HETCH HETCHY
WATER SYSTEM IMPROVEMENT PROGRAM

# QUARTERLY REPORT

## Local Projects

Q3 FY 2011 | 2012

January 2012 — March 2012

*Rebuilding Today for a Better Tomorrow*

Published 05/03/2012

# Quarterly Report - Q3 FY2011/2012

## Water System Improvement Program - Local Projects

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## 1. PROGRAM DESCRIPTION

The Water System Improvement Program (WSIP) is a $4.6 billion dollar, multi-year capital program to upgrade the City of San Francisco's regional and local drinking water systems. The program will deliver improvements that enhance the City's ability to provide reliable, affordable, high quality drinking water to its 26 wholesale customers and regional retail customers in Alameda, Santa Clara, and San Mateo Counties, and to 800,000 retail customers in San Francisco, in an environmentally sustainable manner. The WSIP is structured to cost-effectively meet water quality requirements, improve seismic and delivery reliability, and achieve water supply goals.

Built in the early to mid-1900s, many components of the water system are nearing the end of their working life, with crucial facilities crossing or in close proximity to three major earthquake faults. The San Francisco Public Utilities Commission (SFPUC) initiated the WSIP to repair, replace, and seismically upgrade the system's deteriorating pipelines, tunnels, dams, reservoirs, pump stations, storage tanks, and treatment facilities.

The program consists of 35 local projects located within San Francisco and 46 regional projects spread over seven different counties from the Sierra foothills to San Francisco. Local projects only benefit San Francisco residents whereas regional projects benefit both City residents and the 26 wholesale agencies that receive water from the SFPUC. The management of local projects is divided into 4 sub-programs –Reservoirs, Pump Stations / Tanks, Pipelines / Valves, and Miscellaneous.

The Local program originally included local water supply projects. These projects provide access to groundwater supplies for the potable system, deliver recycled water supplies for non-potable uses, and address water quality and water level issues at Lake Merced. The management and implementation of the five (5) local water supply projects was transferred from the WSIP to the Water Enterprise Capital Improvement Program (CIP) as of July 1, 2011.

The WSIP is funded through the issuance of revenue bonds. Local Measures A and E, which were approved by San Francisco voters in November 2002, allowed for the financing of improvements to the City's water system using revenue bonds and/or other forms of revenue financing. Increases in the water rates of retail and wholesale customers will be used to pay back the debt service on the bonds.

The program budget and schedule were originally adopted by the San Francisco Public Utilities Commission on March 1, 2003. The program at the time was referred to as the Capital Improvement Program (CIP). The scope of the CIP was changed significantly following the adoption of Levels of Service (LOS) goals in early 2005. The program changes were so substantial that the program was renamed the WSIP and a new program budget and schedule were adopted on November 29, 2005. Since the scope of the 2005 Revised WSIP is in general representative of the program being implemented today, the 2005 budget and schedule are considered the "Baseline Budget and Schedule."

Subsequently, the WSIP Baseline Budget and Schedule were revised in 2007, 2009 and 2011, and they were approved by the San Francisco Public Utilities Commission on February 26, 2008, July 28, 2009, and July 12, 2011, respectively. Refer to Appendix A for a scope description of all the local projects included in the WSIP.

| Program Revision | Commission Approval | Budget ($Million) | Schedule(*) |
|---|---|---|---|
| 2003 (Original) | March 1, 2003 | $3,628 | 03/15/16 |
| 2005 (Baseline) | November 29, 2005 | $4,343 | 06/30/14 |
| 2007 (Revised) | February 26, 2008 | $4,392 | 12/18/14 |
| 2009 (Revised) | July 28, 2009 | $4,586 | 12/04/15 |
| 2011 (Latest Approved) | July 12, 2011 | $4,586 | 07/29/16 |

* Final Program Completion Date

## 2. PROGRAM STATUS

This third (3rd) Quarterly Report for Fiscal Year (FY) 2011-2012 presents the progress made on the WSIP local projects between December 25, 2011 and March 31, 2012. The program's schedule and budget were last approved by the San Francisco Public Utilities Commission (SFPUC or Commission) on July 12, 2001. The progress made on the regional projects of the WSIP is presented in a separate quarterly report.

Figure 2.1 shows the total Approved Budget for the local projects remaining in each phase of the program as of March 31, 2012. The number of projects currently active in each phase is shown in parenthesis.

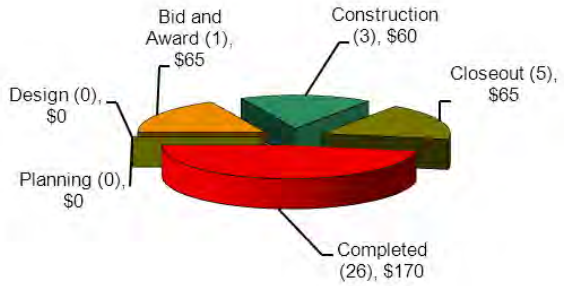


**Figure 2.1 Total Approved Budget for Projects Active in Each Phase ($Million)**

Figure 2.2 shows the number of local projects in the following stages of the program as of March 31, 2012: Pre-construction, Construction, and Post-construction.

Figure 2.3 summarizes the environmental review and permitting status of the WSIP 35 local projects as of March 31, 2012.

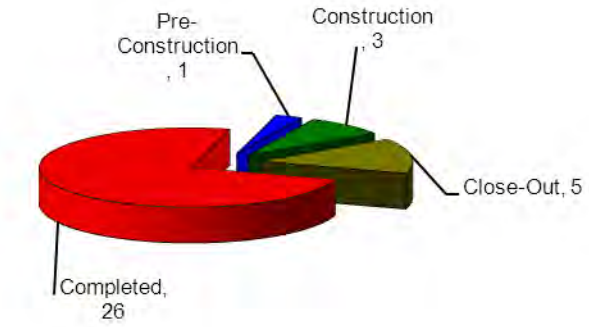


**Figure 2.2 Number of Projects in Pre-construction, Construction, and Post-construction**

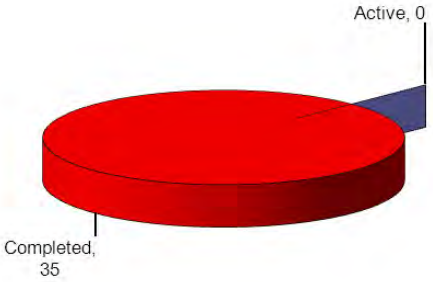


**Figure 2.3 Program Environmental and Permitting Status**

## 3. PROGRAM COST SUMMARY

Table 3.1 provides an overall program-level cost summary of the WSIP Local Program. It shows the Expenditures to Date; the 2005 Baseline, 2011 Approved, Current Approved and Q3/FY11-12 Forecasted Budgets; and the Cost Variance between the Current Approved and Forecasted Budgets.

The total Current Approved WSIP Budget (including Regional and Local Programs, Local Water Supply Projects, Program Management Reserve, and Financing Costs) is $4,586 million and the currently Forecasted Cost at completion is $4,583 million ($2.3 million under the Current Approved Budget). The Current Approved WSIP Budget for the Local Improvement Projects is $361 million and the currently Forecasted Cost at completion is $358 million ($2.3 million under the Current Approved Budget). The Current Approved WSIP Budget for the Regional Program is $3,326 million and the currently Forecasted Cost at completion is $3,351 million ($24.8 million over the Current Approved Budget). Refer to Appendix B for a graphical representation of how the WSIP budget and actual expenditures have changed over time.

