SANTA CLARA COUNTYWIDE WATER SERVICE REVIEW PUBLIC REVIEW DRAFT

September 26, 2011

Prepared for the
Local Agency Formation Commission of Santa Clara County

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ACRONYMS

AB:	Assembly Bill
ABAG:	Association of Bay Area Governments
ACP:	Asbestos Concrete Pipe
ADWF:	Average dry weather flow
AF:	acre feet
AFA:	acre feet per year
AFB:	Air Force Base
AFY:	acre feet per year
AHCWD:	Aldercroft Heights County Water District
BACWA:	Bay Area Clean Water Agencies
BARDP:	Bay Area Regional Desalination Project
BAWAC:	Bay Area Water Agencies Coalition
BAWSCA:	Bay Area Water Supply and Conservation Agency
BDCP:	Bay Delta Conservation Plan
BOE:	State Board of Equalization
Cal Water:	California Water Service Company
CCAG:	Creek Connections Action Group
CCC:	California Coastal Conservancy
CCF:	one hundred cubic feet
CCR:	California Code of Regulations
CCTV:	Closed circuit television
CD:	Certificates of Deposit
CEQA:	California Environmental Quality Act
cfs:	Cubic feet per second
CIP:	Capital Improvement Plan or Program
CIWMB:	California Integrated Waste Management Board
CKH:	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
CPAR:	Corrective or Preventive Actions
CPUC:	California Public Utilities Commission
CSDA:	California Special District Association
CUWCC:	California Urban Water Conservation Council
CVP:	Central Valley Project
CWA:	Federal Clean Water Act
CY:	Calendar year
DCP:	Drought Contingency Plan
DEH:	County Department of Environmental Health
DFG:	California Department of Fish and Game
DPH:	California Department of Public Health

DSOD:	Department of Safety of Dams
DTSC:	California Department of Toxic Substances Control
DWR:	Department of Water Resources
EES:	Environmental Enhancement Surcharge
EIR:	Environmental Impact Report
ENSO:	El Niño Southern Oscillation
EPA:	U.S. Environmental Protection Agency
ERAF:	Educational Revenue Augmentation Fund
FAQ:	Frequently Asked Questions
FPD:	Fire Protection District
FTE:	full-time equivalent
FY:	Fiscal year
GCRCD:	Guadalupe-Coyote Resource Conservation District
GFOA:	Governmental Finance Officers Association of the United States and Canada
GIS:	Geographic Information Systems
GM:	General Manger
GP:	General Plan
gpd:	gallons per day
gpm:	gallons per minute
HCP/NCCP:	Habitat Conservation Plan/Natural Communities Conservation Plan
HTWTP:	Harry Tracy Water Treatment Plant
IRP Water:	Utility Infrastructure Reliability Project
IRWMP:	Integrated Regional Water Management Plan
ISA:	Interim Supply Allocation
ISG:	Individual Supply Guarantee
ISO:	Insurance Services Organization
JHA:	Jurisdiction Having Authority
JPA:	Joint Powers Authority or Agency
LAFCO:	Local Agency Formation Commission
LAHCFD:	Los Altos Hills County Fire District
LOMU:	Letter of Mutual Understanding
LPRCD:	Loma Prieta Resource Conservation District
MCL:	Maximum Contaminant Level
mg:	millions of gallons
mgd:	Millions of gallons per day
MOUs:	Memorandums of Understanding
MS4:	Municipal Separate Storm Sewer Systems
MSR:	Municipal Service Review
MWC:	Mutual Water Company
NA:	Not applicable
NHI:	Natural Heritage Institute
NMFS:	National Marine Fishery Service

NP:	Not provided
NPDES:	National Pollutant Discharge Elimination System
NPDWRs:	National Primary Drinking Water Regulations
NRCS :	Natural Resources Conservation Service
OPR:	Governor's Office of Planning and Research
PARWQCP:	Palo Alto Regional Water Quality Control Plant
PCFFA:	Pacific Coast Federation of Fishermen
PHG:	Public Health Goal
PHWD:	Purissima Hills Water District
PPWD:	Pacheco Pass Water District
psi:	pounds per square inch
PUG:	Northern California Pipe Users Group
PWWF:	Peak wet weather flow
RCD:	Resource conservation district
RD:	Reclamation District
RWQCB:	Regional Water Quality Control Board
SBRCD:	San Benito RCD
SBWR:	South Bay Water Recycling
SCADA:	Supervisory Control and Data Acquisition
SCBWMI:	Santa Clara Basin Watershed Management Initiative
SCRWA:	South County Regional Wastewater Authority
SCVWD:	Santa Clara Valley Water District
SDWA:	Safe Drinking Water Act
SDWIS:	Safe Drinking Water Information System
SFEI:	San Francisco Estuary Institute
SFPUC:	San Francisco Public Utility Commission
SJ/SC WPCP:	San José/Santa Clara Water Pollution Control Plant
SJWC:	San Jose Water Company
SMCWD:	San Martin County Water District
SOI:	Sphere of influence
SSO:	Sewer System Overflow
SVWTP:	Sunol Valley Water Treatment Plant
SWP:	State Water Project
SWPCP:	Sunnyvale Water Pollution Control Plant
SWRCB:	State Water Resources Control Board
TDS:	Total dissolvable solids
TMDL:	Total maximum daily load
UAC:	Utilities Advisory Commission
USA:	Urban Service Area
USBR:	U.S. Bureau of Reclamation
USDA:	U.S. Department of Agriculture
UWMP:	Urban Water Management Plan

