETED								
Peninsula Region	01-Nov-00 A	06-Jul-16											
CUW35401 Lower Crystal Springs Dam Improvements	01-Nov-00 A	28-Dec-12A						сомн	LETED				
CUW35601 New Crystal Springs Bypass Tunnel	07-Jan-02 A	17-Aug-12A						COMPLET	ED				
CUW35701 Adit Leak Repair - Crystal Springs/Calaver	01-Apr-05 A	31-Jul-08 A		COMPLET	ËD								
CUW36101 Pulgas Balancing - Inlet/Outlet Work	15-May-02 A	11-May-06A	COMPLETEL)									
CUW36102 Pulgas Balancing - Discharge Channel Mo	01-Apr-05 A	30-Jul-10 A				COMPLETE	D						
CUW36103 Pulgas Balancing - Structural Rehabilitation	03-Apr-06 A	28-Dec-12A						СОМЕ	LETED				
CUW36105 Pulgas Balancing - Modifications of the Ex	02-Apr-07 A	20-Mar-13A							MPLETED				
CUW36501 Cross Connection Controls	01-Jul-03 A	30-Apr-09A		i and the second se	COMPLETED								
CUW36601 HTWTP Short-Term Improvements (Demc	04-Sep-02 A	14-Nov-06A	COMPLETE	D									
CUW36603 HTWTP Short-Term Improvements - Coag	03-Jul-06 A	28-Jul-10 A		ф. — — — — — — — — — — — — — — — — — — —	<u> </u>	COMPLETE	D						
CUW36701 HTWTP Long-Term Improvements	01-Jul-03 A	04-Jan-16											
CUW36702 Peninsula Pipelines Seismic Upgrade	01-Jul-09 A	06-Jul-16						<mark>. 11 </mark>					
CUW36901 Capuchino Valve Lot Improvements	22-Apr-05 A	19-Aug-08A		COMPLET	ED	[
CUW37101 Crystal Springs/San Andreas Transmission	18-Aug-03 A	30-Jun-15 A									COMPLETE)	
CUW37801 Crystal Springs Pipeline No. 2 Replacement	15-Jan-04 A	31-Jul-14A		1						COMPLETE	D		
CUW37901 San Andreas Pipeline No. 3 Installation	15-Jan-04 A	30-Aug-12A						COMPLET	ED				
CUW39101 Baden and San Pedro Valve Lots Improver	03-Oct-05 A	29-Mar-13 A							OMPLETED				
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Project Management Env	vironmental		Right-of-Wa	ay 📃	Constructio	on Mgmt	Clos	eout					
Planning Des	sign		Bid & Award		Constructio	on 🗖	Prog	ram Mgmt				P	1
												Pa	ge I OI Z

	APP	ENDIX	B: Currer	nt Appr	oved WS	SIP Pro	ject-L	evel Sche	dules				
Project Name	Start	Finish	FY2008	FY2009	FY2010	FY2011		012 FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
San Francisco Regional Region	31-Mar-00 A	31-Jul-18				rairazirasi				rairazirasira	4 rairaz rasra		
CUW30103 Regional Groundwater Storage and Recov	01-Jun-03 A	31-Jul-18											<u> </u>
CUW35801 Sunset Reservoir - North Basin	31-Mar-00 A	10-Sep-10A				COMPL	ETED						
CUW37201 University Mound Reservoir - North Basin	1 24-Oct-05 A	29-Mar-13A			-				COMPLETED				
Support Projects	13-Apr-04 A	31-Aug-18											
CUW36302 System Security Upgrades	07-Jan-06 A	29-Apr-16											
CUW38801 Programmatic EIR	13-Apr-04 A	30-Jun-09 A				•							
CUW38802 Bioregional Habitat Restoration	06-Sep-06 A	28-Jul-16					- i					-	
CUW38803 Vegetation Restoration of WSIP Construct	i 02-Jan-13 A	31-Dec-15								:			
CUW38804 Long Term Mitigation Endowment	05-Mar-14 A	31-Aug-18								:			
CUW39201 Program Management Project	01-Aug-05 A	30-Dec-16											
CUW39401 Watershed Environmental Improvement P	02-Jan-07 A	31-Aug-18											
Project Management	vironmental		Right-of-Way		Constructio	n Mgmt		Closeout					
	esian		Bid & Award		Constructio	n I		Program Mom	t				
					20.00.0000				-			Pa	ige 2 of 2

t Name ic	Start	Finish	EY2008	EY2009	EY2010	EY2011	EY2012	EY2013	EY2014	EY2015	EY2016	EY2017	EY2018
C C			FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 F0	24 FQ1 FQ2 FQ3 F	Q4 FQ1 FQ2 FQ3 F	Q4 FQ1 FQ2 FQ	3 FQ4 FQ1 FQ2 FQ3	FQ4 FQ1 FQ2 FQ3 F	Q4 FQ1 FQ2 FQ3 FC	24 FQ1 FQ2 FQ3 FQ	4 FQ1 FQ2 FQ3 FQ4	1 FQ1 FQ2 FQ3
Regional Improvement Projects	31-Mar-00	24-May-19											
San Joaquin Region	01-Jul-02	31-Mar-15											
CUW36401 Lawrence Livermore Water Quality Improv (02-Feb-04	31-Jul-13	COMPLETED										
Project Management (02-Feb-04	31-Jul-13				-		I	—				
Planning	02-Feb-04	28-Sep-07											
Environmental	31-Aug-06	25-Feb-09											
Design	01-Oct-07	31-Mar-09											
Bid & Award (01-Dec-08	25-Aug-09											
Construction Management 2	27-Feb-09	11-Mar-11		_									
Construction 2	26-Aug-09	11-Mar-11											
Closeout	14-Mar-11	31-Jul-13											
CUW37301 San Joaquin Pipeline System	19-Aug-02	31-Mar-15											
Project Management 1	19-Aug-02	31-Mar-15		l				I					
Planning	19-Aug-02	28-Dec-06	_										
Environmental Review	17-Feb-04	27-Mar-12											
Right of Way (02-Jan-07	29-Mar-13											
Design	02-Jan-07	23-Mar-11											
Bid & Award	27-Apr-09	21-Jul-11	_										
Construction Management (03-Feb-09	31-Jul-14											
Construction	13-Oct-09	31-Jul-14											
Closeout	25=Oct=13	31-Mar-15											
CUW37302 Rehabilitation of Existing San Joaquin Pine (03-Jul-06	30-Jun-14	COMPLETE										
Project Management	03-Jul-06	30-Jun-14	COMILETEL										
Planning	03-Jul-00	30 Apr 14											
Environmental Review	26 San 06	30-Api-14											
	20-3ep-00	31-Dec-12											
Bid & Award	02 May 08	21 Mar 11											
