

# City Service Area Environmental and Utility Services



**Plant Electrical Reliability  
Project**



**Digester Rehabilitation Project**

***Mission:*** Provide environmental leadership through policy development, program design and reliable utility services.

Design of the remainder of the Plant Electrical Reliability project is underway with multiple construction projects expected to be awarded during 2009-2010. With a total budget of \$80 million, this project will significantly reduce the risks and inefficiencies associated with the current antiquated electrical system within the treatment facility. The construction of the Alternative Disinfection System, with the primary goal of converting from gaseous chlorine disinfection to liquid chlorine, is scheduled for completion in early 2010. This project marks a significant safety enhancement to the Plant and is the last of a series of security related projects recently implemented. During 2009-2010, the Plant will begin design of a multi-year \$98 million Digester Rehabilitation program to rehabilitate and upgrade all 16 digester tanks.

The South Bay Water Recycling Program has begun development of a recycled water transmission line extension to the Airport and an Advanced Recycled Water Treatment facility adjacent to the Plant. Water Utility System projects in the Adopted CIP include the construction of new facilities, maintenance of existing infrastructure, and improvements to facilities.

The Storm Sewer System Capital Improvement Program continues to implement a strategy to replace or rehabilitate the oldest and least reliable pump stations and storm outfalls. The program is also broadening its scope from enhancing area-wide drainage capacity to addressing the drainage needs in residential neighborhoods, neighborhood business districts, and walking routes to schools and public facilities. A new, high-priority focus will be the comprehensive rehabilitation and upgrading of storm system infrastructure in Alviso.

---

## CSA CAPITAL PROGRAMS

---

- Sanitary Sewer System
- Storm Sewer System
- Water Pollution Control
- Water Utility System

# City Service Area Environmental and Utility Services

## Recent Accomplishments

- Completed: Albany-Kiely Phase III, Hope/Elizabeth Pump Station, Downer-Canoas Injection Station, Willow Street Storm Pump Station, Gold Street (Alviso) Junction Structure Flapgate Replacement, North First Street Parallel Main Phase III, Norwood Pump Station Replacement, Water Valve Rehabilitation project, South Bay Water Recycling Program (SBWRP) SJ-14 Pump Station Reliability project, and the Dent Avenue Storm Drain Improvement.
- Completed the Plant Reliability Improvements project ten months ahead of schedule.
- Completed the Julian-Sunol Supplement Rehabilitation, St. James/St. John Streets Sewer Rehabilitation and Homewood Dr. Sewer Rehabilitation.
- Completion of the North Coyote Valley Water System, including three wells to supply Metcalf Energy Center and other developments.

## Program Highlights

### Sanitary Sewer System Capital Program

2010-2014 Adopted CIP: \$148.1 million

#### Neighborhood Sanitary Sewer Rehabilitation Projects:

- Naglee Avenue, University Avenue, Parkmoor-Meridian, Union/Almaden Oak, and Spreckles Force Main Supplement

#### Sanitary Sewer Interceptor/Capacity Improvement Projects:

- 30" Old Bayshore Supplement
- 60" Brick Interceptor, Phase VIA and VIB
- Cropley Avenue Sanitary Sewer Improvement
- Edenvale Sanitary Sewer Supplement, Phases VA and VB

### Storm Sewer System Capital Program

2010-2014 Adopted CIP: \$21.3 million

- Albany-Kiely Storm Drainage Improvement, Phases III/IV & V/VI
- Alviso Storm Rehabilitation
- Gundersen Storm Drain Improvement
- Creek Channel Stabilization
- Storm Pump Station Rehabilitation and Replacement

### Water Pollution Control Capital Program

2010-2014 Adopted CIP: \$375.6 million

- Digester Rehabilitation
- Plant Electrical Reliability
- Development of the Plant Master Plan
- Secondary and Nitrification Clarifier Rehabilitation

### Water Utility System Capital Program

2010-2014 Adopted CIP: \$26.4 million

- Nortech Parkway East Loop Main
- Castleton Drive Main Replacement

---

## CSA OUTCOMES

(Supported by the Capital Programs)

- ✓ Reliable Utility Infrastructure
- ✓ Healthy Streams, Rivers, Marsh and Bay
- ✓ Safe, Reliable and Sufficient Water Supply

# City Service Area

## Environmental and Utility Services

### Performance Measures

A set of consistent and comprehensive performance measurements along with targets and goals have been established for the entire capital program and adopted for each individual CSA. Measures have been established for four key areas: schedule (cycle time), cost, quality, and customer satisfaction. Please see the Budget Guide section narrative for additional information on capital performance measurements.