WSAP:	Water Shortage Allocation Plan
WPCP:	Sunnyvale Water Pollution Control Plant
WSA:	Water Supply Agreement
WSIP:	Water System Improvement Program
WSMWW:	West San Martin Water Works
WSV:	Water Supply Verifications
WTP:	Water Treatment Plant
WWTP:	Wastewater Treatment Plant

PREFACE

Prepared for the Local Agency Formation Commission of Santa Clara County (LAFCO), this report is a countywide water services review—a state-required comprehensive study of services within a designated geographic area. This Service Review focuses on local agencies and other service providers in Santa Clara County that provide water services.

CONTEXT

LAFCO of Santa Clara County is required to prepare this Countywide Water Service Review by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code §56000, et seq.), which took effect on January 1, 2001. The water service review examines services provided by public agencies whose boundaries and governance are subject to LAFCO. Those agencies providing water services in Santa Clara County are the focus of this review. In order to provide comprehensive information on service provision, other service providers—private companies and mutual water companies—are included in this Service Review.

CREDITS

The authors extend their appreciation to those individuals at many agencies that provided planning and financial information and documents used in this report. The contributors are listed individually at the end of this report. The local agencies have provided a substantial portion of the information included in this report. Each local agency provided budgets, financial statements, various plans, and responded to questionnaires. The service providers provided interviews covering workload, staffing, facilities, regional collaboration, and service challenges.

Santa Clara LAFCO Executive Officer, Neelima Palacherla, who was assisted by Dunia Noel (LAFCO Analyst), provided project direction and review. Steve Borgstrom, at the Santa Clara County Planning Office, prepared maps. The Technical Advisory Committee, composed of LAFCO Commissioner Susan Vicklund-Wilson, appointed by LAFCO; Monte Sereno City Manager Brian Loventhal, appointed by the County/Cities Managers' Association; Morgan Hill Engineering Deputy Director Karl Bjarke, appointed by the County Municipal Public Works Officials' Association; and three representatives from the Santa Clara Valley Water District (SCVWD) Water Retailers' Group including SCVWD Chief Operating Officer Jim Fielder, City of Santa Clara Director of Water & Sewer Utilities Chris de Groot, and California Water Service Company Water Resource Planning Engineer Michael Bolzowski, provided input and guidance during the review process.

This report was prepared by Baracco and Associates, Policy Consulting Associates, LLC and Shibatani Group, Inc., and was co-authored by Bruce Baracco, Jennifer Stephenson, Oxana Kolomitsyna, and Robert Shibatani. Bruce Baracco served as project manager. Jennifer Stephenson and Oxana Kolomitsyna provided research analysis. Water expertise was provided by Robert Shibatani.

1. EXECUTIVE SUMMARY

This report is a countywide service review report on water services prepared for the Santa Clara Local Agency Formation Commission (LAFCO). A service review is a State-required comprehensive study of services within a designated geographic area, in this case, Santa Clara County. The service review requirement is codified in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.). After findings are adopted, the Commission will begin the process of updating the spheres of influence (SOIs) of water providers in Santa Clara County. This report recommends SOI updates for the special districts for the Commission's consideration.

PROVIDERS

Overview

This report reviews water services in Santa Clara County, including how these services are provided by the special districts, cities and other providers not under LAFCO jurisdiction. All agencies covered in this report and the services provided by each are shown in Figure 1-1.

There are 15 agencies under LAFCO jurisdiction that are covered in this report—eight cities and seven special districts. Of these 15 providers, 11 provide potable retail water services. Santa Clara Valley Water District (SCVWD) is the only wholesaler among the water purveyors under LAFCO jurisdiction. SCVWD also provides several countywide water management services, not provided by other agencies, including flood control, groundwater management and recharge, and regional planningwater resource planning. Loma Prieta Resource Conservation District (LPRCD) and Guadalupe-Coyote Resource Conservation District (GCRCD) provide resource conservations services, including watershed stewardship activities. Pacheco Pass Water District (PPWD) provides groundwater recharge services. PPWD is under the jurisdiction of San Benito LAFCO, which is responsible for adopting determinations and updating the District's SOI.