Construction Management	02-Way-08	10 Sop 11											
	03-Jui-00	19-Sep-11											
	20 Sap 11	20 Jun 14											
CUW38401 Tesla Treatment Engility (20-Sep-11	30-Juli-14	COMPLETE										
Project Management	01-Jul-02	31-Jul-14	COMFLETEL										
Ploped Management (01-Jul-02	31-Jul-14	_							1			
Flaining	01-Jul-02	29-Jun-07	_										
Environmental :	30-Jun-06	25-Feb-09											
Right of Way	17-Mar-08	16-Oct-08											
	15-Feb-07	20-Nov-09											
Bid & Award	30-Jan-08	10-Nov-08	_							-			
Construction Management (02-Feb-09	20-May-14											
Construction	08-Sep-08	20-May-14	_							•			
Closeout	01-Jul-11	31-Jul-14											
Sunol Valley Region	19-Dec-01	24-May-19											
CUW35201 Alameda Creek Recapture Project	30-Sep-03	11-Apr-19											
Project Management 3	30-Sep-03	11-Apr-19						I					
Planning	30-Sep-03	14-Nov-14											
Environmental Phase 2	23-Apr-10	30-Sep-16			<u> </u>								

Design Phase Bid & Award Phase Construction Management Phase Construction	Start 01-Jul-10 03-Oct-16	Finish 31-May-16	FY2008 FQ1 FQ2 FQ3 FQ4	FY2009 FQ1 FQ2 FQ3 FQ4	FY2010 4 FQ1 FQ2 FQ3 FC	FY2011 FY20 4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 F	12 FY2013 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 F	FY2014 FY2015 Q1 FQ2 FQ3 FQ4 FQ1 FQ2 FG	5 FY2016 13 FQ4 FQ1 FQ2 FQ3 FC	FY2017 24 FQ1 FQ2 FQ3 FQ4	FY:
Design Phase Bid & Award Phase Construction Management Phase Construction Closeout Phase	01-Jul-10 03-Oct-16	31-May-16			+						
Bid & Award Phase Construction Management Phase Construction Construct	03-Oct-16		-	1						1	
Construction Management Phase Construction		31-Mar-17									
Construction Closeout Phase	03-Apr-17	31-Oct-18								_	-
Closeout Phase	03-Apr-17	31-Oct-18								-	<u>.</u>
010300011111111111111111111111111111111	01-Nov-18	11-Apr-19	_								
UW35501 Standby Power Facilities - Various Locatio	11-Jul-02	22-Dec-10	COMPLETE	0							
Project Management	11-Jul-02	22-Dec-10				<u> </u>					
Planning	11-Jul-02	30-Jun-05									
Environmental (CatEx)	26-May-05	23-Sep-05									
Design	01-Jul-05	04-May-07	-								
Bid & Award	16-Apr-07	31-Dec-07									
Construction Management	10-Dec-07	22-Jun-10									
Construction	10-Dec-07	28-May-10									
Closeout	10-Dec-07	07-Oct-10	-								
CUW35901 New Irvington Tunnel	10 Dec 01	11 Mar 16									
Project Management	19-Dec-01	11-Mar 16									
	19-Dec-01	11-Mar-16	_								
Flaining	19-Dec-01	07-Oct-05	_								
	25-Aug-04	07-Mar-11									
Right of Way (03-Jul-06	11-Sep-15							1		
Design	11-Oct-05	12-Jan-10				<u></u>					
Bid & Award	05-Jan-09	21-Jul-10	_								
Construction Management	28-Sep-09	11-Sep-15	_				1				
Construction	31-Mar-09	11-Sep-15									
Close Out	14-Sep-15	11-Mar-16									
CUW35902 Alameda Siphon #4	19-Dec-01	28-Jun-13	COMPLETE	þ							
Project Management	19-Dec-01	28-Jun-13			1						
Planning	19-Dec-01	07-Oct-05									
Environmental	25-Aug-04	30-Mar-10									
Right of Way	04-Jun-07	09-Feb-09									
Design	11-Oct-05	13-Mar-09									
Bid & Award	03-Nov-08	25-Aug-09			—						1
Construction Management	26-Aug-09	24-Aug-12	-								
Construction	20-Apr-09	24-Aug-12		-	- 11						
Closeout	27-Aug-12	28-Jun-13									
CUW37001 Pipeline Repair & Readiness Improvements	21-Apr-03	16-Apr-09	COMPLETEL	þ							
Project Management	21-Apr-03	16-Apr-09		÷							
Planning	21-Apr-03	30-Mar-07	_								
Environmental (CatEx)	14-Ian-05	29-Dec-06									
	07-Jun-04	05-Eeb-07									
Bid & Award	31-Oct-05	23-Jul-07	0								
Construction Management	30 Ian 06	15 Oct 08		<u>.</u>							
Construction	30 Jan 06	15 Oct 08									
Close Out	10 San 06	15-0ct-00									
Cluw27401 Coloveros Dem Benlesement	18-Sep-00	24 Mar 10									
Dreiget Mangament	03-Sep-02	24-May-19			<u> </u>						
	03-Sep-02	24-May-19									
Planning	03-Sep-02	04-Nov-05									

Informeration Frage		AP	PENDIX	X B: Current Approved WSIP Phase-Level Schedules
Invisormental 16.406-00 0.5 Pai-12 Design 14.500-00 0.500-15 Design 14.500-00 0.500-15 Design 14.500-00 0.500-15 Design 15.000-11 0.500-05 Design 15.000-01 0.500-01 Design 15.000-01 0.500-01 <t< th=""><th>lame</th><th>Start</th><th>Finish</th><th>FY2008 FY2010 FY2011 FY2012 FY2013 FY2014 FY2015 FY2016 FY2017 FY2 For legglegalegalegalegalegalegalegalegalega</th></t<>	lame	Start	Finish	FY2008 FY2010 FY2011 FY2012 FY2013 FY2014 FY2015 FY2016 FY2017 FY2 For legglegalegalegalegalegalegalegalegalega
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Bit A Avaid 2:00-09 39.No-15 Image: Section 1.000000000000000000000000000000000000	Design	14-Nov-05	30-Nov-15	
Construction Management 15-Aug-11 00-50-16 0	Bid & Award	27-Dec-10	30-Nov-15	
Construction USA Acad SA Acad	Construction Management	15-Aug-11	10-Sep-18	