#### *Outcome: Quality CIP Projects Delivered On-Time and On-Budget*

Strategic Goals	CSA Performance Measures	2007-2008 Actual	2008-2009 Target	2008-2009 Estimate	2009-2010 Target	5-Year Goal
Environmental and Utility Services CSA delivers quality Capital Improvement Program (CIP) projects on-time and on-budget	1. % of CIP projects delivered* within 2 months of approved baseline schedule	83% (15/18)	85%	83% (15/18)	85%	85%
	2. % of CIP projects that are completed** within the approved baseline budget	100% (13/13)	90%	100% (9/9)	90%	90%
	3. % of operations and maintenance divisions rating new or rehabilitated capital facilities as being functional and sustainable after first year of use	TBD***	80%	TBD***	80%	80%
	4. % of customers rating new or rehabilitated CIP projects as meeting established goals (4 or better based on a scale of 1-5)	77%	85%	88%	85%	85%

*Changes to Performance Measures from 2008-2009 Adopted Budget: No*

- \* Projects are considered to be "delivered" when they are available for their intended use.
- \*\* Projects are considered to be "completed" when final cost accounting has occurred and the project has been accepted.
- \*\*\* Survey results are not available at this time.

In 2008-2009, the Environmental and Utility Services CSA delivered an estimated 15 of 18 (83%) projects within two months of the approved baseline schedule, which is very near the one-year performance target of 85%. The notable capital projects completed in 2008-2009 include the Water Pollution Control Plant Reliability Improvements, Norwood Pump Station Replacement, and several sanitary sewer rehabilitation and replacement projects. The three projects that did not get completed on-time were those that required additional time to identify additional funding due to higher than anticipated bid results or those that experienced unforeseen construction related delays.

In 2008-2009, an estimated 100% of the nine accepted projects were completed within their respective baseline budget amounts, which exceeds the one-year performance target of 90%. The CSA continues to work to strengthen the alignment of project scopes, schedules and budgets, while also accounting for external market conditions that may affect the delivery of capital projects. Staff relies heavily on the cost estimating and tracking tools that are available through the City's Capital Project Management System

*City Service Area*  
**Environmental and  
Utility Services**

## **Performance Measures (Cont'd.)**

(CPMS). These tools allow project management staff to effectively track project costs on an ongoing basis and assist in ensuring that expenditures remain within budgeted levels.

The CSA is continuing its efforts to conduct operations, maintenance, and customer satisfaction surveys on completed projects. For each measurement, staff typically conducts surveys on a representative sample of projects that are completed during the year. In the case of the operations and maintenance survey measurement, staff conducts surveys on projects that have been completed and in use for at least one year. Survey results for the operations and maintenance measurement are not available at this time. Based on preliminary results received thus far, the average customer satisfaction rating is 88%, which is above the 85% customer satisfaction target, as well as the 2007-2008 performance level of 77%. Additional survey results will be reported to Council as part of future Status Reports on the City-wide Capital Improvement Program as results become available. Staff is also evaluating more effective methods of conducting these surveys, including improvements to the structure and format as well as the use of web-based surveys, which might yield a higher percentage of returned surveys.