Other water providers in Santa Clara that are not under LAFCO jurisdiction, but are relevant to the discussion of water services within the County, are discussed in Chapters 18 through 26 to the extent necessary to establish relationships, quantify services, and provide a comprehensive overview of water services countywide. Large private water purveyors within the County, which are covered in this report, include San Jose Water Company, California Water Service Company, Great Oaks Water Company, West San Martin Water Works, and Stanford University. Other related agencies that influence water service in the County, include San Francisco Public Utilities Commission and the Bay Area Water

Supply and Conservation Agency. The County's four recycled water producers are also included here for a comprehensive review of water supply sources.

For a geographic overview of the agencies covered, please refer to Figures 1-3 and 1-4.

Figure 1-1: Santa Clara Water Service Providers

	Retail		Services								
Agency	Potable	Recycled	Treatment	Distribution	Wholesale	Maintenance	Watershed Stewardship	Flood Control/Stormwater	Groundwater Management	Groundwater Recharge	Regional Water Planning
Agencies Under LAFCO Jurisdiction											
Santa Clara Valley Water District		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aldercroft Heights County Water District	✓		✓	✓		✓					
Purissima Hills Water District	✓			✓		✓					
San Martin County Water District	✓		✓	✓		✓					
Pacheco Pass Water District										✓	
Guadalupe-Coyote Resource Conservation District							✓				
Loma Prieta Resource Conservation District							✓				
City of Gilroy	✓	✓		✓		✓		✓			
City of Milpitas	✓	✓		✓		✓		✓			
City of Morgan Hill	✓		✓	✓		✓		✓			
City of Mountain View	✓	✓		✓		✓		✓			
City of Palo Alto	✓	✓		✓		✓		✓			
San Jose Municipal Water	✓	✓		✓		✓		✓			
City of Santa Clara	✓	✓		✓		✓		✓			
City of Sunnyvale	✓	✓		✓		✓		✓			
Agencies Not Under LAFCO Jurisdiction											
San Jose Water Company	✓	✓	✓	✓	✓	✓					
California Water Service Company	✓			✓		✓					
Great Oaks Water Company	✓			✓		✓					
West San Martin Water Works	✓		✓	✓		✓					
Stanford University	✓			✓		✓					
San Francisco Public Utilities Commission	✓		✓	✓	✓	✓	✓	✓			✓
Bay Area Water Supply and Conservation Agency											✓
South County Regional Wastewater Authority		✓	✓		✓	✓					
South Bay Water Recycling		✓	✓	✓	✓	✓					
Palo Alto Regional Water Quality Control Plant		✓	✓		✓	✓					
Sunnyvale Water Pollution Control Plant		✓	✓			✓					

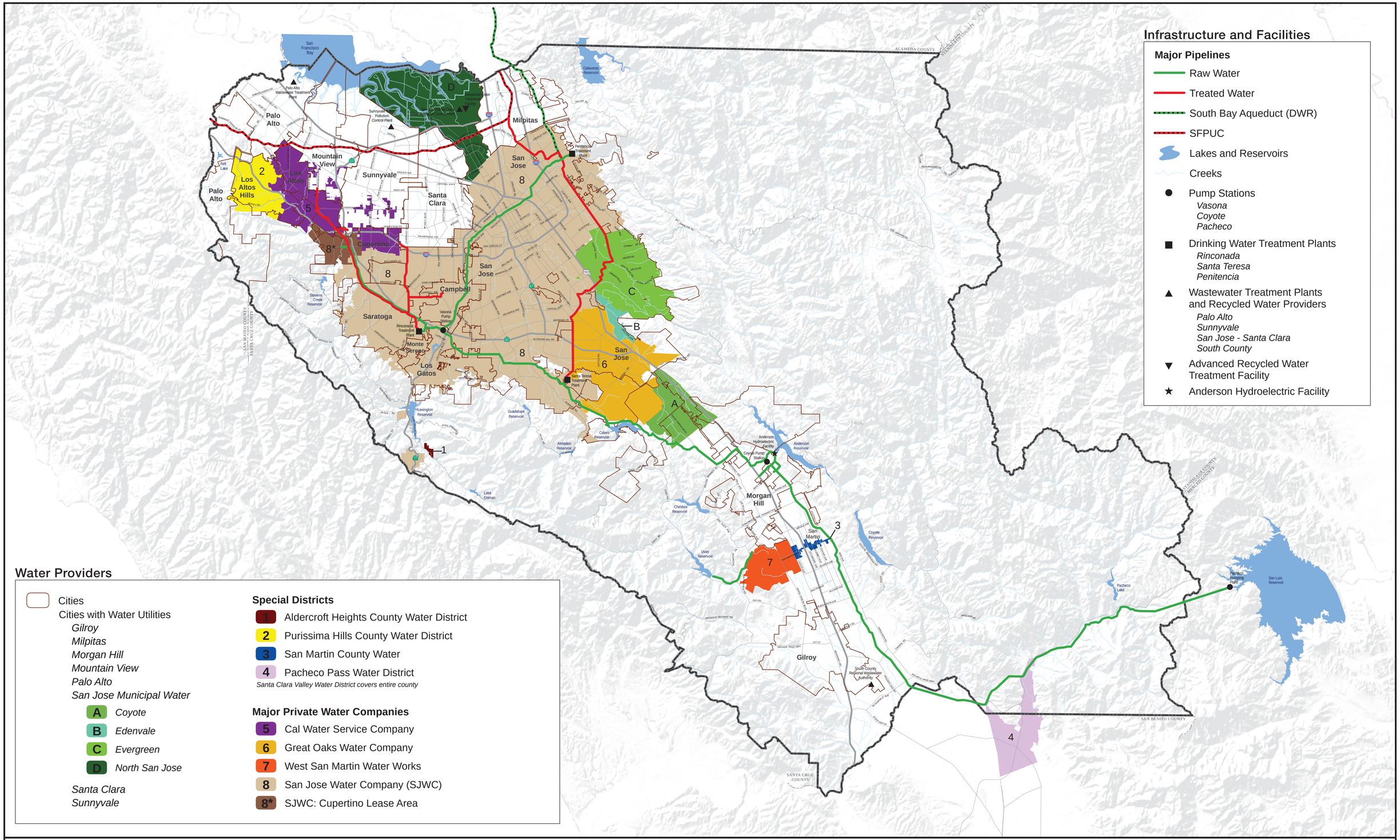
All agencies covered in this report, the number of connections served and the amount of water produced or imported are shown in Figure 1-2.