**Table 3.1 Program Cost Summary**

| Cost Categories | Expenditures To Date ($ Million) (A) | 2005 Baseline Budget ($ Million) (B) | 2011 Approved Budget ($ Million) (C) | Current[5] Approved Budget ($ Million) (D) | Q3/FY11-12 Forecasted Cost ($ Million) (E) | Cost Variance ($ Million) (F = D - E) |
|---|---|---|---|---|---|---|
| **Local Improvement Projects** | **$284** | **$383** | **$360.6** | **$360.6** | **$358.4** | **$2.3** |
| Construction Cost[1] | $201 | $289 | $264.2 | $264.2 | $263.6 | $0.6 |
| Program Delivery Cost[2] | $82 | $91 | $95.4 | $95.4 | $93.8 | $1.6 |
| Other Costs[3] | $1 | $3 | $1.0 | $1.0 | $1.0 | $0.0 |
| **Regional Subtotal** | **$1,743** | **$3,407** | **$3,310.5** | **$3,326.3** | **$3,351.1** | **($24.8)** |
| **Regional and Local Total** | **$2,026** | **$3,791** | **$3,671.1** | **$3,686.9** | **$3,709.5** | **($22.6)** |
| **Local Water Supply Projects[4]** | **$32** | **-** | **$281.3** | **$281.3** | **$281.3** | **($0.0)** |
| **Program Management Reserve (PMR) [7]** | **-** | **-** | **$161.4** | **$145.7** | **$120.8** | **$24.8** |
| **Finance** | **-** | **$552** | **$471.7** | **$471.7** | **$471.7** | **$0.0** |
| **PROGRAM TOTAL [8]** | **$2,058** | **$4,343** | **$4,585.6** | **$4,585.6** | **$4,583.3** | **$2.3** |
| **PMR Current Balance** | | | **$144.5** | | | |
| **PMR Released to Date** | | | **$17.0** | | | |

Notes:

1. **Construction Cost** includes the Construction Base Bid, Construction Contingency and owner-provided equipment/material.
2. **Delivery Cost** includes program and project management, planning, environmental (CEQA, permitting, construction compliance), design, construction management, and engineering support during construction.
3. **Other Costs** include environmental mitigation, art enrichment, security Improvements and real estate expenses.
4. Local Water Supply Projects managed as part of the Water Enterprise Capital Improvement Program (CIP) are (1) Lake Merced Water Level Restoration, (2) San Francisco Groundwater Supply, (3) San Francisco Westside Recycled Water, (4) Harding Park Recycled Water, and (5) San Francisco Eastside Recycled Water.
5 The budget and schedule approved as part of the June 2011 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.
6 Program management costs are a subset of Support Projects costs. Program management expenditures to date are $69.1M, and the Current Approved Budget for Program Management is $116.7M.
7 For description of PMR funds refer to Section 3 and Table 3.3.
8 The forecasted cost reflects projected savings on the Local Improvements Projects.

Table 3.2 provides the status of construction contingencies. For each sub-program, it shows the 2011 Approved Contingency; the Current Approved Contingency; the Q3/FY11-12 Forecasted Change Orders; the Q3/FY11-12 Forecasted Trends; and the Q3/FY11-12 Forecasted Remaining Contingency. As of March 31, 2012, the Total Forecasted Remaining Contingency is $12.5 million

**Table 3.2 Status of Construction Contingency**

| Sub Program | 2011 Approved Contingency ($ Million) (A) | Current Approved Contingency ($ Million) (B) | Q3/FY11-12 Forecasted Change Orders ($ Million) (C) | Q3/FY11-12 Forecasted Trends ($ Million) (D) | Q3/FY11-12 Forecasted Remaining Contingency ($ Million) (E = B-C-D) |
|---|---|---|---|---|---|
| Reservoirs | $9.62 | $9.62 | - | - | $9.62 |
| Pump Stations / Tanks | $6.96 | $6.96 | $3.25 | $0.81 | $2.90 |
| Pipelines / Valves | $0.55 | | - | - | $0.00 |
| Miscellaneous | $0.01 | | - | - | $0.00 |
| **Local Total** | **$17.14** | **$16.58** | **$3.25** | **$0.81** | **$12.52** |

Notes:

A. Contingency included in June 2011 Revised WSIP.
B. Contingency included in June 2011 Revised WSIP and any contingency approved by the Commission thereafter.
C. Forecasted Change Orders include Approved, Pending, and Potential Change Orders.
   - Approved Change Orders are changes that have received all required approvals, including that of the City Controller.
   - Pending Change Orders are changes that have been negotiated and approved by the SFPUC but have to be approved by the City Controller.
   - Potential Change Orders are changes that have been requested and entered into CMIS but are still being negotiated.
D. Trends are any expected impact that the CM team believes has a high probability of becoming a change but are yet to be entered into CMIS as a Potential Change.

**Table 3.3 Status of Program Management Project Cost Breakdown**

| Category | Expenditures To Date ($ Million) (A) | 2011 Approved Budget ($ Million) (B) | Current[5] Approved Budget ($ Million) (C) | Q3/FY11-12 Forecasted Cost ($ Million) (D) | Cost Variance ($ Million) (E = C-D) |
|---|---|---|---|---|---|
| Management Support | $26.19 | $36.96 | $36.96 | $36.96 | - |
| Project Labor Agreement | $2.58 | $4.95 | $4.95 | $4.95 | - |
| Planning and Project Development | $14.69 | $22.84 | $22.84 | $22.81 | $0.03 |
| Program Controls | $12.76 | $20.56 | $20.56 | $20.59 | ($0.03) |
| Program Construction Management | $12.92 | $31.43 | $31.43 | $31.43 | - |
| **Program Management Total** | **$69.14** | **$116.74** | **$116.74** | **$116.74** | **-** |

The Program Management project includes programmatic activities that spans multiple regions and benefit several WSIP projects (Table 3.3). The project provides funding for the following functions and resources: SFPUC Staff assigned to the management of the overall program; consultants supporting SFPUC staff at the program level (program, project and pre-construction management consultant, program construction management consultant, program control consultant); labor relations including management of project labor agreement; communication and public outreach; programmatic legal support; real estate acquisitions; program controls including the tracking and reporting of all WSIP efforts; and program-level construction management activities associated with quality assurance, risk management, the Supplier Quality Surveillance (SQS) Program, operations assistance, safety and training.

The activities under the Program Management project are organized into five categories that are tracked and monitored on a monthly basis. These categories are Management Support, Project Labor Agreement, Planning and Project Development, Program Control and Program Construction Management. The spending pattern for the project is very similar from month to month as the project to a great extent is used to fund a number of program-level positions occupied by both SFPUC staff and consultants.

## 4. PROGRAM SCHEDULE SUMMARY

Figure 4.1 and Table 4.1 compare the 2005 Baseline, 2011 Approved and Q3/FY11-12 Forecasted Schedules for the WSIP Local Program. Refer to the "Cost and Schedule Status" notes in Section 5 for the criteria associated with the three color-coded Forecast Status levels in Figure 4.1 – Meet Requirements, Need Attention, and Exceed Limits.

The Current Approved Schedule completion for the overall WSIP (including Regional and Local Programs) and for the Regional Program is July 2016 and the currently Forecasted Schedule completion is the same. The Approved Schedule completion for the WSIP Local Program is June 2015 and currently Forecasted Schedule completion is the same. Refer to Appendix C for a graphical presentation of the WSIP Approved Project-Level Schedule.