## Capital Program Summary by City Service Area

# Environmental and Utility Services

	2009-2010 Budget	2010-2014 CIP Budget	Total Budget (All Years)	Start Date	End Date
<b>Sanitary Sewer System</b>					
30" Old Bayshore Rehabilitation		3,450,000	3,450,000	3rd Qtr. 2010	2nd Qtr. 2011
30" Old Bayshore Supplement	4,284,000	4,453,000	4,996,000	3rd Qtr. 2008	2nd Qtr. 2011
60" Brick Interceptor, Phase VIA & VIB	459,000	22,490,000	57,950,382	3rd Qtr. 2007	2nd Qtr. 2012
84" RCP Interceptor, Phases VB & VIB	150,000	150,000	8,495,000	3rd Qtr. 2004	2nd Qtr. 2010
Blossom Hill Road Supplement		500,000	500,000	3rd Qtr. 2010	2nd Qtr. 2011
Campbell Avenue Sanitary Sewer Rehabilitation		2,105,000	2,105,000	3rd Qtr. 2012	2nd Qtr. 2014
Capitol Avenue Sanitary Sewer Improvement		1,675,000	1,675,000	3rd Qtr. 2010	2nd Qtr. 2011
Coleman Road Sanitary Sewer Improvement		2,629,000	2,629,000	3rd Qtr. 2010	2nd Qtr. 2011
Cropley Avenue Sanitary Sewer Improvement	500,000	4,529,000	4,529,000	3rd Qtr. 2009	2nd Qtr. 2011
Edenvale Sanitary Sewer Supplement, Phases VA and VB	19,112,000	28,433,000	32,763,000	2nd Qtr. 2001	2nd Qtr. 2011
Fee Administration	75,000	525,000		* Ongoing	Ongoing
Flow Monitoring Program (Master Planning)	1,500,000	6,500,000		* Ongoing	Ongoing
Fourth Major Interceptor, Phase IIB	210,000	3,033,000	3,033,000	3rd Qtr. 2009	2nd Qtr. 2011
Foxworthy Avenue Sanitary Sewer Improvement		2,519,000	2,519,000	3rd Qtr. 2012	2nd Qtr. 2014
Geographic Information System (GIS)	115,000	275,000		* Ongoing	Ongoing
Husted Avenue Sanitary Sewer Improvement		4,300,000	4,300,000	3rd Qtr. 2013	2nd Qtr. 2015
Hydrogen Peroxide Injection Station	125,000	125,000	300,000	3rd Qtr. 2006	2nd Qtr. 2010
Inflow and Infiltration Reduction	6,500,000	10,500,000		* Ongoing	Ongoing
Infrastructure - Sanitary Sewer Condition Assessment	131,000	131,000	966,000	3rd Qtr. 2008	2nd Qtr. 2010
Interceptor Management Plan	250,000	250,000	250,000	3rd Qtr. 2009	2nd Qtr. 2010
Jacob Avenue Sanitary Sewer Improvement		3,325,000	3,325,000	3rd Qtr. 2012	2nd Qtr. 2014
Julian-Sunol Supplemental Sewer Rehabilitation	30,000	30,000	1,521,000	3rd Qtr. 2007	1st Qtr. 2010
Minnesota Avenue Sanitary Sewer Improvement		1,500,000	1,500,000	3rd Qtr. 2010	2nd Qtr. 2012
Miscellaneous Projects	3,300,000	7,300,000		* Ongoing	Ongoing
Miscellaneous Rehabilitation Projects	5,000,000	9,500,000		* Ongoing	Ongoing
Morrill Avenue/Sierra Road Sanitary Sewer Improvement	400,000	2,400,000	2,400,000	3rd Qtr. 2009	2nd Qtr. 2011
Naglee Avenue Sanitary Sewer Replacement	842,000	842,000	2,860,000	3rd Qtr. 2008	2nd Qtr. 2010
Parkmoor-Meridian Sanitary Sewer Rehabilitation		2,300,000	2,300,000	3rd Qtr. 2012	2nd Qtr. 2013
Payments to West Valley Sanitation District	10,000	50,000		* Ongoing	Ongoing