Closeout 27.8m.18 41.4m.97 Project Management 19.8m.43 8-Jadkin Project Management 19.8m.43 8-Jadkin Commental 19.8m.43 8-Jadkin Commental 19.8m.43 8-Jadkin Design 16.8m.44 18.8m.43 Bid & Avard 23.4m.65 18.8m.45 Construction Management 27.3m.45 14.8m.46 Construction Management 17.8m.43 8-Jadkin Construction Management 2-Jadkin 8-Jadkin </td <td>Construction</td> <td>31-May-11</td> <td>26-Nov-18</td> <td></td>	Construction	31-May-11	26-Nov-18	
CUW3403 Calavase Reserve Uppuks NS-Nor43 8-Jack Preject Margerent NS-Nor43 NS-Nor43 Parning DN-Nor43 NS-Nor43 Design 10-be-44 NS-Nor43 Construction 27,iand5 14-be-64 Construction 77,iand5 14-be-64 Construction 17,0aec3 NS-Nor43 Preject Margerent 17,0aec3 NS-Nor43 Preject Margerent 17,0aec3 NS-Nor43 Construction NS-Nor43 NS-Nor43 Design 0-ba-04 NS-Nor43 Construction Margerent 2,0aec3 1-ba-04 Construction Margerent 2,0aec3 1-ba-04 Construction Margerent 2,0aec3 1-ba-04 Preject Margerent 2,0aec3 1-ba-04	Closeout	27-Nov-18	24-May-19	
Project Management 19 Kev.03 8-Med Painring 19 Kev.04 Nave.65 Environmental 11 Moy.44 Nave.65 Environmental 12 Moy.44 Nave.65 Environmental 27 Mar.65 Nave.65 Construction Management 27 Mar.65 Nave.65 Construction Management 17 Obec.01 Nave.75 Project Management 17 Obec.01 Nave.75 Design 0.04 Mar.07 Nave.75 Project Management 27 Aber.85 Nave.75 Orastruction Management 27 Aber.85 Nave.75 Orastruction Management 28 Aber.95 Nave.75 </td <td>CUW37402 Calaveras Reservoir Upgrades</td> <td>19-Nov-03</td> <td>28-Jul-06</td> <td>COMPLETED</td>	CUW37402 Calaveras Reservoir Upgrades	19-Nov-03	28-Jul-06	COMPLETED
Planning IS-Nu-03 IS-Nu-04 IS-Nu-04 <td< td=""><td>Project Management</td><td>19-Nov-03</td><td>28-Jul-06</td><td></td></td<>	Project Management	19-Nov-03	28-Jul-06	
Environmental 2.MayA4 (8.Nov.06) Design 1.De.v0 (8.Nov.06) Did A Awad 2.Jan.06 (8.Nov.06) Construction Management 2.Jan.06 14.Feb.06 Construction Management 17.De.v0 30.Nov.15 Princed Management 17.De.v0 30.Nov.15 Design 10.Au.07 2.Say.12 Design 0.Mau.07 2.Say.12 Design 0.Mau.07 2.Say.12 Construction Management 2.Du.10 30.Nov.15 Construction Management 2.May.13 30.Nov.15 Construction Management 2.May.14 2.May.14 Design 0.Mau.07 2.Say.12 Construction Management 2.May.14 2.May.14 Project Management 2.May.14 2.May.14 Project Management 2.May.14 2.May.14 Project Management 2.May.14 2.May.14 Project Management 2.May.14 2.May.14 Construction Management 2.May.14 2.May.14 Project Management 2.May.14 2.May.14 Construction Management </td <td>Planning</td> <td>19-Nov-03</td> <td>18-Nov-05</td> <td></td>	Planning	19-Nov-03	18-Nov-05	
Design 16-38-04 15-80-04 15-80-04 Bid & Award 23-80-05 147-60-06 Construction Management 27-80-05 147-60-06 Construction Management 17-20-06 38-80-06 Project Management 17-20-06 38-80-06 Project Management 17-20-06 38-80-07 Project Management 17-20-06 38-80-17 Project Management 0.54-06 0 UW39405 Stamping 0.54-07 0 Orastruction Management 0.54-07 0 Project Management 0.54-07 0 UW39405 Stamping 0.54-07 0 UW39405 Stamping 0.54-07 0 Project Management 0.54-07 0 Project Management 0.54-07 0 0 0 Project Management 0.54-07 0	Environmental	21-May-04	18-Nov-05	
Bid A Nard 25 Janu 5 18 Key 05 Construction Management 27 Janu 5 11 Key 06 Construction Anagement 77 Janu 5 11 Key 06 V197403 San Autorio Backup Pyeline 77 Janu 5 11 Key 07 Project Management 17 Jaec 10 80 Key 15 Project Management 17 Jaec 10 80 Key 15 Construction Management 20 Actio 29 Marci 13 Construction Management 26 Actio 29 Marci 13 Construction Management 26 Actio 29 Marci 13 Construction Management 26 Actio 29 Marci 13 Construction Management 22 Actio 13 20 Actio 14 Construction Management 22 Actio 13 20 Actio 13 Construction Management 22 Actio 13 20 Actio 14 Construction Management 22 Actio 13 20 Actio 14 Parining 22 Actio 13 11 Marci 13 Environmental Review 21 Adtio 14 20 Actio 13 Bid A Award 23 Actio 13 20 Actio 14 Construction Management 20 Actio 13 20 Actio 14 Design 16 Jaan/7 10 Actio 14 20	Desian	16-Dec-04	18-Nov-05	
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Close Our 07-0-48 28-400 CUW37018 Stan Attenio Backup Pfeline 17-0-60 80-Nor-15 Project Management 17-0-60 80-Nor-15 Planning 17-0-60 80-Nor-15 Evidormental 00-0-61 28-4-13 Design 01-Mar-07 28-59-12 Bid & Award 18-Mar-15 30-Nor-15 Close Out 01-Ja-15 30-Nor-15 Close Out 01-Ja-15 30-Nor-15 Close Out 01-Ja-15 30-Nor-15 Close Out 01-Ja-16 20-Nar-15 Project Management 22-Apr-05 12-Mar-14 Project Management 22-Apr-05 12-Mar-14 Close Out 01-Ja-15 30-Nor-15 Close Out 03-Ja-06 23-Ja-07 Construction 03-Ja-07 23-Ja-07 Bid & Award 23-Ja-07 23-Ja-07 Construction Maragement 01-Ja-07 14-Ja-07 Project Management 01-Ja-07 14-Ja-07 Project Management 01-Ja-07 14-Ja-07 Project Management 01-Ja-07 14-Ja-07	Construction	27-Jun-05	14-Feb-06	