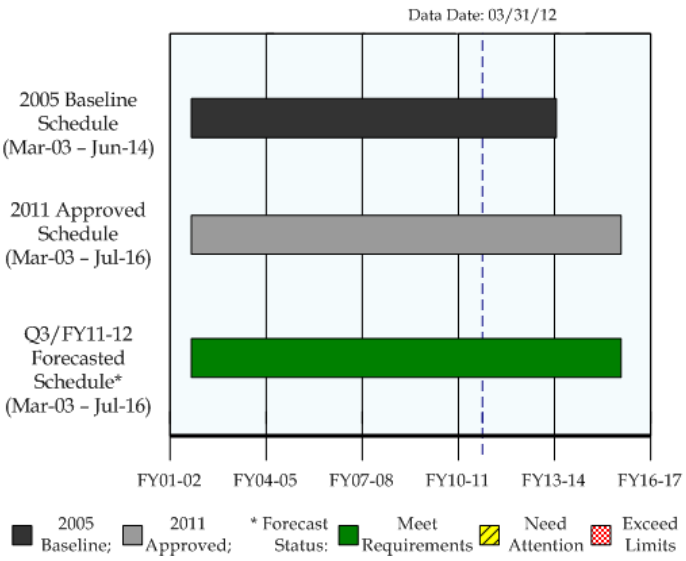


**Figure 4.1 Program Schedule Summary**

**Table 4.1 2011 Approved vs. Q3/FY11-12 Forecasted Schedule Dates**

| Category | 2005 Baseline Start | 2011 Approved Start | Current* Approved Start | Actual Start | 2005 Baseline Finish | 2011 Approved Finish | Current* Approved Finish | Q3/FY11-12 Forecasted Finish | Schedule Variance (Months) |
|---|---|---|---|---|---|---|---|---|---|
| Local Program | 03/01/03 | 03/31/03 | 03/31/03 | 03/01/03✓ | 06/28/13 | 06/05/15 | 06/05/15 | 06/05/15 | - |
| Regional Program | 03/01/03 | 03/31/03 | 03/31/03 | 03/01/03✓ | 06/30/14 | 07/29/16 | 07/29/16 | 07/29/16 | - |
| Overall WSIP | 03/01/03 | 03/01/03 | 03/01/03 | 03/01/03✓ | 06/30/14 | 07/29/16 | 07/29/16 | 07/29/16 | - |

* The budget and schedule approved as part of the June 2011 Revised WSIP, plus any additional budget and schedule changes approved by the Commission as part of additional contingencies on construction contracts.

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# 5. PROJECT PERFORMANCE SUMMARY*

All costs are shown in $1,000s as of 03/31/12

| Project Name | Active Phase (**) | 2005 Baseline Budget (a) | 2011 Approved Budget (b) | Current Approved Budget (c) | Q3/FY11-12 Forecasted Cost (d) | Expenditures To Date (e) | Cost Variance (f= c - d) | Cost Status (+) | 2005 Baseline Completion (g) | 2011 Approved Completion (h) | Current Approved Completion (i) | Q3/FY11-12 Forecasted Completion (j) | Schedule Variance (k = i - j) | Schedule Status (+) | Project Data Sheet |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Reservoirs | | | | | | | | | | | | | | | |
| CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade | BA | $ 31,372 | $ 65,000 | $ 65,000 | $ 64,425 | $ 4,439 | $ 575 | ★ | 07/15/11 | 06/05/15 | 06/05/15 | 06/05/15 | - | ★ | See Appendix D |
| Pump Stations / Tanks | | | | | | | | | | | | | | | |
| CUW30901 - Lake Merced Pump Station Essential Upgrades | CN | $ 69,093 | $ 47,292 | $ 47,292 | $ 47,856 | $ 40,667 | ($564) | ⚠ | 07/15/11 | 09/28/12 | 09/28/12 | 03/22/13 | 5.8 mo. Late | ⚠ | See Section 6 |
| CUW32001 - Forest Hill Pump Station Upgrades | CN | $ 4,446 | $ 7,583 | $ 7,583 | $ 7,546 | $ 2,739 | $ 37 | ★ | 12/02/11 | 09/20/13 | 09/20/13 | 09/12/13 | <1 mo. Early | ★ | See Appendix D |
| CUW33801 - La Grande Pump Station Upgrades | CN | $ 5,311 | $ 5,225 | $ 5,225 | $ 5,170 | $ 4,077 | $ 55 | ★ | 11/05/10 | 11/26/12 | 11/26/12 | 11/26/12 | - | ★ | See Appendix D |

* Exclude projects with completed construction and projects that are no longer active (i.e., deleted projects, closed projects, and projects combined with other projects)

**** Phase Status Legend**

PL Planning | DS Design | BA Bid & Award

CN Construction | CL Close-Out

For projects active in multiple phase, the table shows the phase in which a majority of the work is taking place.

**+ Cost and Schedule Status**

★ Meet Requirements: Forecasted Cost/Schedule is within Current Approved Budget/Schedule.

⚠ Need Attention: Forecasted Cost is over Current Approved Budget by greater than 1% and less than 10%. Or Forecasted Schedule is over Current Approved Schedule by greater than 2 months and less than 6 months and less than 10%.

● Exceed Limits: Forecasted Cost is over Current Approved Budget by 10% or more. Or Forecasted Schedule is over Current Approved Schedule by greater than 6 months or 10% or more.

## 6. PROJECTS NOT WITHIN BUDGET AND/OR SCHEDULE

### CUW30901 - Lake Merced Pump Station Essential Upgrades

**Project Description:** This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

| **Region:** Pump Stations / Tanks | **Project Status:** Construction | **Environmental Status:** Completed (CatEx) |
|---|---|---|

| **Project Cost:** | | **Project Schedule:** | |
|---|---|---|---|
| Approved | $47.29 M | Approved Jan-06 | Sep-12 |
| Forecast* | $47.86 M | Forecast* Jan-06 | Mar-13 |
| Actual | $40.67 M | Project Percent Complete: 88.9% | |

Approved; Actual Cost; * Forecast Status: Meet Requirements Need Attention Exceed Limits

| Key Milestones: | Environmental Approval | Bid Advertisement | Construction NTP | Construction Final Completion |
|---|---|---|---|---|
| **Current Forecast** | 12/28/07✓ | 10/20/08✓ | 06/01/09✓ | 09/24/12 |

**Progress and Status:**

Completed selective demolition of the existing pump station building and started seismic retrofit work. Proposed additional tenant improvement work to the existing pump station building was approved by the Change Control Board. A construction change order will be drafted and circulated for approval. A commission action will be needed to finalize the approval as the additional work will exceed the allowable 10% contingency for budget and schedule. Startup testing and commissioning of the Sutro pumping system was delayed due to replacement of defective gearbox on the discharge valves and condition assessment of existing sutro pipe leak. Continue installation of Lake Draw pumping system, roadway grading, and flow-thru planter system. Startup testing and commission of the Sutro pumping system is anticipated to start early next quarter.

**Issues and Challenges:**

Unforeseen hydrocarbon contamination was discovered in the soil samples at the existing Underground Storage Tanks (UST) to be demolished. Coordinating with California Department of Public Health (CDPH) to develop plan for additional work to test and abate the hazmat soil. This additional work may delay construction progress. Prior unforeseen obstruction in the soil and asbestos in the pipe coating and lead in the building paints have also impacted construction progress. Current cost and schedule variance reflects contingency estimates for tenant improvements of the existing pump station building and delays due to unforeseen site conditions. An agenda item will be submitted for Commission approval to increase project contingencies for budget and schedule. Current cost variance of $564K and schedule variance of approximately 6 months reflects impacts from the tenant improvement work at the existing pump station building and delays from unforeseen site conditions.

*Interior seismic and tenant improvement work at the Lake Merced existing pump station building*

## 7. On-Going Construction

| Construction Contract | Schedule | | | Budget | | Variance (Original - Forecast) | | Planned % Complete | Actual % Complete |
|---|---|---|---|---|---|---|---|---|---|
| | NTP Date | Original Construction Final Completion | Q3/FY11-12 Forecasted Construction Final Completion | Original Contract Cost | Q3/FY11-12 Forecasted Cost* | Schedule (Cal. Days) | Cost | | |
| **Pump Stations / Tanks** | | | | | | | | | |
| CUW30901 - Lake Merced Pump Station Essential Upgrades Project | 06/01/09 | 10/23/11 | 09/24/12 | $ 31,584,000 | $ 34,834,483 | (337) | ($3,250,483) | 99.0% | 91.0% |
| CUW32001 - Forest Hill Pump Station Upgrade | 09/12/11 | 03/14/13 | 03/14/13 | $ 3,651,050 | $ 3,651,050 | - | - | 30.9% | 12.8% |
| CUW33801 - La Grande Pump Station Upgrade | 05/27/10 | 01/11/12 | 05/23/12 | $ 2,586,000 | $ 2,604,213 | (133) | ($18,213) | 86.8% | 80.5% |

| Program Total for On-Going Construction | Original Contract Cost | Q3/FY11-12 Forecasted Cost* | Variance | |
|---|---|---|---|---|
| | | | Cost | Percent |
| | **$ 37,821,050** | **$ 41,089,746** | **($3,268,696)** | **(8.6%)** |

Note: * The Forecasted Cost includes all approved, pending, and potential change orders.