Figure 1-2: Santa Clara Water Service Providers

Agency	Connections	Water Produced and/or Purchased in 2010 (Acre Feet)
Agencies Under LAFCO Jurisdiction		
Santa Clara Valley Water District	NA	104,921
Aldercroft Heights County Water District	117	16
Purissima Hills Water District	2,176	1,903
San Martin County Water District	189	114
Pacheco Pass Water District	NA	NA
Guadalupe-Coyote Resource Conservation District	NA	NA
Loma Prieta Resource Conservation District	NA	NA
City of Gilroy	12,905	7,322
City of Milpitas	16,351	11,034
City of Morgan Hill	12,132	7,888
City of Mountain View	17,365	11,348
City of Palo Alto	20,238	13,065
San Jose Municipal Water	23,469	22,291
City of Santa Clara	26,985	23,214
City of Sunnyvale	29,257	21,465
Agencies Not Under LAFCO Jurisdiction		
San Jose Water Company	222,450	133,066
California Water Service Company	18,310	11,648
Great Oaks Water Company	20,628	11,021
West San Martin Water Works	253	303
Stanford University[1]	1,416	2,800
San Francisco Public Utilities Commission	NA	254,497
Bay Area Water Supply and Conservation Agency	NA	NA
South County Regional Wastewater Authority	22	2,040
South Bay Water Recycling	~600	8,650
Palo Alto Regional Water Quality Control Plant	7	2,450
Sunnyvale Water Pollution Control Plant	112	1,330

Notes:
1) Since the University chose to not participate in this water service review and update the informationfrom the previous service review, the number of connections and acre feet produced are from 2004.