Currential 17-02-03 30-Non-15 Project Management 17-02-03 30-Non-15 Project Management 17-02-03 30-Non-15 Bids Award 02-02-06 9-Ma-13 Construction Management 20-02-12 18-Ma-07 Bids Award 13-Ma-07 12-Ma-14 Construction Management 20-02-12 18-Ma-14 Project Management 22-Apr05 12-Ma-14 Project Management 01-Ma-07 12-Sp-13 Bids Award 23-Apr05 12-Ma-14 Construction Management 22-Apr05 12-Ma-14 Project Management 01-Ja-04 22-Apr05 Project Management 01-Ja-04 22-Apr05 Construction Management 22-Apr05 12-Ma-14 Project Management 01-Ja-04 22-Apr05 Bids Award 23-Apr05 12-Ma-14 Construction Management 02-Apr06 12-Ma-14 Construction Management 01-Ja-04 2-Ja-04 Construction Management 01-Ja-04 2-Ja-04	Close Out	07-Oct-05	28-Jul-06	
Construction Project Management Project Manag	CUW37403 San Antonio Backun Pineline	17 Dec 02	20-Jul-00	
Project Management 01-backo 0.54,00-13 Design 01-backo 11-backo 0.54,00-13 Design 01-backo 11-backo 0.54,00-13 Bid & Award 25-bach 11-backo 0.54,00-13 Construction Management 20-bach 12-backo 0.54,00-13 Construction Management 22-backo 12-backo 0.54,00-13 Project Management 22-backo 12-backo 0.54,00-13 Right of Way 0.31,04-10 10-backo 0.54,00-13 Right of Way 0.31,04-10 10-backo 0.54,00-13 Construction Management 30-backo 22-backo 0.54,00-13 Construction Management 30-backo 22-backo 0.54,00-13 Construction Management 30-backo 22-backo 0.54,00-13 Construction Management <td< td=""><td>Project Management</td><td>17-Dec-03</td><td>30-Nov-13</td><td></td></td<>	Project Management	17-Dec-03	30-Nov-13	
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Design 01-Marc0 2/4 Sep 12 Bid & Award 18 May-11 2/4 Marc13 Construction Management 2/2 Opt-12 18 Marc15 Construction 2/9 Marc13 18 May-15 Construction 2/9 Marc13 18 May-15 Construction 2/2 Apr-05 19 May-15 Project Management 2/2 Apr-05 19 May-16 Project Management 2/2 Apr-05 19 May-16 Ocnstruction 2/9 May-13 19 May-16 Bid & Award 01-May-16 19 May-16 Construction 2/2 Apr-05 19 May-16 Bid & Award 03-May-10 19 May-16 Construction 2/2 Apr-05 19 May-16 Construction 2/2 Apr-05 19 May-16 Construction 2/3 May-09 2/2 May-10 Construction 2/3 May-09 2/3 May-10 Construction 2/3 May-09 2/3 May-12 Project Management 01-May-14 2/3 May-09 Output: 19 Apr-10 3/3 May-09 Construction Management 02-May-09 0/3 Geg-11 Construction Management	Environmental	02-Oct-06	29-Mar-13	
Bid & Award IS May-11 29 Mar-13 Construction 29 Mar-13 31 May-15 Construction 29 Mar-13 31 May-15 Close Out 01-Jun-15 90 Nov-15 CUW38101 SWUTP Expansion & Treated Water Ree 22 Apr-05 12 Jun-14 Project Management 22 Apr-05 12 Jun-14 Project Management 22 Apr-05 29 Jun-17 Environmental Review 21 Jul-06 40 Jun-10 Bid & Award 23 Nov-09 22 Jun-14 Construction Management 30 Apr-10 00 Sep-13 Construction Management 01-Jul-44 2-Jun-44 Cut-30001 03-Sep-13 Construction Management 01-Jul-44 Project Management 01-Jul-44 2-Jun-44 Construction Management 02-Jun-47 Construction Management 02		01-Mar-07	24-Sep-12	
Construction Management 26-Oct.12 18-Mar-13 SN-Mar-13 SN-Mar-13 </td <td>Bid & Award</td> <td>18-May-11</td> <td>29-Mar-13</td> <td></td>	Bid & Award	18-May-11	29-Mar-13	
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Planning - Phase A 0 Environmental - Phase A 0 Design - Phase A 0 Bid & Award - Phase A 1 Construction Management - Phase A 1 Construction - Phase A 1 Close Out - Phase A 1 Close Out - Phase A 2 2UW35302 Seismic Upgrade of BDPL Nos. 3 & 4 2 Project Management 2 Planning - Phase B 2 Environmental (EIR) - Phase B 1 Right of Way Phase B 0 Design - Phase B 0 Bid and Award - Phase B 0 Construction - Phase B 1 Class Out - Phase B 1 Class Out - Phase B 1	Start 06-Jan-03 16-Jul-03 03-May-04 16-May-05 23-Jan-06 11-Oct-05 20-Mar-08 22-Oct-04 22-Oct-04 22-Oct-04 22-Oct-04 11-Sep-06 03-Jul-06 05-Mar-07 03-Nov-08	Fnish 20-Jul-04 28-Feb-06 16-May-06 18-Aug-06 03-Apr-09 19-Mar-08 31-Jul-09 09-Dec-15 09-Dec-15 12-Dec-08 17-Mar-12 26-Aug-11		PY2009 04 FQ1 FQ2 FQ3		FY2011 FG4 FG1 FG2 FG3	FY2012 FQ4 FQ1 FQ2 FQ3	FY2013 FQ4 FQ1 FQ2 FQ3	FY2014 FQ4 FQ1 FQ2 FQ3 F	FY2015 24 FQ1 FQ2 FQ3 FC	FY2016 14 FQ1 FQ2 FQ3 FQ	FY2017 4 FQ1 FQ2 FQ3 FQ-	FY20 4 FQ1 FQ2 I
Planning - Phase A 0 Environmental - Phase A 1 Design - Phase A 0 Bid & Award - Phase A 1 Construction Management - Phase A 2 Construction - Phase A 1 Close Out - Phase A 2 VUW35302 Seismic Upgrade of BDPL Nos. 3 & 4 2 Project Management 2 Planning - Phase B 2 Environmental (EIR) - Phase B 1 Right of Way Phase B 0 Design - Phase B 0 Bid and Award - Phase B 0 Construction - Phase B 1	06-Jan-03 16-Jul-03 03-May-04 16-May-05 23-Jan-06 11-Oct-05 20-Mar-08 22-Oct-04 22-Oct-04 22-Oct-04 11-Sep-06 03-Jul-06 05-Mar-07 03-Nov-08	20-Jul-04 28-Feb-06 16-May-06 18-Aug-06 03-Apr-09 19-Mar-08 31-Jul-09 09-Dec-15 09-Dec-15 12-Dec-08 17-Mar-12 26-Aug-11										· · · · · · · · · · · · · · · · · · ·	
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Bid & Award 22	22-Jun-09	11-Dec-09											
Construction Management 22	23-Sep-08	28-Feb-11											
Construction 2:	25-Jul-08	28-Dec-12					_		_				
Close Out 0	01-Mar-11	28-May-13				-	-		-				
CUW36801 BDPL Reliability Upgrade / Tunnel	19-Dec-01	31-Mar-16											