## 8. PROJECTS IN CLOSE-OUT

| Project Title | 2005 Baseline Construction Phase Completion | 2011 Approved Construction Phase Completion | Current Approved Construction Phase Completion | Actual Construction Phase Completion | 2005 Baseline Construction Phase Budget | 2011 Approved Construction Phase Budget | Current Approved Construction Phase Budget | Construction Phase Expenditures To Date |
|---|---|---|---|---|---|---|---|---|
| **Reservoirs** | | | | | | | | |
| CUW30701 - Summit Reservoir Rehabilitation | 06/02/06 | 06/26/06 | 06/26/06 | 06/26/06 | $ 9,649,877 | $ 7,760,609 | $ 7,760,609 | $ 7,861,726 |
| CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade | 11/04/11 | 02/16/12 | 02/16/12 | 01/24/12 | $ 5,854,200 | $ 1,870,000 | $ 1,870,000 | $ 2,040,000 |
| **Pump Stations / Tanks** | | | | | | | | |
| CUW32301 - Alemany Pump Station Upgrades (McLaren Park) | 01/09/09 | 02/25/11 | 02/25/11 | 02/25/11 | $ 8,150,000 | $ 24,181,984 | $ 24,181,984 | $ 24,132,591 |
| CUW34001 - Vista Francisco Pump Station Upgrades | 11/06/09 | 12/17/10 | 12/17/10 | 12/17/10 | $ 3,936,000 | $ 3,185,607 | $ 3,185,607 | $ 3,177,050 |
| **Pipelines / Valves** | | | | | | | | |
| CUW31201 - Lincoln Way Transmission Line | 08/04/06 | 11/10/06 | 11/10/06 | 11/10/06 | $ 11,369,200 | $ 9,345,426 | $ 9,345,426 | $ 9,345,426 |
| **TOTAL** | | | | | $ 38,959,277 | $ 46,343,627 | $ 46,343,627 | $ 46,556,793 |

## 9. COMPLETED PROJECTS

| Project Title | 2005 Baseline Project Completion | 2011 Approved Project Completion | Actual Project Completion | 2005 Baseline Project Budget | 2011 Approved Project Budget | Project Expenditures To Date |
|---|---|---|---|---|---|---|
| **Reservoirs** | | | | | | |
| CUW33401 - Stanford Heights Reservoir Rehabilitation | 03/05/10 | 04/01/11 | 04/01/11 | $ 19,172,308 | $ 23,635,000 | $ 23,632,660 |
| CUW33501 - Potrero Heights Reservoir Rehabilitation | 07/13/07 | 08/11/08 | 08/11/08 | $ 7,610,033 | $ 6,836,736 | $ 6,836,736 |
| **Pump Stations / Tanks** | | | | | | |
| CUW30601 - Crocker Amazon Pump Station Upgrades | 10/31/06 | 03/27/08 | 03/27/08 | $ 4,823,675 | $ 4,126,498 | $ 4,126,498 |
| CUW31401 - La Grande Tank Seismic Upgrade | 06/07/07 | 12/18/08 | 12/18/08 | $ 7,919,543 | $ 6,987,728 | $ 6,987,728 |
| CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade | 01/05/07 | 08/31/07 | 08/31/07 | $ 3,204,561 | $ 2,936,199 | $ 2,936,199 |
| CUW32101 - Forest Knolls Pump Station Upgrades | 07/03/08 | 12/30/11 | 01/18/12 | $ 5,779,776 | $ 6,245,000 | $ 6,195,696 |
| CUW32201 - Lincoln Park Pump Station Upgrades | 06/01/07 | 08/11/08 | 08/11/08 | $ 4,762,027 | $ 4,345,215 | $ 4,345,215 |
| CUW32401 - Mount Davidson Pump Station Upgrades | 08/06/09 | 03/30/11 | 03/30/11 | $ 5,223,489 | $ 4,578,500 | $ 4,327,966 |
| CUW32501 - Palo Alto Pump Station Upgrades | 04/10/09 | 11/16/10 | 11/16/10 | $ 5,225,506 | $ 6,254,000 | $ 6,255,526 |
| CUW32601 - Sky View - Aqua Vista Pump Station Upgrade | 07/11/08 | 08/11/09 | 08/11/09 | $ 5,717,647 | $ 4,751,094 | $ 4,751,094 |
| CUW32701 - Summit Pump Station Upgrades | 03/20/08 | 08/11/08 | 08/11/08 | $ 6,396,784 | $ 6,546,113 | $ 6,546,113 |
| CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade | 10/10/08 | 08/11/08 | 08/11/08 | $ 5,354,512 | $ 4,659,910 | $ 4,659,741 |
| CUW32901 - Potrero Heights Tank Seismic Upgrade | 07/13/07 | 08/11/08 | 08/11/08 | $ 1,281,714 | $ 1,084,863 | $ 1,084,863 |
| CUW33001 - Forest Knolls Tank Seismic Upgrade | 07/03/08 | 12/30/11 | 01/18/12 | $ 3,536,899 | $ 3,575,000 | $ 3,546,259 |
| CUW33101 - Lincoln Park Tank Seismic Upgrade | 06/01/07 | 08/11/08 | 08/11/08 | $ 3,085,460 | $ 2,690,656 | $ 2,690,656 |
| CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade | 10/10/08 | 08/11/08 | 08/11/08 | $ 5,329,017 | $ 4,458,201 | $ 4,458,201 |
| CUW33301 - Mount Davidson Tank Seismic Upgrade | 08/06/09 | 03/30/11 | 03/30/11 | $ 3,927,838 | $ 2,829,000 | $ 2,568,414 |
| CUW33901 - Potrero Heights Pump Station Upgrades | 07/13/07 | 08/11/08 | 08/11/08 | $ 733,242 | $ 605,670 | $ 605,670 |
| **Pipelines / Valves** | | | | | | |
| CUW30401 - North University Mound System Upgrade | 05/07/10 | 06/30/11 | 06/30/11 | $ 23,114,504 | $ 11,450,000 | $ 10,052,348 |
| CUW30801 - Key Motorized and Other Critical Valves | 11/06/07 | 08/11/08 | 08/11/08 | $ 11,447,747 | $ 10,984,746 | $ 10,984,746 |
| CUW31101 - Sunset Circulation Improvements | 07/06/06 | 07/06/06 | 07/06/06 | $ 8,224,379 | $ 7,073,054 | $ 7,073,164 |
| CUW31301 - Noe Valley Transmission Main - Phase 2 | 02/11/11 | 06/03/11 | 06/03/11 | $ 11,956,364 | $ 5,657,000 | $ 5,641,390 |
| CUW31501 - East / West Transmission Main | 04/10/09 | 03/21/11 | 03/21/11 | $ 22,955,659 | $ 27,755,000 | $ 27,753,751 |

| Project Title | 2005 Baseline Project Completion | 2011 Approved Project Completion | Actual Project Completion | 2005 Baseline Project Budget | 2011 Approved Project Budget | Project Expenditures To Date |
|---|---|---|---|---|---|---|
| **Pipelines / Valves** | | | | | | |
| CUW31601 - Fulton @ 6th | 08/08/08 | 08/11/08 | 08/11/08 | $ 4,842,437 | $ 4,713,931 | $ 4,713,931 |
| **Miscellaneous** | | | | | | |
| CUW30301 - Vehicle Service Facility Equipment Safety Upgrade | 07/02/09 | 08/11/09 | 08/11/09 | $ 5,245,082 | $ 4,043,540 | $ 4,043,540 |
| CUW30501 - Fire Protection @ CDD | 06/30/06 | 01/30/07 | 01/30/07 | $ 1,988,892 | $ 1,675,476 | $ 1,675,476 |
| **TOTAL** | | | | $ 188,859,095 | $ 170,498,130 | $ 168,493,581 |

# APPENDICES

A PROJECT DESCRIPTIONS

B WSIP BUDGET AND EXPENDITURES HISTOGRAM

C WSIP 2009 APPROVED PROJECT-LEVEL SCHEDULE

D PROJECTS WITHIN BUDGET AND SCHEDULE

E LIST OF ACRONYMS

## APPENDIX A. PROJECT DESCRIPTIONS

### Reservoirs

**CUW30701 - Summit Reservoir Rehabilitation**

This project consists of the upgrade of the existing Summit Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

**CUW31001 - New Northwest Reservoir (Deleted)**

This project is the construction of a new 5MG reservoir in the northeast zone of San Francisco. This reservoir will provide both fire protection and pressurized supply to areas currently served from the Sunset and Lombard Zones.