## Capital Program Summary by City Service Area

# Environmental and Utility Services

	2009-2010 Budget	2010-2014 CIP Budget	Total Budget (All Years)	Start Date	End Date
<b>Sanitary Sewer System (Cont'd.)</b>					
Permit Review and Inspection for SCVWD	75,000	375,000		*	Ongoing
Preliminary Engineering	700,000	3,500,000		*	Ongoing
Program Management	400,000	2,000,000		*	Ongoing
Public Art	613,000	1,388,000		*	Ongoing
Public Works Capital Management Costs	422,000	2,261,000		*	Ongoing
Public Works Engineering Services Equipment (Materials Lab)	40,000	200,000		*	Ongoing
Rehabilitation of Sanitary Sewer Pump Stations	900,000	900,000	1,000,000	3rd Qtr. 2008	2nd Qtr. 2010
Sanitary Sewer Condition Assessments - Phase II	2,000,000	2,000,000	2,000,000	3rd Qtr. 2009	2nd Qtr. 2010
Sanitary Sewer Improvements, Phase II	350,000	350,000	979,832	1st Qtr. 2005	3rd Qtr. 2008
Spreckles Sanitary Sewer Force Main Supplement	3,179,000	3,458,000	3,557,000	3rd Qtr. 2008	2nd Qtr. 2011
Transfer to the City Hall Debt Service Fund	238,000	1,275,000	1,492,000	N/A	N/A
Union/Almaden Oak Sanitary Sewer Rehabilitation	466,000	466,000	1,730,000	3rd Qtr. 2007	2nd Qtr. 2010
University Avenue Sanitary Sewer Replacement	2,800,000	2,800,000	2,926,000	3rd Qtr. 2008	2nd Qtr. 2010
Willow Glen Sanitary Sewer Rehabilitation	100,000	100,000	1,291,000	3rd Qtr. 2007	2nd Qtr. 2009
Willow-Union Trunk Sewer	50,000	50,000	1,672,000	3rd Qtr. 2004	1st Qtr. 2010
<b>Total: Construction/Non-Construction</b>	<b>55,326,000</b>	<b>146,942,000</b>			
Ending Fund Balance	24,857,752	1,140,752 **			
<b>Total: Sanitary Sewer System</b>	<b>80,183,752</b>	<b>148,082,752 **</b>			
<b>Storm Sewer System</b>					
Albany-Kiely Storm Drainage Improvement, Phase III/IV & V/VI	1,501,000	1,501,000	5,569,000	3rd Qtr. 2008	2nd Qtr. 2010
Alviso Storm Rehabilitation	340,000	1,040,000	1,988,000	3rd Qtr. 2007	2nd Qtr. 2011
City Hall Debt Service Fund	53,000	283,000	350,000	N/A	N/A
Creek Channel Stabilization	580,000	580,000	600,000	3rd Qtr. 2008	2nd Qtr. 2010
Fee Administration	32,000	256,000		*	Ongoing
Geographic Information Systems	108,000	140,000		*	Ongoing
Master Planning	125,000	1,355,000		*	Ongoing
Minor Neighborhood Storm Drain Improvements	400,000	2,400,000		*	Ongoing