Project Management 1	19-Dec-01	31-Mar-16				1							
Planning 19	19-Dec-01	31-May-06											
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Bid & Award - BAYTUNNEL 0	01-May-09	31-Mar-10				1							
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Construction - BAYTUNNEL 1	17-Jul-09	01-Oct-15											
Close Out - BAYTUNNEL 01	02-Oct-15	31-Mar-16											
UW36802 BDPL Reliability Upgrade - Pipeline 19	19-Dec-01	06-Apr-15											
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	AP	PENDIX	B: Curre	ent Appr	roved V	VSIP Ph	ase-Le	vel Schedu	ules				
roject Name	Start	Finish	FY2008	FY2009	FY2010	FY2011	FY201	2 FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Closeout	14-Jun-12	06-Apr-15	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4				u3 FQ4 FQ1 FQ2 FQ3 FQ4					
CUW36803 BDPL Reliability Upgrade - Relocation of	24-Apr-06	28-May-10	COMPLETE										
Project Management	24-Apr-06	28-May-10											
Right of Way	24 Mpr 00	28-May-10				1							
Design	20-141ay-10	16-Jan-07											
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	02_Jul_07	28-May-10				1							
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	28 May 10	28-May-10											
CUW38001 RDPL Nos 3 & 4 Crossovers	20-May-10	20 Jun 14											
Broject Management	17-Feb-04	30-Juli-14	COMPLETED				_		<u> </u>				
	17-Feb-04	30-Jun-14								-			
	17-Feb-04	14-Nov-06											
	28-Aug-06	31-Dec-08											
	04-Sep-07	30-Jun-14											
	04-Dec-06	20-Jul-09	_		<u></u>								
Bid & Award	05-Nov-08	10-Jul-09			-								
Construction Management	23-Sep-08	30-May-14		· · · ·									
Construction	30-Jan-09	11-Sep-13											
Close Out	31-Dec-12	30-Jun-14											
CUW38901 SFPUC/EBMUD Intertie	24-Jun-02	20-Mar-14	COMPLETED										
Project Management	24-Jun-02	20-Mar-14			1	1		I					
Planning	24-Jun-02	11-Oct-02											
Environmental	14-Oct-02	31-Mar-03											
Design	01-Apr-03	30-Jul-04											
Bid & Award	02-Aug-04	21-Dec-04											
Construction Management	18-Jan-05	31-Jan-08											
Construction	18-Jan-05	31-Jan-08											
Close Out	01-Feb-08	20-Mar-14											
CUW39301 BDPL No. 4 Condition Assessment PCCP	04-Aug-06	06-Feb-09	COMPLETED										
Project Management	04-Aug-06	06-Feb-09											
Planning	04-Aug-06	06-Feb-09											
Environmental	16-Jul-07	30-Sep-08											
Peninsula Region	01-Nov-00	06-Jul-16											
CUW35401 Lower Crystal Springs Dam Improvements	01-Nov-00	28-Dec-12	COMPLETE										
Project Management	01-Nov-00	28-Dec-12											
Planning	01-Nov-00	30-Dec-04											
Environmental Review	03-Jan-05	28-Apr-11											
Bight of Way	03 Jul 05	20 Jun 10											
Design	03-Jui-00	30 Sap 10											
Bid & Award	20 Aug 10	28 Jap 11	_										
	20-Aug-10	28-Jan-11											
	21 Jan 11	01-May-12											
	51-Jan-11	01-May-12											
CUW25601 New Createl Springs Barrow Turnel	02-May-12	28-Dec-12											
Dreiget Management	07-Jan-02	17-Aug-12											
	07-Jan-02	17-Aug-12											
	07-Jan-02	05-Aug-04											
Project Management	vironmenta		Right-of-Wa	v	Construct	tion Mamt		Closeout					
	aian			, <u> </u>	Construct	tion		Brogrom Mamt					
	อเมา		DIU & AWAI'U		CONSTRUC			Frogram wight				Pag	e 5 of 10

	API	PENDIX	B: Curre	ent App	roved W	/SIP Pha	ase-Leve	el Sche	dules				
Project Name	Start	Finish	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Environmental	18-Sep-03	09-Oct-08	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ	4 FQ1 FQ2 FQ3 FC	4 FQ1 FQ2 FQ3 F		Q4 FQ1 FQ2 FQ3	FQ4 FQ1 FQ2 FQ3 F	24 FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 4
Bight of Way	03-Jul-06	16-Sep-08											
Design	03-Jui-00	05 Jun 08											
Bid & Award	01-Juli-04	03-Juii-08											
	03-Jun-08	01-Dec-08	-										
	01-Dec-08	20-001-11	_										
	01-Dec-08	17-Aug-12											
	29-Sep-11	17-Aug-12											
CUW35701 Adit Leak Repair - Crystal Springs/Calaver	01-Apr-05	31-Jul-08	COMPLETED	_									
	01-Apr-05	31-Jul-08	-										
Planning	01-Apr-05	27-Mar-06											
Environmental	01-Jul-05	30-Jun-06											
Design	01-Sep-05	15-Sep-06											
Bid & Award	28-Aug-06	30-Mar-07											
Construction Management	02-Apr-07	05-Mar-08											
Construction	09-Apr-07	05-Mar-08											
Close Out	12-Mar-08	08-Jul-08											
CUW36101 Pulgas Balancing - Inlet/Outlet Work	15-May-02	11-May-06	COMPLETED										
Project Management	01-Jul-03	11-May-06											
Planning	15-May-02	01-Aug-05											
Environmental	02-May-04	02-May-04											
Bid & Award	05-Mar-04	06-Sep-05											
Construction Management	07-Sep-05	02-Feb-06											
Construction	06-Sep-05	02-Feb-06	-										
Close Out	03-Feb-06	11-May-06	-										
CUW36102 Pulgas Balancing - Discharge Channel Mo	01-Apr-05	30-Jul-10	COMPLETED										
Project Management	01-Apr-05	30-Jul-10	COMPERIER			<u> </u>							