**CUW31901 - Hunters Point Reservoir Rehab & Seismic Upgrade**

This project is the upgrade of the existing Hunters Point Reservoir to meet current seismic standards and conform to all State Health requirements and includes correction of circulation problems and new inlet/outlet structure.

**CUW33401 - Stanford Heights Reservoir Rehabilitation (Completed)**

This project consists of the upgrade of the existing Stanford Heights Reservoir to meet current seismic standards and conform to all State Public Health requirements. The project includes a new inlet/outlet structure to correct circulation problems.

**CUW33501 - Potrero Heights Reservoir Rehabilitation (Completed)**

This project is the upgrade of the existing Potrero Heights Reservoir to meet current seismic standards and conform to all State Health requirements and includes correction of circulation problems and new inlet/outlet structure.

**CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade**

This project is the upgrade of the existing Sutro Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems and new inlet/outlet structure.

### Pump Stations / Tanks

**CUW30601 - Crocker Amazon Pump Station Upgrades (Completed)**

This project will rebuild the Crocker-Amazon pump station, including a reinforced concrete structure, three pumps, stand-by generator, hydropneumatic tanks, security fencing, monitoring and disinfection systems, and landscaping.

**CUW30901 - Lake Merced Pump Station Essential Upgrades**

This project will rebuild the Lake Merced pump station. Specific improvements include a new reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**CUW31401 - La Grande Tank Seismic Upgrade (Completed)**

The project will include the replacement of the La Grande tank, including a concrete tank foundation, new 350,000 gal steel tank, inlet/outlet piping, valves, security fencing, water quality monitoring systems, demolition of existing facility.

**CUW31801 - Forest Hill Tank Rehab & Seismic Upgrade (Completed)**

This project is the seismic upgrade of the Forest Hill concrete tank, including seismic work, new foundation, inlet/outlet, valves; retaining wall; security fencing and monitoring system, and site improvements.

**CUW32001 - Forest Hill Pump Station Upgrades**

This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by

generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**CUW32101 - Forest Knolls Pump Station Upgrades**
This project will rebuild the Forest Knolls pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

**CUW32201 - Lincoln Park Pump Station Upgrades (Completed)**
This project will rebuild the Lincoln Park pump station. Specific improvements include a new reinforced concrete structure, pumps, stand-by generator, security fencing, tanks, SCADA, monitoring and disinfection systems, and landscaping.

**CUW32301 - Alemany Pump Station Upgrades (McLaren Park)**
This project will rebuild the Alemany Pump Station, including a reinforced concrete structure, pumps, stand-by generators, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**CUW32401 - Mount Davidson Pump Station Upgrades (Completed)**
This project will rebuild the Mount Davidson pump station. Specific improvements include a new reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**CUW32501 - Palo Alto Pump Station Upgrades (Completed)**
This project will rebuild the Palo Alto Pump Station, including a seismically reinforced concrete structure, pumps, replacement of hydro pneumatic tanks, stand-by generator, security fencing, SCADA, landscaping, and demolition of existing facility.

**CUW32601 - Sky View - Aqua Vista Pump Station Upgrade (Completed)**
This project will rebuild the Sky View-Aqua Vista pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, water quality monitoring and sampling systems, and landscaping.

**CUW32701 - Summit Pump Station Upgrades (Completed)**
This project will rebuild the Summit Pump Station, including a reinforced concrete structure, retaining walls, pumps, inlet-outlet piping, seismic reinforcing of existing generator building, security fencing, SCADA, landscaping, and demolition of existing facility.

**CUW32801 - McLaren #1 Tank Rehab & Seismic Upgrade (Completed)**
This project consists of the rehabilitation and seismic upgrade of the McLaren #1 Tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

**CUW32901 - Potrero Heights Tank Seismic Upgrade (Completed)**
This project is the demolition of the existing Potrero Heights Tank. The tank became nonessential upon completion of the Sunset Circulation Improvements Project.

**CUW33001 - Forest Knolls Tank Seismic Upgrade**
This project will include the replacement of the Forest Knolls Tank, including a new 100,000 gallon concrete tank, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

**CUW33101 - Lincoln Park Tank Seismic Upgrade (Completed)**
The project consists of the replacement of the Lincoln Park tank. Specific improvements include a new 100,000G concrete tank, inlet/outlet piping, valves, security fencing,

monitoring systems, demolition, and site improvements.

**CUW33201 - McLaren #2 Tank Rehab & Seismic Upgrade (Completed)**
This project consists of the rehabilitation and seismic upgrade of the McLaren #2 tank including seismic bracing, interior lining replacement, cathodic protection, new exterior coating, lead paint abatement, new inlet/drain/overflow piping and valves, security fencing, electrical improvements, paving, and landscaping.

**CUW33301 - Mount Davidson Tank Seismic Upgrade (Completed)**
The project consists of the seismic retrofit of the existing 75,000G Mount Davidson tank. Specific improvements include a drilled pier foundation, inlet/outlet piping, valves, security fencing, monitoring systems, demolition, and site improvements.

**CUW33801 - La Grande Pump Station Upgrades**
This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**CUW33901 - Potrero Heights Pump Station Upgrades (Completed)**
This project is the demolition of the existing Potrero Heights Pump Station. The pump station became nonessential upon completion of the Sunset Circulation Improvements Project.

**CUW34001 - Vista Francisco Pump Station Upgrades**
This project will rebuild the Vista Francisco pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

**Pipelines / Valves**

**CUW30401 - North University Mound System Upgrade (Completed)**
This project will improve the supply reliability of the University Mound (UM) system, linking the two independent University Mound and Sunset Supply systems. In order to diminish the impact on the neighborhoods, sewer, domestic water distribution main, and pavement replacement work has been added to the scope.

**CUW30801 - Key Motorized and Other Critical Valves (Completed)**
This project consists of installing motorized valves at several critical locations. These valves will assist during emergency shutdowns after events such as main breaks, earthquakes, or other situations requiring immediate system isolation.

**CUW31101 - Sunset Circulation Improvements (Completed)**
This project improved the operation of the Sunset Zone by allowing McLaren tanks to feed the Potrero Heights System. This improved circulation and created a more reliable water supply for the Potrero System.

**CUW31201 - Lincoln Way Transmission Line**
This project is a new transmission main to serve as a backup to the deteriorated Sunset main from Sunset Reservoir to 5th Avenue and Lincoln Way. Under this project, approximately 13,000 LF of 48-inch steel pipe will be constructed.

**CUW31301 - Noe Valley Transmission Main, Phase 2 (Completed)**
This project is a new transmission main that will extend the Noe Valley main. The existing main, which ends at Sanchez and 20th Streets, needs to be extended to supply additional pressure to areas where low pressure is a problem.

**CUW31501 - East / West Transmission Main (Completed)**
This project is a new main from Alemany PS to the western part of the City. This transmission main will enable the SFPUC to move water from the east side of the City into the Sunset system in

the event of a peninsula pipeline failure or emergency.