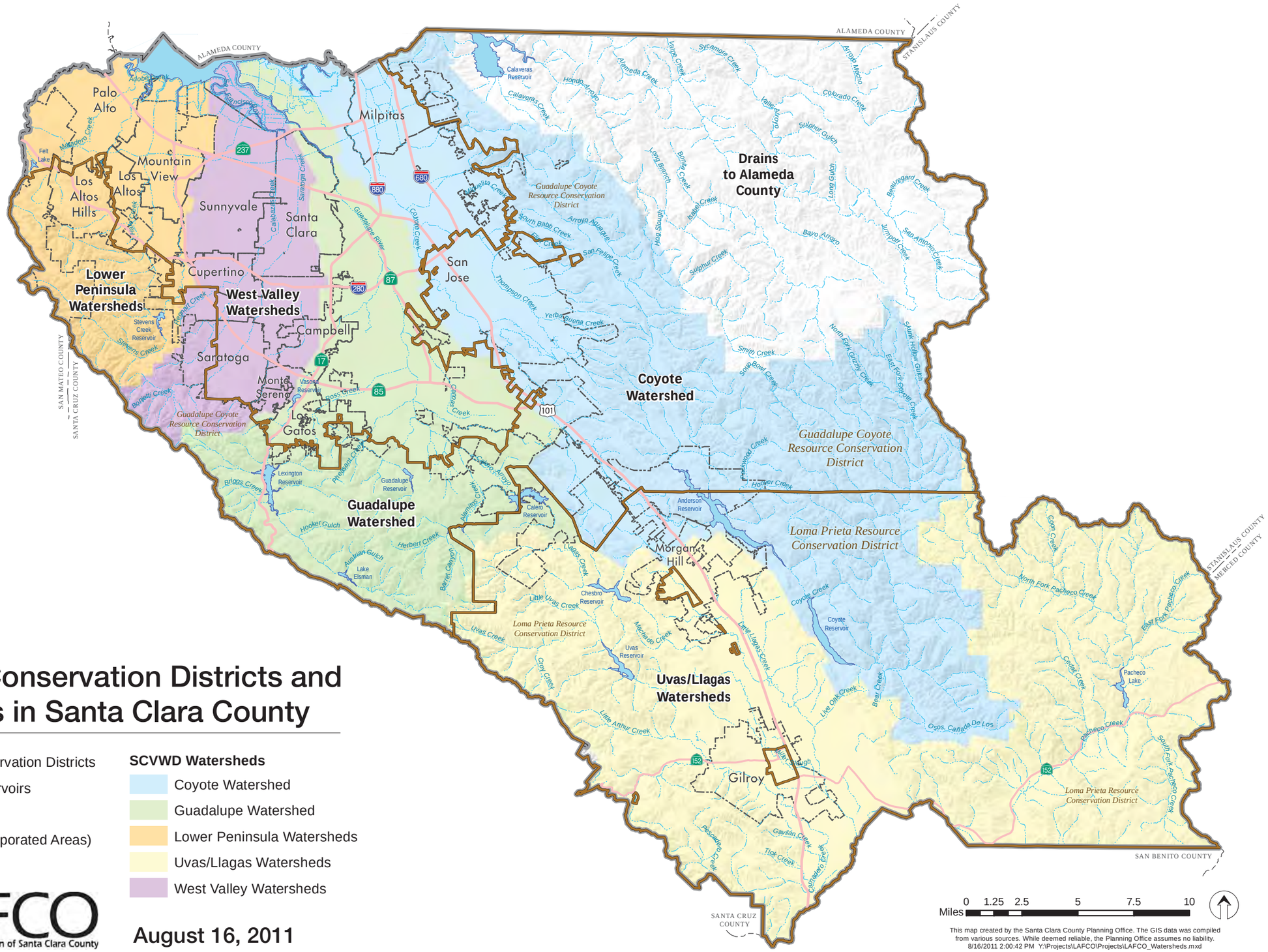
Figure 1-3



Water Service Providers in Santa Clara County

September 2011

Figure 1-4



Resource Conservation Districts and Watersheds in Santa Clara County

- Resource Conservation Districts
- Lakes and Reservoirs
- Creeks
- City Limits (Incorporated Areas)

SCVWD Watersheds

- Coyote Watershed
- Guadalupe Watershed
- Lower Peninsula Watersheds
- Uvas/Llagas Watersheds
- West Valley Watersheds