Planning	01 Apr 05	15 Sap 06											
Environmentel	17 Aur 06	13-Sep-00	_										
	17-Aug-00	03-Api-09	_										
Design Bid & Award	10-Apr-07	03-100-08	-										
	04-INOV-08	03-Apr-09	_										
	06-Apr-09	07-Dec-09											
	02-Apr-09	07-Dec-09	_										
Close Out	08-Dec-09	30-Jul-10											
CUW36103 Pulgas Balancing - Structural Rehabilitation	03-Apr-06	28-Dec-12	COMPLETED										
Project Management	03-Apr-06	28-Dec-12				1							
Planning	03-Apr-06	11-Dec-07											
Environmental	03-Jul-07	16-Jul-09											
Design	11-Jan-08	01-Jul-09			_								
Bid & Award	06-Apr-09	30-Nov-09		0									
Construction Management	30-Nov-09	01-Sep-11											
Construction	30-Nov-09	01-Sep-11											
Close Out	02-Sep-11	28-Dec-12						-					
CUW36105 Pulgas Balancing - Modifications of the Ex	02-Apr-07	20-Mar-13	COMPLETED										
Project Management	02-Apr-07	20-Mar-13			<u>,</u> n	<u> </u>		<u> </u>					
Planning	02-Apr-07	17-Mar-09											
Environmental	19-Nov-07	04-Mar-10											
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Project Management Env	vironmenta		Right-of-Wa	у	Construct	ion Mgmt	Clo	seout					
Planning Des	sign		Bid & Award		Construct	ion [Pro	ogram Mam	ıt				
	5					-		5 5.0				Page	e 6 of 10

ne is	Start	Finish	FY2008	EY2009	FY2010	EY2011	EY2012	EY2013	FY2014	FY2015	FY2016	FY2017	EY2
			FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	FQ1 FQ2 FQ3 FQ4	4 FQ1 FQ2 FQ3 FQ	FQ1 FQ2 FQ3 FQ	FQ1 FQ2 FQ3 F	Q4 FQ1 FQ2 FQ3 FQ4	FQ1 FQ2			
Design 0)2-Jan-09	12-Mar-10	_										
Bid & Award 2	29-Jan-10	22-Sep-10											
Construction Management 2	22-Sep-10	25-Oct-12											
Construction 2	22-Sep-10	25-Oct-12											
Close Out 2	26-Oct-12	20-Mar-13											
CUW36501 Cross Connection Controls 0)1-Jul-03	30-Apr-09	COMPLETEI										
Project Management 0)1-Jul-03	27-Feb-09											
Planning 0)1-Jul-03	03-Aug-04											
Environmental 0)1-Jul-03	05-Aug-08											
Right of Way 0	03-Sep-07	30-Sep-08											
Design 0)3-Aug-04	30-Dec-05		[
Bid & Award 0	01-Apr-05	31-May-05											
Construction Management 0)1-Jun-05	26-Nov-08											
Construction 0)1-Jun-05	26-Nov-08											
Close Out 0)1-Dec-08	30-Apr-09											
CUW36601 HTWTP Short-Term Improvements (Demc 0)4-Sep-02	14-Nov-06	COMPLETE	<u>þ</u>									1
Project Management 0)4-Sep-02	14-Nov-06											
Planning 0)4-Sep-02	30-Apr-03											
Environmental 0)1-Aug-03	08-Aug-05											
Design)1-Aug-03	11-Feb-05	_										
Bid & Award 1	14-Feb-05	08-Sep-05				+							÷
Construction Management 0	9-Sen-05	27-Eeb-06											
Construction)9-Sep-05	27 Feb-06											
Close Out	12 Ion 06	13 Nov 06	_										
CIW36603 HTWTP Short-Term Improvements - Coag 0	12-Jail-00	28 Jul 10	COMPLETE										
Project Management)3 Jul 06	28-Jul-10	COMPLETE	<u>,</u>	<u>.</u>	<u>+</u>	+						
Planning)2 Jul 04	23-Jui-10				T							
Environmental 0)3-Jul-06	22-Aug-07				<u>.</u>							
Environmental 0	JS-JUI-00	28-Jui-10											
Design 1	13-Jul-07	22-Feb-08											
Bid & Award 2 & 3	03-Sep-07	09-Jul-08											ļ
Construction Management 2& 3	18-Jun-08	31-Mar-10											
Construction 2 & 3	19-Feb-08	31-Mar-10	_										
Close Out 2 & 3 0	01-Apr-10	28-Jul-10				1							
CUW36701 HTWTP Long-Term Improvements 0)1-Jul-03	04-Jan-16											
Project Management 0)1-Jul-03	04-Jan-16											
Planning 0)1-Jul-03	29-Aug-08											
Environmental 0)9-Jan-07	15-Mar-11											
Design 0	02-Sep-08	15-Oct-10											
Bid & Award 0)1-Jul-10	15-Mar-11											
Construction Management 1	16-Mar-11	30-Jun-15				-					4		
Construction 1	16-Mar-11	30-Jun-15		[4		1
Close Out 3	30-Jun-15	04-Jan-16											
CUW36702 Peninsula Pipelines Seismic Upgrade 0)1-Jul-09	06-Jul-16											
Project Management 0)1-Jul-09	06-Jul-16				;	1	; ,				÷	
Planning 0)1-Jul-09	31-Aug-12						<u></u>					
Environmental 0)1-Jul-09	01-Apr-14		+									1
				1	1		1	1	1	:		1	1

	AP	PENDIX	B: Curr	ent App	roved W	/SIP Pha	ase-Lev	el Sche	dules				
ne	Start	Finish	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018
Right of Way	03-Sep-12	25-Nov-15											i arr azr
Design	03-Jan-12	18-Dec-13											
Bid & Award	15-Nov-13	14-Jul-14											
Construction Management	15-Jul-14	31-Dec-15											
Construction	15-Jul-14	31-Dec-15											
Closeout	04-Jan-16	06-Jul-16	_									÷.	
CUW36901 Capuchino Valve Lot Improvements	22-Apr-05	19-Aug-08	COMPLETE										
Project Management	22-Apr-05	19-Aug-08		÷									
Planning	22-Apr-05	01-Nov-05											
Environmental	01-Nov-05	14-Nov-06											
Design	01-Nov-05	15-Sep-06											
Bid & Award	18-Sep-06	29-Jan-07	_										
Construction Management	29-Jan-07	05-Mar-08											
Construction	29-Jan-07	05-Mar-08											
Close Out	06-Mar-08	19-Aug-08											
CUW37101 Crystal Springs/San Andreas Transmission	18-Aug-03	30-Jun-15	COMPLETE!										