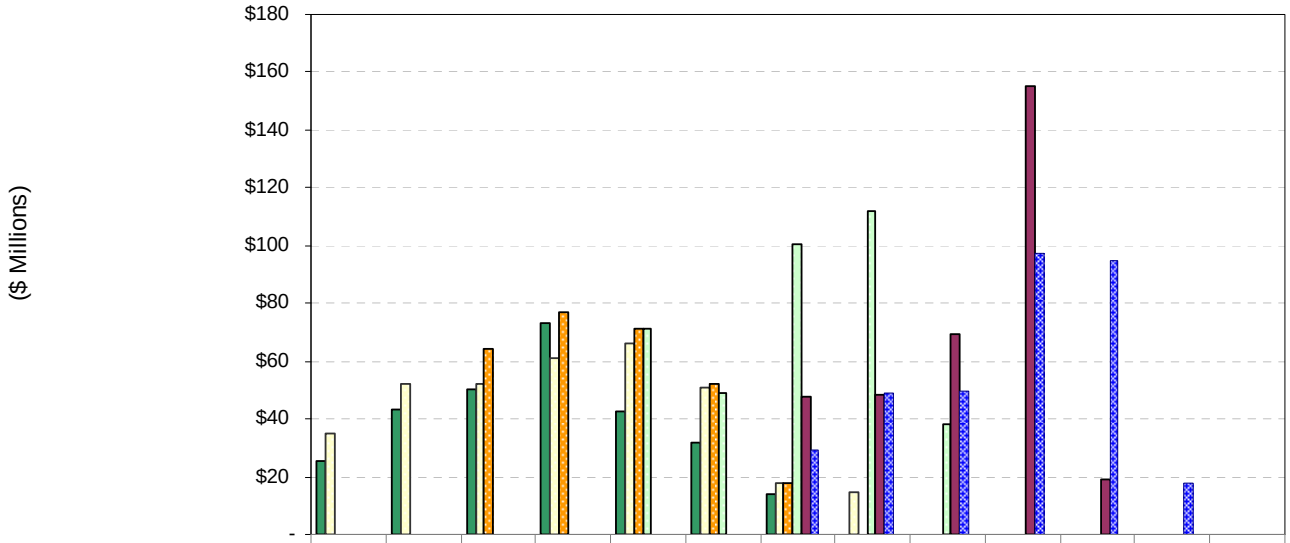
**CUW31601 - Fulton @ Sixth Ave - 30" Main Replacement (Completed)**
This project consists of construction of a 30" main to replace the deteriorated Richmond supply main in the Golden Gate Park from Lincoln Way at 6th Avenue to Fulton at 6th. The main will extend the Sunset zone to increase the pressure and supply at the northern end of the zone.

**Miscellaneous**

**CUW30301 - Vehicle Service Facility Equipment Safety Upgrade (Completed)**
This project will upgrade the vehicle service center, machine shop, and various other City Distribution Division (CDD) shops to correct seismic deficiencies and comply with worker safety standards and health department regulations.

**CUW30501 - Fire Protection @ CDD (Completed)**
This project covers the final phase of construction to complete the fire detection and monitoring systems needed at the City Distribution Division facilities.

## APPENDIX B. BUDGET AND EXPENDITURE HISTOGRAM*




| | FY 05-06 | FY 06-07 | FY 07-08 | FY 08-09 | FY 09-10 | FY 10-11 | FY 11-12 | FY 12-13 | FY 13-14 | FY 14-15 | FY 15-16 | FY 16-17 | FY 17-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Actual Total Cost | $25 | $43 | $50 | $73 | $43 | $32 | $14 | | | | | | |
| 2005 Approved Budget | $35 | $52 | $52 | $61 | $66 | $51 | $18 | $15 | | | | | |
| 2007 Approved Budget | | | $64 | $77 | $71 | $52 | $18 | $0 | | | | | |
| 2009 Approved Budget | | | | | $71 | $49 | $101 | $112 | $38 | $0 | - | | |
| 2011 Approved Budget | | | | | | | $48 | $49 | $70 | $155 | $19 | $0 | $0 |
| Current Forecast | | | | | | | $29 | $49 | $50 | $98 | $95 | $18 | $0 |
| Percentage Spent** | 72% | 83% | 79% | 95% | 60% | 66% | | | | | | | |

All costs are shown in $ Millions.

* The histogram does not reflect budget and expenditures prior to FY 2005-2006. The histogram includes budget and expenditures for Local Water Supply Projects

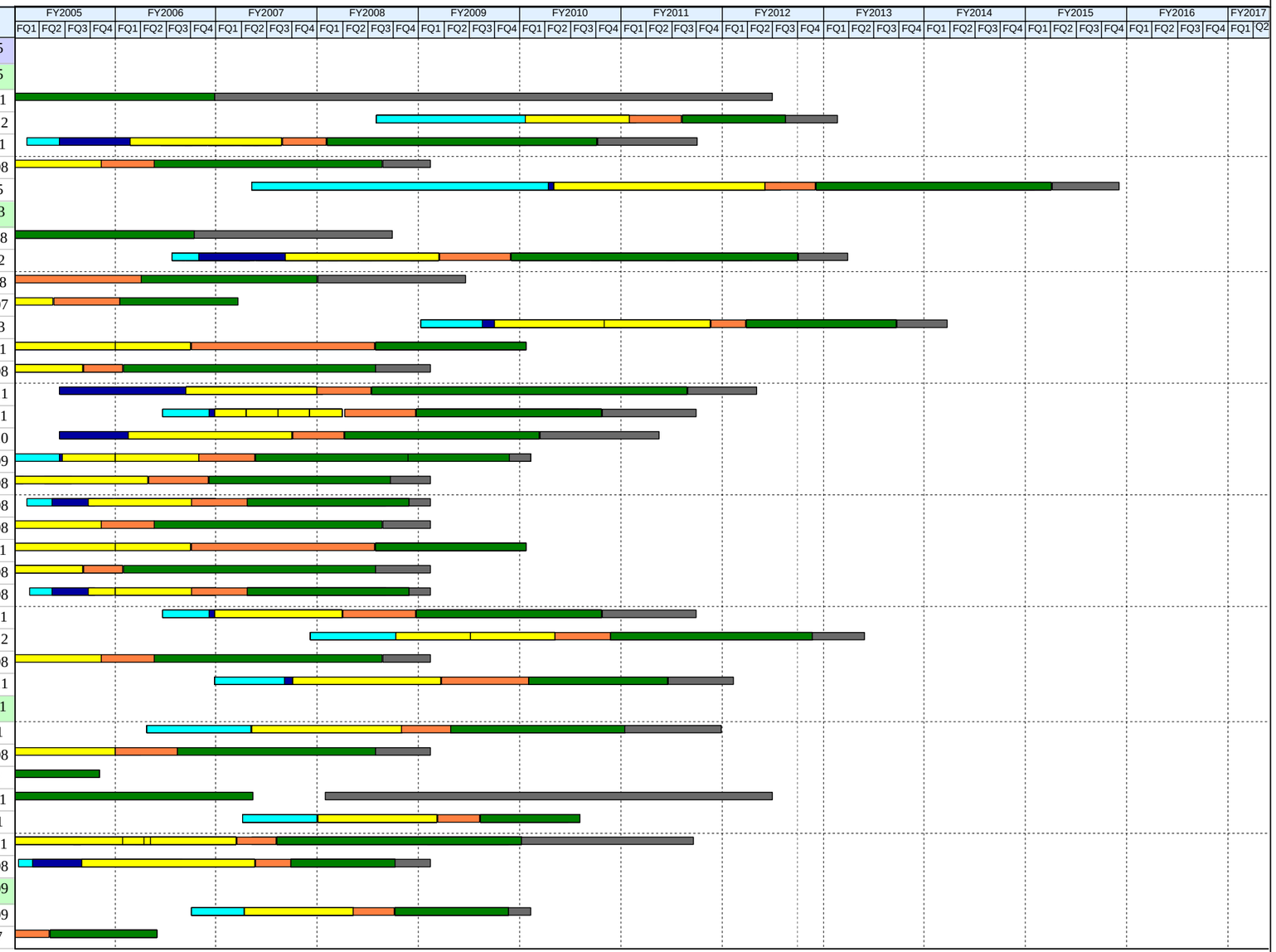
** Percentage Spent calculated as Actual Expenditures over the most current Approved Budget for each individual Fiscal Year.