## Capital Program Summary by City Service Area

# Environmental and Utility Services

	2009-2010 Budget	2010-2014 CIP Budget	Total Budget (All Years)	Start Date	End Date
<b><u>Storm Sewer System</u> (Cont'd.)</b>					
Miscellaneous Projects	400,000	2,400,000	*	Ongoing	Ongoing
Outfall Rehabilitation - Capital		480,000	600,000	2nd Qtr. 2007	2nd Qtr. 2012
Permit Review and Inspection for Outside Agencies	25,000	125,000	*	Ongoing	Ongoing
Preliminary Engineering	90,000	450,000	*	Ongoing	Ongoing
Program Management	90,000	450,000	*	Ongoing	Ongoing
Public Art	58,000	161,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	98,000	529,000	*	Ongoing	Ongoing
Ross-Guadalupe Storm Drain Improvements		400,000	400,000	3rd Qtr. 2010	2nd Qtr. 2012
Storm Drainage Improvements - Special Corridors	300,000	3,530,000	*	Ongoing	Ongoing
Storm Pump Station Rehabilitation & Replacement	2,905,000	2,905,000	*	Ongoing	Ongoing
Storm/Sanitary Sewer Separation		500,000	500,000	3rd Qtr. 2010	2nd Qtr. 2011
Willow Glen-Guadalupe, Phase III		1,500,000	1,500,000	3rd Qtr. 2013	2nd Qtr. 2014
<b>Total: Construction/Non-Construction</b>	<b>7,105,000</b>	<b>20,985,000</b>			
Ending Fund Balance	212,945	238,945 **			
<b>Total: Storm Sewer System</b>	<b>7,317,945</b>	<b>21,223,945 **</b>			
<b><u>Water Pollution Control</u></b>					
Alternative Disinfection	500,000	500,000	10,780,000	2nd Qtr. 2004	1st Qtr. 2010
Digester Gas Line Replacement		10,300,000	10,300,000	3rd Qtr. 2009	4th Qtr. 2011
Digester Rehabilitation	2,000,000	41,500,000	98,100,000	3rd Qtr. 2008	4th Qtr. 2018
Dissolved Air Flotation Pressure Retention Tank & Valves		1,100,000	2,716,000	3rd Qtr. 2005	4th Qtr. 2016
Environmental Services Building (ESB) Repair	1,966,000	1,966,000	6,000,000	2nd Qtr. 2008	4th Qtr. 2009
Equipment Replacement	4,630,000	11,890,000	*	Ongoing	Ongoing
Filtration Action Plan - Valve Replacement		7,000,000	11,000,000	3rd Qtr. 2010	3rd Qtr. 2015
Fire Line Replacement		800,000	1,150,000	3rd Qtr. 2007	2nd Qtr. 2013
Headworks Enhancement	500,000	4,000,000	4,000,000	3rd Qtr. 2009	4th Qtr. 2011
Land Management & Improvements	250,000	250,000	20,568,000	2nd Qtr. 1997	2nd Qtr. 2010
Payment for Clean Water Financing Authority Trustee	5,000	25,000	*	Ongoing	Ongoing

## Capital Program Summary by City Service Area

### Environmental and Utility Services

	2009-2010 Budget	2010-2014 CIP Budget	Total Budget (All Years)	Start Date	End Date
<b><u>Water Pollution Control (Cont'd.)</u></b>					
Plant Electrical Reliability	20,900,000	60,500,000	80,295,000	3rd Qtr. 2008	2nd Qtr. 2015
Plant Infrastructure Improvements	6,763,000	61,283,000	*	Ongoing	Ongoing
Plant Master Plan	2,780,000	5,180,000	10,200,000	3rd Qtr. 2007	1st Qtr. 2011
Public Art	138,000	1,920,000	*	Ongoing	Ongoing
Public Works Capital Management Costs	5,000	31,000	*	Ongoing	Ongoing
Reserve for Electrical Reliability Improvements Project	5,305,000	5,305,000	5,305,000	N/A	N/A
Reserve for Equipment Replacement	5,000,000	5,000,000	5,000,000	N/A	N/A
Reserve for Plant Master Plan Improvements		10,000,000	90,000,000	N/A	N/A
Reserve for Rate Studies	200,000	200,000	200,000	N/A	N/A
Revised South Bay Action Plan - SBWR Extension	14,364,000	15,920,000	*	Ongoing	Ongoing
SBWR Reservoir Facility	6,000,000	6,000,000	6,000,000	3rd Qtr. 2009	2nd Qtr. 2010
Secondary and Nitrification Clarifier Rehabilitation	1,000,000	15,000,000	35,000,000	3rd. Qtr. 2009	4th Qtr. 2018
State Revolving Fund Loan Repayment	4,464,000	22,320,000	90,452,000	3rd Qtr. 1998	2nd Qtr. 2019
Transfer to City Hall Debt Service Fund	12,000	62,000	*	Ongoing	Ongoing
Transfer to Clean Water Financing Authority Debt Service Payment Fund	6,981,000	34,813,000	97,548,000	2nd Qtr. 1996	4th Qtr. 2020
Unanticipated/Critical Repairs	250,000	1,250,000	*	Ongoing	Ongoing
WPCP Reliability Improvements Phase II		5,000,000	35,000,000	3rd Qtr. 2012	4th Qtr. 2017
Warehousing Facility Additions		1,230,000	1,230,000	3rd Qtr. 2010	2nd Qtr. 2012
<b>Total: Construction/Non-Construction</b>	<b>84,013,000</b>	<b>330,345,000</b>			
Ending Fund Balance	24,143,907	45,239,907	**		
<b>Total: Water Pollution Control</b>	<b>108,156,907</b>	<b>375,584,907</b>	**		
<b><u>Water Utility System</u></b>					
Advance System Design	250,000	1,290,000	*	Ongoing	Ongoing
Bon Bon Drive Main Replacement		1,000,000	1,000,000	3rd Qtr. 2010	3rd Qtr. 2012
Castleton Drive Main Replacement	65,000	900,000	900,000	3rd Qtr. 2009	2nd Qtr. 2011
Gumdrop Drive Main Replacement		1,300,000	1,300,000	3rd Qtr. 2012	2nd Qtr. 2014