Project Management	18-Aug-03	30-Jun-15	COMILLILI				1		-		_		
Planning	18-Aug-03	20-Apr-07	_										
Environmental	03-Jan-07	30-Nov-10											
Bight of Way	27 Mar 06	30 Jun 10										+	+
Design	15 Oct 07	15 Jun 10	_										
Bid & Award	13-0ct-07	30 Nov 10	_										
Construction Management	01 Dec 10	31 Dec 14	_		_								
Construction	01-Dec-10	31-Dec-14											
	01-Dec-10	31-Dec-14										+	+
CUW37801 Crustal Springs Binalina No. 2 Banlacaman	02-Jail-13	30-Jul-13									1		
Brojost Management	15 Jan 04	31-Jul-14	COMPLETEL		<u> </u>				, · · · · · · · · · · · · · · · · · · ·	<u> </u>			
Planning	15-Jan-04	31-Jul-14											
Environmental	01 A == 04	19-Jan-07					_						
Pight of Woy	01-Apr-04	30-Jun-11										+	÷
Design	01-Sep-06	27-Apr-12											
Design Bid & August	01-Jan-07	08-Oct-10	-										
	09-Sep-10	04-Mar-11	_										
Construction Management	01-Nov-10	22-Mar-13	_										
Construction	0/-Feb-11	30-Mar-13											
	24-Mar-13	31-Jul-14											
CUW3/901 San Andreas Pipeline No. 3 Installation	15-Jan-04	30-Aug-12	COMPLETEL										
Project Management	15-Jan-04	30-Aug-12											
	15-Jan-04	28-Apr-05											
Environmental	01-Apr-04	15-May-09											
Right of Way	01-Aug-06	13-Aug-09											
Design	01-May-05	17-Apr-09		_									
Bid & Award	20-Apr-09	26-Aug-09		-	-								
Construction Management	26-Aug-09	30-Jun-11	_										
Construction	26-Aug-09	30-Jun-11	l				-					ļ	
Closeout	01-Jul-11	30-Aug-12	COMPLETE										
CUW39101 Baden and San Pedro Valve Lots Improver	03-Oct-05	29-Mar-13	COMPLETE										
Project Management	vironmenta		Right-of-Wa		Construct	ion Mgmt	Cl	oseout					
Planning De	sian		Bid & Award		Construct	ion	Pr	ogram Mon	nt				
	g.,		c.//urc					eg. ann mgr				Pag	e 8 of

Name Sature Free <						
Project Management 01-0-105 03-Mar-106 Planning 05-Oc-105 03-Nor-06 Environmental 05-Oc-06 03-Mar-07 Bid & Award 29-Sep-04 07-Apr-09 Construction 03-Apr-09 90-Dec-11 Cutwasol Regional Groundwater Storage and Recov 91-Jun-03 31-Jul-18 Project Management 01-Jun-03 31-Jul-18 Cutwasol Regional Groundwater Storage and Recov 90-Apr-16 Planning 01-Jun-03 31-Jul-18 Construction 01-Jun-03 31-Jul-18 Construction Management 04-Mar-06 31-Jul-18 Construction Management 01-Jun-03 31-Jul-18 Construction Management 01-Jun-03 31-Jul-18 Cutwasol Management 01-Jun-03 31-Jul-18 Cutwasol Management 01-Jun-03 31-Jul-18 Cutwasol Management 01-Apr-06 Sep-10 <		FY2012 FY2013 FY20 FQ2 FQ3 FQ4 FQ1 FQ2 FQ3 FQ4 FQ1 FQ2 F	14 FY2015 203 FQ4 FQ1 FQ2 FQ3 FQ4	FY2016	FY2017 Q1 FQ2 FQ3 FQ4 F	FY FQ1 F(
Planning 63-0c-06 53-No-06 Environmental 65-Oc-06 31-Mar-08 Design 29-Mar-07 12-Jan-09 Bid & Award 29-Sep-08 07-Apr-09 Construction Management 68-Apr-09 30-Dec-11 Construction 63-Apr-09 04-Dec-11 Construction 03-Apr-09 04-Dec-11 Construction 03-Apr-09 04-Dec-11 Construction 01-Jau-03 31-Jau-18 Project Management 01-Jau-03 31-Jau-18 Planning 01-Jau-03 31-Jau-18 Planning 07-Apr-09 0-Oc-11 Design 07-Apr-08 0-Oc-17 Design 07-Apr-08 0-Oc-17 Design 01-Jau-03 31-Jau-18 Construction Management 01-Jau-03 31-Jau-18 Construction Management 01-Jau-03 31-Jau-18 Construction Management 01-Jau-03 0-Oc-17 Project Management 31-Mar-00 Io-Sep-10 Project Management 11-Mar-06 Io-Sep-10 Construction Management 11-Apr-05						
Environmental 05 Occ-06 21-Occ-08 Right of Way 05 Occ-06 31-Mar-08 Design 29-Mar-07 12-Jan-09 Bid & Award 29-Sep-08 07-Apr-09 Construction Management 08-Apr-09 30-Dec-11 Clase Out 31-Dec-11 29-Mar-13 San Francisco Regional Region 31-Jan-18 Project Management 01-Jan-03 31-Jan-18 Project Management 01-Jan-03 31-Jan-18 Piny opt Management 01-Jan-03 31-Jan-18 Project Management 01-Jan-03 31-Jan-18 Closeout 07-Apr-08 30-Oct-17 Design 02-Apr-16 00-Apr-16 Construction Management 01-Jan-03 31-Jan-18 Closeout 01-Jan-03 31-Jan-18 Closeout 01-Apr-09 31-Jan-18 Closeout 01-Apr-09 31-Jan-18 Project Management 01-Mar-00 02-Apr-16 Project Management 01-Apr-05 26-Mar-09 Project Management 01-Apr-05 26-Mar-09 Construction 01-Apr-05						
Right of Way 05 Oct-06 31-Mar-08 Design 29-Mar-07 12-Jan-09 Bid & Award 29-Sep-08 30-Dec-11 Construction 08-Apr-09 30-Dec-11 Construction 03-Apr-09 30-Dec-11 Close Out 31-Dec-11 29-Mar-13 San Francisco Regional Region 31-Jah-18 CUW30103 Regional Groundwater Storage and Recov 01-Jan-03 Ol-Jan-03 31-Jah-18 Prioret Management 01-Jan-03 Design 02-Apr-16 Right of Way 07-Apr-08 Octostruction 01-Jan-03 Construction 01-Jan-03 Construction Management 01-Jan-03 Onstruction 01-Jan-03 Construction 01-Jan-03 Construction 01-Jan-03 Construction 01-Jan-03 Closeout 01-Jan-03 Closeout 01-Jan-04 Project Management 01-Jan-04 Onstruction 01-Jan-04 Design 01-Oct-01 12-Apr-06 Bid & Award 22-Oct-04 10-Oct-06						
Design 29-Mar-07 12-Jan-09 12-Jan-09 Bid & Award 29-Sep-08 07-Apr-00 30-Dec-11 Construction 06-Apr-00 30-Dec-11 20-Mar-13 Cisee Out 31-Job-18 31-Job-18 Project Management 01-Jal-05 31-Jal-18 Project Management 01-Jal-05 31-Jal-18 Project Management 01-Jal-05 31-Jal-18 Project Management 01-Jal-05 31-Jal-18 Construction Management 01-Jal-05 31-Jal-18 Construction Management 01-Jal-03 31-Jal-18 Construction Management 01-Mar-00 28-Sep-01 Project Management 01-Sep-10 COMPLETED Project Management 11-Apr-05 29-Mar-13 <						