**Figure B Annual Budgeted Spending Plans vs. Actual Expenditures**

Figure B compares the spending plans associated with the various WSIP Approved Budgets to Actual Expenditures. It shows total annual expenditures from FY05-06 through Q3/FY11-12 and cost projections (Current Forecast) from FY11-12 through program completion in July 2017. Actual annual expenditures have ranged from 60% to 95% of planned expenditures.

# APPENDIX C. WSIP Approved Project-Level Schedule

| Project Name | Start | Finish |
|---|---|---|
| **San Francisco Local Program** | 02-Jan-01 | 05-Jun-15 |
| **Reservoirs** | 02-Jan-01 | 05-Jun-15 |
| CUW30701 Summit Reservoir Rehabilitation | 02-Jan-01 | 30-Dec-11 |
| CUW31901 Hunters Point Reservoir Rehab & Seismic Upgrade | 01-Feb-08 | 20-Aug-12 |
| CUW33401 Stanford Heights Reservoir Rehabilitation (Completed) | 17-Aug-04 | 01-Apr-11 |
| CUW33501 Potrero Heights Reservoir Rehabilitation (Completed) | 01-May-03 | 11-Aug-08 |
| CUW33701 Sutro Reservoir Rehab & Seismic Upgrade | 06-Nov-06 | 05-Jun-15 |
| **Pump Stations / Tanks** | 02-Jul-01 | 20-Sep-13 |
| CUW30601 Crocker Amazon Pump Station Upgrades (Completed) | 14-Jan-02 | 27-Mar-08 |
| CUW30901 Lake Merced Pump Station Essential Upgrades | 23-Jan-06 | 28-Sep-12 |
| CUW31401 La Grande Tank Seismic Upgrade (Completed) | 02-Jul-01 | 18-Dec-08 |
| CUW31801 Forest Hill Tank Rehab & Seismic Upgrade (Completed) | 03-Mar-03 | 03-Aug-07 |
| CUW32001 Forest Hill Pump Station Upgrades | 11-Jul-08 | 20-Sep-13 |
| CUW32101 Forest Knolls Pump Station Upgrades (Completed) | 01-Jul-03 | 30-Dec-11 |
| CUW32201 Lincoln Park Pump Station Upgrades (Completed) | 04-Feb-02 | 11-Aug-08 |
| CUW32301 Alemany Pump Station Upgrades (McLaren Park) | 13-Dec-04 | 04-Nov-11 |
| CUW32401 Mount Davidson Pump Station Upgrades (Completed) | 20-Dec-05 | 30-Mar-11 |
| CUW32501 Palo Alto Pump Station Upgrades (Completed) | 13-Dec-04 | 16-Nov-10 |
| CUW32601 Sky View - Aqua Vista Pump Station Upgrade (Complete | 14-Jun-04 | 11-Aug-09 |
| CUW32701 Summit Pump Station Upgrades (Completed) | 02-Sep-03 | 11-Aug-08 |
| CUW32801 McLaren #1 Tank Rehab & Seismic Upgrade (Completed) | 17-Aug-04 | 11-Aug-08 |
| CUW32901 Potrero Heights Tank Seismic Upgrade (Completed) | 01-Jul-03 | 11-Aug-08 |
| CUW33001 Forest Knolls Tank Seismic Upgrade (Completed) | 01-Jul-03 | 30-Dec-11 |
| CUW33101 Lincoln Park Tank Seismic Upgrade (Completed) | 11-Feb-02 | 11-Aug-08 |
| CUW33201 McLaren #2 Tank Rehab & Seismic Upgrade (Completed) | 27-Aug-04 | 11-Aug-08 |
| CUW33301 Mount Davidson Tank Seismic Upgrade (Completed) | 20-Dec-05 | 30-Mar-11 |
| CUW33801 La Grande Pump Station Upgrades | 05-Jun-07 | 26-Nov-12 |
| CUW33901 Potrero Heights Pump Station Upgrades (Completed) | 01-Jul-03 | 11-Aug-08 |
| CUW34001 Vista Francisco Pump Station Upgrades | 27-Jun-06 | 12-Aug-11 |
| **Pipelines / Valves** | 02-Apr-01 | 30-Dec-11 |
| CUW30401 North University Mound System Upgrade (Completed) | 24-Oct-05 | 30-Jun-11 |
| CUW30801 Key Motorized and Other Critical Valves (Completed) | 01-Jul-03 | 11-Aug-08 |
| CUW31101 Sunset Circulation Improvements (Completed) | 02-Apr-01 | 06-Jul-06 |
| CUW31201 Lincoln Way Transmission Line | 05-Apr-02 | 30-Dec-11 |
| CUW31301 Noe Valley Transmission Main - Phase 2 (Completed) | 06-Oct-06 | 03-Jun-11 |
| CUW31501 East / West Transmission Main (Completed) | 01-Oct-03 | 21-Mar-11 |
| CUW31601 Fulton @ 6th (Completed) | 19-Jul-04 | 11-Aug-08 |
| **Miscellaneous** | 15-Apr-02 | 11-Aug-09 |
| CUW30301 Vehicle Service Facility Equipment Safety Upgrade (Con | 03-Apr-06 | 11-Aug-09 |
| CUW30501 Fire Protection @ CDD (Completed) | 15-Apr-02 | 30-Jan-07 |




Planning
Environmental
Design
Bid & Award
Right of Way
Construction
Closeout

## APPENDIX D. PROJECTS WITHIN BUDGET AND SCHEDULE

### CUW33701 - Sutro Reservoir Rehab & Seismic Upgrade

**Project Description:** This project is the upgrade of the existing Sutro Reservoir to meet current seismic standards and conform to all State Health requirements and includes the correction of circulation problems and new inlet/outlet structure.

| **Region:** Reservoirs | **Project Status:** Bid and Award | **Environmental Status:** Completed (CatEx) |
|---|---|---|

| **Project Cost:** | | **Project Schedule:** | |
|---|---|---|---|
| Approved | $65.00 M | Approved Nov-06 | Jun-15 |
| Forecast* | $64.43 M | Forecast* Nov-06 | Jun-15 |
| Actual | $4.44 M | Project Percent Complete: 9.0% | |

Approved; Actual Cost; * Forecast Status: Meet Requirements Need Attention Exceed Limits

| **Key Milestones:** | **Environmental Approval** | **Bid Advertisement** | **Construction NTP** | **Construction Final Completion** |
|---|---|---|---|---|
| **Current Forecast** | 12/19/11✓ | 01/07/12✓ | 06/25/12 | 10/27/14 |

**Progress and Status:**

Bid/Award phase started last quarter and the construction contract was advertised on 1/7/2012. SFPUC received five (5) bids on 3/8/2012 and after careful review; staff determined that all the bids received do not conform to the project specifications for various reasons. Staff decided to reject all bids and re-advertise the project. An agenda item has been submitted for Commission approval for the 4/24/12 meeting to reject/re-advertise the contract. The contract will be re-advertised and bids will be opened in the next quarter.

**Issues and Challenges:**

None at this time.

*Interior of Sutro Reservoir*

## CUW32001 - Forest Hill Pump Station Upgrades

**Project Description:** This project will rebuild the Forest Hill pump station. Specific improvements include a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

| **Region:** Pump Stations / Tanks | **Project Status:** Construction | **Environmental Status:** Completed (CatEx) |
|---|---|---|

| **Project Cost:** | | **Project Schedule:** | |
|---|---|---|---|
| Approved | $7.58 M | Approved Jul-08 | Sep-13 |
| Forecast* | $7.55 M | Forecast* Jul-08 | Sep-13 |
| Actual | $2.74 M | Project Percent Complete: 37.9% | |

Approved; Actual Cost; * Forecast Status: Meet Requirements Need Attention Exceed Limits

| Key Milestones: | Environmental Approval | Bid Advertisement | Construction NTP | Construction Final Completion |
|---|---|---|---|---|
| **Current Forecast** | 11/23/10✓ | 06/01/11✓ | 09/12/11✓ | 03/14/13 |

**Progress and Status:**

Contractor completed the demolition of the existing pump station and hydro tanks including hazmat abatement. Construction of bypass piping segments B and C, and drilled piers and soldier pile retaining walls were also completed during this quarter. Continuing foundation work at hydro tank and pump station building.