LAFCO
Local Agency Formation Commission of Santa Clara County

August 16, 2011

COUNTYWIDE WATER SUPPLY SYSTEM

Overview

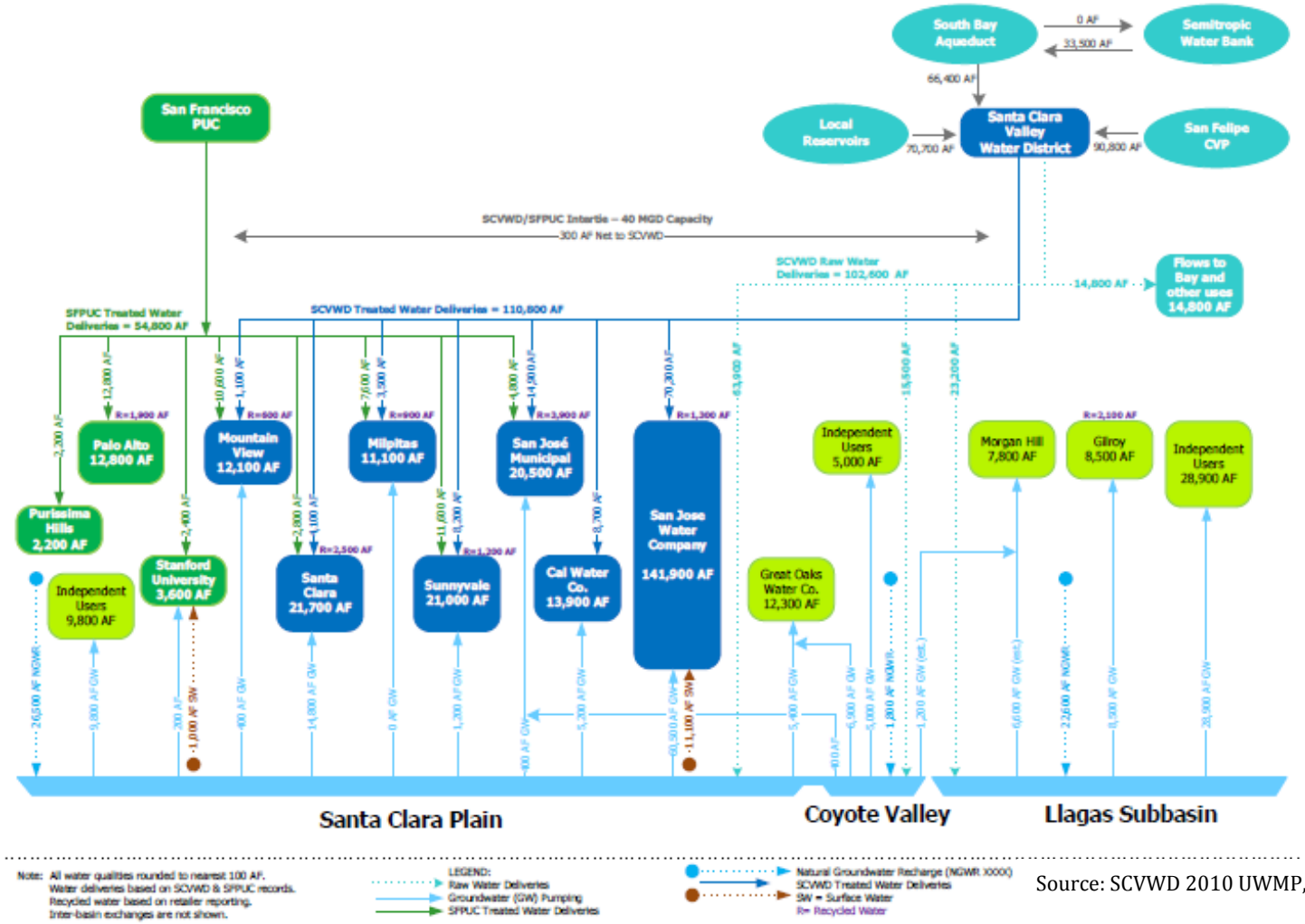
Santa Clara County relies on three main sources of water: groundwater from the Santa Clara Valley Basin, local surface water from creeks and streams, and imported water delivered through the Hetch Hetchy Water System, the State Water Project, and the Central Valley Project. Each of these resources is integral to the overall supply, although there are distinct differences in the sources available within the County's sub-regions. The southern portion of the County is entirely dependent on groundwater for its potable supply. There are currently no other potable water supply alternatives in the area. The northern portion of the County utilizes all three sources—groundwater, local surface water and imported water—although the amount supplied by each source varies by locale.

The two primary wholesale water agencies serving the County are Santa Clara Valley Water District (SCVWD) and San Francisco Public Utilities Commission (SFPUC). SCVWD treats local and imported surface water for further distribution to the water retailers. SCVWD is the designated groundwater management agency for Santa Clara County and is responsible for managing the groundwater resources, including all natural and artificial recharge facilities. The extent of the services provided by the SFPUC is delivery of treated water through the Hetch Hetchy System.

Since 1989, the County's various sources of water have remained relatively constant as a percentage of total supply. In 2010, water supplied by SCVWD made up the largest share of total use at 38 percent of total water purchased or produced by the County's water purveyors. Groundwater comprised the second largest share at 35 percent of total water supplied. SFPUC supplies (from the Hetch-Hetchy system) represent the third largest share at 18 percent of total water use. Recycled water consisted of approximately four percent and other local surface water (non-SCVWD) was six percent of total water supplied. A breakdown of the various water sources by agency is shown in Figure 1-6.

A schematic representation of the Santa Clara County water providers and water system is shown in Figure 1-5. Figure 1-5 indicates supply sources by retailer in 2009, which has been selected as a representative year for water conservation comparison purposes.

Figure 1-5: Santa Clara County Water Supply System



Source: SCVWD 2010 UWMP, p. 20.