Bid & Award 29-Sp-08 07-Apr-09 Construction Management 08-Apr-09 30-Dec-11 Construction Management 08-Apr-09 30-Dec-11 CUW30103 Regional Groundwater Storage and Recov 01-Jun-03 31-Jul-18 Project Management 01-Jun-03 31-Jul-18 Planning 01-Jun-03 31-Jul-18 Environmental 15-Oct-07 29-Apr-16 Right of Way 07-Apr-08 30-Oct-17 Design 02-Jan-08 30-Jun-18 Construction Management 04-Jun/3 31-Jan-18 Construction Management 04-Jun/3 31-Jan-18 Construction 01-Jun/3 31-Mar-10 Construction 01-Jun/3 31-Mar-18 Construction 01-Jun/3 31-Mar-18 Construction 01-Jun/3 31-Mar-18 Project Management 11-Mar-09 28-Sp-01 Environmental 21-Mar-04 21-Mar-04 Design 01-Oct-01 12-Apr-06 Bid & Award 20-Oct-04 20-Mar-09 Clussor Out 13-Mar-05 20-Mar-09 Design <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Construction Management 08-Apr-09 30-Dec-11 Construction 03-Apr-09 30-Dec-11 Close Out 31-Dec-11 29-Mar-13 Sam Francisco Regional Region 31-Mar-00 31-Jal-18 Project Management 01-Jul-05 31-Jal-18 Project Management 01-Jul-05 31-Jal-18 Right of Way 07-Apr-08 30-Oet-17 Design 02-Jan-08 30-Oet-17 Bid & Award 11-Mar-00 29-Apr-16 Construction Management 04-Mar-08 31-Jal-18 Construction 01-Jul-03 31-Jan-18 Closeout 01-Feb-18 31-Jal-18 Project Management 31-Mar-00 10-Sep-10 Project Management 21-May-04 21-Dec-04 Design 01-Oet-01 12-Apr-06 Bid & Award						
Construction 03-Apr.09 30-Dec-11 Image: Close Out 31-Dec-11 29-Mar-13 San Francisco Regional Region 31-Mar-00 31-Jau-18 Image: Close Out <						
Close Out 31-Dec-11 29-Mar-13 San Francisco Regional Region 31-Jau-18 Project Management 01-Jul-05 31-Jul-18 Proinental 15-Oc-17 29-Apr-16 Right of Way 07-Apr-08 30-Oc+17 Design 02-Jan-08 30-Jul-17 Bid & Award 11-Mar-09 29-Apr-16 Construction Management 04-Mar-08 31-Jan-18 Construction Management 01-Jul-03 31-Jan-18 Construction Management 01-Jul-03 31-Jan-18 Construction Management 01-Jul-03 31-Jan-18 Construction Management 01-Jul-03 31-Jan-18 Construction 01-Jul-03 31-Jan-18 Closeout 01-Feb-18 31-Jan-18 Construction 01-Feb-18 31-Jan-18 Construction Management 11-Apr-03 28-Sep-01 Project Management 11-Apr-05 20-Mar-03 Design 01-Oc-04 20-Apr-06 Bid & Award 22-Oc+05 00-Mar-03 Construction 11-Apr-05 20-Mar-13 Project Management <t< td=""><td></td><td>-</td><td></td><td></td><td></td><td></td></t<>		-				
San Francisco Regional Region 31-Mar-00 31-Jul-18 CUW30103 Regional foroundwater Storage and Recov 01-Jun-03 31-Jul-18 Project Management 01-Jun-03 31-Jul-18 Planning 01-Jun-03 31-Jul-18 Environmental 15-Oct-07 29-Apr-16 Right of Way 07-Apr-08 30-Jun-17 Bid & Award 11-Mar-09 29-Apr-16 Construction 01-Jul-03 31-Jul-18 Construction 01-Jul-03 31-Mar-18 Construction 01-Feb-18 31-Jul-18 Construction 01-Feb-18 31-Jul-18 Construction 01-Feb-18 31-Jul-18 Construction 10-Feb-18 31-Jul-18 Construction 11-Apr-00 10-Sep-10 Project Management 11-Apr-05 20-Anr-06 Bid & Award 22-Oct-04 10-Oct-06 Construction 11-Apr-05 20-Mar-09 Construction 11-Apr-05 20-Mar-09 Construction Management 24-Oct-05 20-Mar-13						
CUW30103 Regional Groundwater Storage and Recov 01-Jun-03 31-Jul-18 Project Management 01-Jul-05 31-Jul-18 1 Planning 01-Jul-05 31-Jul-18 1 Environmental 15-Oct-07 29-Apr.16 30-Oct-17 Design 02-Jan-08 30-Oct-17 30-Apr.16 30-Oct-17 Bid & Award 11-Mar-09 29-Apr.16 1 1 1 Construction Management 04-Mar-08 31-Jul-18 0 0 1 0 1 1 0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Project Management 01-Jul-05 31-Jul-18 Planning 01-Jun-03 31-Jun-08 Planning 01-Jun-03 31-Jun-08 Environmental 15-Oct-07 29-Apr-16 Right of Way 07-Apr-08 30-Oct-17 Design 02-Jan-08 30-Jun-17 Bid & Award 01-Jul-03 31-Mar-18 Construction 01-Jul-03 31-Mar-18 Closeout 01-Feb-18 31-Jul-18 Closeout 01-Feb-18 31-Jul-18 Closeout 01-Feb-18 Comstruction Planning 31-Mar-00 10-Sep-10 Planning 31-Mar-00 10-Sep-10 Planning 31-Mar-00 10-Sep-10 Planning 31-Mar-00 28-Sep-01 Design 01-Oct-01 12-Apr-06 Bid & Award 22-Oct-04 28-Sep-10 Construction 11-Apr-05 29-Mar-13 Project Management 14-Oct-05 29-Mar-13 Project Management 24-Oct-05 29-Mar-13						
Planning 01-Jun-03 31-Jan-08 Environmental 15-Oct-07 29-Apr-16 Right of Way 07-Apr-08 30-Oct-17 Design 0.2-Jan-08 30-Oct-17 Bid & Award 11-Mar-09 29-Apr-16 Construction 0.1-Jun-03 31-Jan-18 Closeout 0.1-Geb-18 31-Jan-18 Closeout 0.1-Feb-18 31-Jul-18 CUW35801 Sunset Reservoir - North Basin 31-Mar-00 10-Sep-10 Project Management 31-Mar-00 10-Sep-10 Planning 31-Mar-00 12-Apr-06 Bid & Award 12-Apr-06 26-Mar-06 Close Out 13-Mar-00 12-Apr-06 Close Out 13-Apr-05 26-Mar-09 Close Out 13-Apr-06 29-Mar-13 Project Management 24-Oct-05 29-Mar-13 Planning 24-Oct-05 29-Mar-13 Planning 24-Oct-05 29-Mar-13 Poject Management 24-Oct-05 29-Mar-13 Poiget Management 24-Oct-05 29-Mar-13 Poiget Management 24-Oct-05 29-M				Ļ÷	÷	
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