**Issues and Challenges:**

The existing piping in the hillside was deeper than expected and delayed the completion of the bypass piping work. Relocation of the PG&E power supply vault was also needed to resolve a conflict with pump station foundation and will likely impact the construction critical path schedule.

*Concrete foundation for the new Forest Hills Pump Station*

## CUW33801 - La Grande Pump Station Upgrades

**Project Description:** This project will rebuild the La Grande pump station, including a reinforced concrete structure, pumps, stand-by generator, security fencing, SCADA, monitoring and disinfection systems, and landscaping.

| **Region:** Pump Stations / Tanks | **Project Status:** Construction | **Environmental Status:** Completed (CatEx) |
|---|---|---|

| **Project Cost:** | | **Project Schedule:** | |
|---|---|---|---|
| Approved | $5.23 M | Approved Jun-07 | Nov-12 |
| Forecast* | $5.17 M | Forecast* Jun-07 | Nov-12 |
| Actual | $4.08 M | Project Percent Complete: 80.2% | |

Approved; Actual Cost; * Forecast Status: Meet Requirements Need Attention Exceed Limits

| **Key Milestones:** | **Environmental Approval** | **Bid Advertisement** | **Construction NTP** | **Construction Final Completion** |
|---|---|---|---|---|
| **Current Forecast** | 12/01/08✓ | 11/12/09✓ | 05/27/10✓ | 05/23/12 |

**Progress and Status:**

Completed installation of the interior piping and plumbing systems, ventilation system, fire protection/detection systems, and electrical conduit and wiring. Completed load bank test for the generator system and achieved PG&E power and AT&T communication hook ups. CDD completed disinfection and water quality testing of the La Grande tank and piping system on 3/30/12. Pump station startup testing including 7-day pump station reliability testing is anticipated to start early next quarter.

**Issues and Challenges:**

None at this time.

*La Grande pump station nearing completion*

## APPENDIX E. LIST OF ACRONYMS

**AAR** Alternative Analysis Report
**AB** Assembly Bill
**ACDD** Alameda Creek Diversion Dam
**ACFCD** Alameda County Flood Control District
**ACFE** Alameda Creek Fishery Enhancement
**ACOE** Army Corps of Engineers (also shown as USACE)
**ACWD** Alameda County Water District
**ADA** Americans with Disabilities Act
**AGM** Assistant General Manager
**ASCE** American Society of Civil Engineers
**BAAQMD** Bay Area Air Quality Management District
**BART** Bay Area Rapid Transit
**BAWSCA** Bay Area Water Supply and Conservation Agency
**BCWS** Budgeted Cost Work Scheduled
**BDPL** Bay Division Pipeline
**BEM** Bureau of Environmental Management
**BMP** Best Management Practices
**BO** Biological Opinion
**CAB** Contract Administration Bureau
**CATEX** Categorical Exemption
**CCSF** City and County of San Francisco
**CDD** City Distribution Division
**CDFG** California Department of Fish and Game
**CDPH** California Department of Public Health
**CEQA** California Environmental Quality Act
**CER** Conceptual Engineering Report
**CHP** California Highway Patrol
**CIDH** Cast-In-Drilled Holes
**CIP** Capital Improvement Program
**CM** Construction Management
**CMB** Construction Management Bureau
**CMIS** Construction Management Information System
**CO** Change Order
**COF** City of Fremont
**COH** City of Hayward
**COZEEP** Construction Zone Enhancement Enforcement Program
**CRLF** California Red Legged Frog
**CRT** Coast Range Tunnel
**CSBPL** Crystal Springs Bypass Pipeline
**CSPL** Crystal Springs Pipeline
**CSPS** Crystal Springs Pump Station
**CS-SA** Crystal Springs – San Andreas
**CSSC** California Seismic Safety Commission
**DB** Design, Build
**DBO** Design, Build, Operate
**DCR** Design Criteria Report
**DGM** Deputy General Manager
**DPW** Department of Public Works
**DRB** Dispute Review Board
**DSOD** Division of Safety of Dams (State of California)
**DTSC** Department of Toxic Substances Control (State of California)
**EBMUD** East Bay Municipal Utility District
**ECCM** Environmental Construction Compliance Manager
**EIR** Environmental Impact Report
**EMB** Engineering Management Bureau
**EPM** Environmental Project Manager
**EV** Earned Value
**EVM** Earned Value Management
**FAQ** Frequently Asked Questions
**FONSI** Finding of No Significant Impact
**FRP** Fiber Reinforced Polymer
**FY** Fiscal Year
**GM** General Manager
**HDPE** High Density Polyethylene
**HH** Hetch Hetchy
**HMP** Habitat Management Plan
**HRP** Habitat Reserve Program
**HTWTP** Harry Tracy Water Treatment Plant
**IPTF** Interagency Permitting Task Force
**IS** Initial Study
**ITS** Information Technology Services
**JOC** Job Order Contract
**LBE** Local Business Enterprise

**LCSD** Lower Crystal Springs Dam
**LLNL** Lawrence Livermore National Laboratory
**LMPS** Lake Merced Pump Station
**LOS** Levels of Service
**LT2ESWTR** Long Term 2 Enhanced Surface Water Treatment Rule
**MEA** Environmental Analysis Division (SF Planning Department)
**MG** Million Gallon
**MGD** Million Gallons per Day
**MIS** Management Information System
**MMRP** Mitigation Monitoring and Reporting Program
**MND** Mitigated Negative Declaration
**MOA** Memorandum of Agreement
**MOU** Memorandum of Understanding
**NAR** Needs Assessment Report
**NCSBT** New Crystal Springs Bypass Tunnel
**NEG DEC** Negative Declaration (also shown as ND)
**NEPA** National Environmental Policy Act
**NMFS** National Marine Fisheries Service (under NOAA)
**NOA** Naturally Occurring Asbestos
**NOAA** National Oceanic and Atmospheric Agency
**NOP** Notice of Preparation
**NTP** Notice to Proceed
**OSHA** Occupational Safety and Health Administration
**PCCP** Pre-stressed Concrete Cylinder Pipe
**PCE** Project Controls Engineer
**PCM** Program Construction Management
**PCSB** Program Control and Support Bureau
**PE** Project Engineer
**PEIR** Program Environmental Impact Report
**PG&E** Pacific Gas and Electric
**ROW** Right-of-Way
**RPD** San Francisco Recreation & Parks Department
**RWQCB** Regional Water Quality Control Board
**SABPL** San Antonio Backup Pipeline
**SAPL** San Antonio Pipeline
**SAPS** San Antonio Pump Station
**SCADA** Supervisory Control and Data Acquisition
**SFFD** San Francisco Fire Department
**SFPUC** San Francisco Public Utilities Commission
**SHPO** State Historic Preservation Officer
**SJPL** San Joaquin Pipeline
**SMP** Surface Mining Permit
**SPI** Schedule Performance Index
**SSTF** Seismic Safety Task Force
**SVWTP** Sunol Valley Water Treatment Plant
**SWPPP** Stormwater Pollution Prevention Plan
**TBD** To be determined
**TBM** Tunnel Boring Machine
**TWR** Treated Water Reservoir
**USACE** US Army Corps of Engineers
**USEPA** United States Environmental Protection Agency
**USFWS** US Fish & Wildlife Services
**UM** University Mount
**UV** Ultra Violet
**VOC** Volatile Organic Compound
**WEIP** Watershed Environmental Improvement Program
**WSIP** Water System Improvement Program

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