Figure 1-6: Water Sources by Purveyor (2010)

Agency	Water Source in 2010 (acre feet)												Total
	SFPUC	%	SCVWD	%	SJWC	%	GW	%	Surface Water Rights	%	Recycled Water	%	
Agencies Under LAFCO Jurisdiction													
Aldercroft Heights CWD	0	0%	0	0%	16	100%	0	0%	0	0%	0	0%	16
Purissima Hills WD	1,903	100%	0	0%	0	0%	0	0%	0	0%	0	0%	1,903
San Martin CWD	0	0%	0	0%	0	0%	114	100%	0	0%	0	0%	114
City of Gilroy	0	0%	0	0%	0	0%	6,622	90%	0	0%	700	10%	7,322
City of Milpitas	6,744	61%	3,484	32%	0	0%	0	0%	0	0%	807	7%	11,035
City of Morgan Hill	0	0%	0	0%	0	0%	7,333	100%	0	0%	0	0%	7,333
City of Mountain View	9,476	84%	1,007	9%	0	0%	476	4%	0	0%	389	3%	11,348
City of Palo Alto	12,263	94%	0	0%	0	0%	0	0%	0	0%	802	6%	13,065
San Jose Municipal Water	4,592	21%	13,692	61%	0	0%	668	3%	0	0%	3,339	15%	22,291
City of Santa Clara	2,454	11%	4,372	19%	0	0%	13,980	60%	0	0%	2,409	10%	23,215
City of Sunnyvale	8,982	42%	9,331	43%	0	0%	1,629	8%	0	0%	1,523	7%	21,465
Agencies Not Under LAFCO Jurisdiction													
San Jose Water Company	0	0%	64,783	49%	0	0%	51,107	38%	15,968	12%	1,208	1%	133,066
California Water Service Company	0	0%	8,252	71%	0	0%	3,396	29%	0	0%	0	0%	11,648
Great Oaks Water Company	0	0%	0	0%	0	0%	11,021	100%	0	0%	0	0%	11,021
West San Martin Water Works	0	0%	0	0%	0	0%	303	100%	0	0%	0	0%	303
Stanford University[1]	2,800	100%	0	0%	0	0%	0	0%	0	0%	0	0%	2,800
Countywide Total	49,214	18%	104,921	38%	16	0%	96,649	35%	15,968	6%	11,177	4%	277,944

Notes:
1) Since the University chose to not participate in this water service review and update the informationfrom the previous service review, the number of connections and acre feet produced are from 2004.

Surface water supplies provided through SCVWD and SFPUC, along with local supply availability, appear adequate to meet the County's needs. Federal and State contract water through the Central Valley Project and State Water Project are shorted based on inter-annual availability constraints, which are unpredictable. This is the primary limitation to the County's water supply. The ability to meet future water use demands will depend significantly on groundwater storage and expanded supplemental water supplies such as transfers, exchanges, in-lieu supplies from groundwater banking, and both recycled water and potential desalination.

Other Water Sources

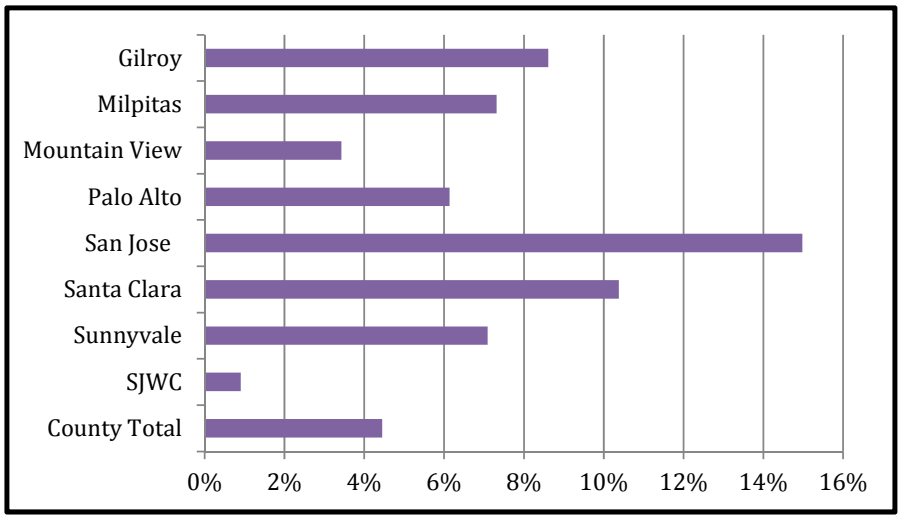
Agencies are searching for additional drought-resistant water sources and a means to enhance the use of existing sources, including desalination and recycled water.

The San Francisco Bay Area's five major water agencies—Contra Costa Water District, East Bay Municipal Utility District, San Francisco Public Utilities Commission, Zone 7 Water Agency, and Santa Clara Valley Water District—all collaborating on a desalination project to determine the feasibility of a regional desalination facility. The intent of the Bay Area Regional Desalination Project (BARDP) is to leverage existing pipelines and interties and to share a regional facility that minimizes costs and environmental impacts.