## Capital Program Summary by City Service Area

# Environmental and Utility Services

	2009-2010 Budget	2010-2014 CIP Budget	Total Budget (All Years)	Start Date	End Date
<b>Water Utility System (Cont'd.)</b>					
Infrastructure Improvements	460,000	2,500,000	*	Ongoing	Ongoing
Loan Repayment to Sewage Treatment Plant Connection Fee Fund	700,000	3,200,000	7,000,000	3rd Qtr. 2004	2nd Qtr. 2013
Major Facilities Fee Administration	15,000	75,000	*	Ongoing	Ongoing
Master Plan Engineering	90,000	490,000	*	Ongoing	Ongoing
Meter Installations	320,000	1,585,000	*	Ongoing	Ongoing
Network System Flow Improvements	6,000	30,000	*	Ongoing	Ongoing
Nortech Parkway East Loop Main	741,000	741,000	750,000	3rd Qtr. 2008	2nd Qtr. 2010
North Coyote Valley Water System	170,000	170,000	8,085,000	2nd Qtr. 2001	3rd Qtr. 2009
Peppermint Drive Main Replacement		1,265,000	1,265,000	1st Qtr. 2012	4th Qtr. 2013
Preliminary Engineering	70,000	400,000	*	Ongoing	Ongoing
Public Art	18,000	113,000	*	Ongoing	Ongoing
Reserve for System Growth Related Projects	1,400,000	1,400,000	1,400,000	N/A	N/A
Reserve for System Rehabilitation/Replacement	1,733,000	2,535,000	2,535,000	N/A	N/A
Security Improvements	163,000	163,000	423,000	3rd Qtr. 2004	4th Qtr. 2009
Service Installations	420,000	2,200,000	*	Ongoing	Ongoing
System Maintenance/Repairs	540,000	2,900,000	*	Ongoing	Ongoing
Transfer to the City Hall Debt Service Fund	13,000	71,000	93,100	N/A	N/A
Trimble and Nortech Pump Station Retrofits	550,000	550,000	550,000	1st Qtr. 2009	2nd Qtr. 2010
<b>Total: Construction/Non-Construction</b>	<b>7,724,000</b>	<b>24,878,000</b>			
Ending Fund Balance	1,286,545	1,555,545 **			
<b>Total: Water Utility System</b>	<b>9,010,545</b>	<b>26,433,545 **</b>			
<b>CSA Total: Construction/Non-Construction</b>	<b>154,168,000</b>	<b>523,150,000 **</b>			
Ending Fund Balance	50,501,149	48,175,149 **			
<b>CSA Total:</b>	<b>204,669,149</b>	<b>571,325,149 **</b>			

\* Total Budget information is not provided due to the ongoing nature of this project.

\*\*The 2009-2010 through 2012-2013 Ending Balances are excluded from the FIVE-YEAR TOTAL USE OF FUNDS to avoid multiple counting of the same funds.

**PAGE IS INTENTIONALLY LEFT BLANK**