Presently, about four percent of the County's total water use consists of recycled water, limited primarily to landscaping and industrial uses. Recycled water is produced at four wastewater treatment plants in Santa Clara County. Wastewater from Gilroy and Morgan Hill is treated at the South County Regional Wastewater Authority facility in Gilroy. In northern Santa Clara County, recycled water is produced at the Palo Alto Regional Water Quality Control Plant, the San Jose/Santa Clara Water Pollution Control Plant (South Bay Water Recycling program) and the Sunnyvale Water Pollution Control Plant.

Of the 11 water retailers under LAFCO jurisdiction that are covered in this report, seven make use of recycled water. San Jose Water Company (SJWC) also makes use of recycled water in its service area. Figure 1-7 illustrates what portion of total water supply consists of recycled water. Use ranges from one percent in SJWC to 15 percent in the City of San Jose's water service area.

Figure 1-7: Portion of Total Water Supply Comprised of Recycled Water (2010)



It appears that there is room for expanded use of recycled water at the existing plants based on the percent of plants' flows that is used for recycled water, as shown in Figure 1-8. Constraints to use of recycled water are the cost of extending recycled water mains to additional water users and stringent regulations regarding treatment and uses.

Figure 1-8: Percentage of Treatment Plant Flow Used For Recycled Water (2010)

Recycled Water Provider	% of Plant Flow Used for Reycled Water
South County Regional Wastewater Authority	26%
South Bay Water Recycling	7%
Palo Alto Regional Water Quality Control Plant	10%
Sunnyvale Water Pollution Control Plant	10%

Recycled water use is expected to expand in the coming years. Water purveyors that are presently making use of recycled water resources plan to increase consumption by 121 percent through 2035. Additionally, Great Oaks Water Company is assessing the potential of initiating recycled water use.

In response to the expected increase in demand for this drought-proof and more cost efficient water source, there are plans for plant expansions and a new plant. The plans include:

- An overall expansion of the SCRWA treatment plant to accommodate future growth in Gilroy and Morgan Hill over the next 20 years.

- Rebuilding of the San Jose/Santa Clara Water Pollution Control Plant aging plant with new treatment technologies including upgrades to the treatment process, as well as enhanced use of renewable energy sources, and habitat and open space areas.

- SCVWD, in collaboration with the City of San Jose, is in the process of building an advanced water treatment facility (to be completed in early 2012), which will produce up to ten million gallons per day of recycled water.

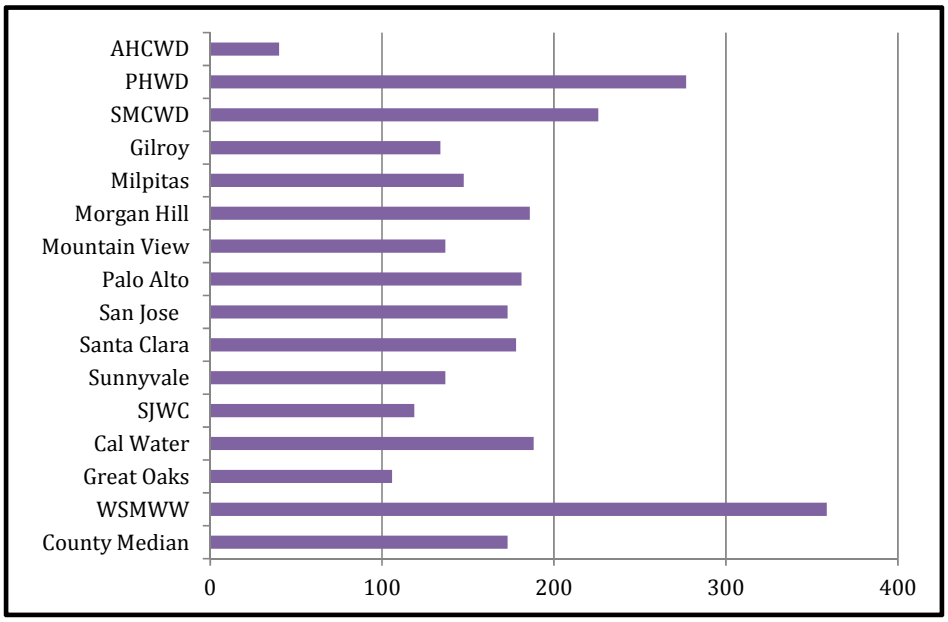
DEMAND

This section provides an overview of water uses, a general discussion of factors affecting water demand, analysis of water demand indicators and conservation efforts, and projections of future needs for water.

Residential water demand differences relate in part to differences in outdoor water use between communities. Lot size is a significant factor affecting differences in per unit demand. Structure age is another factor expected to affect demand differences, as newer buildings tend to have modern, water-efficient plumbing fixtures. Urban water demand is primarily affected by population and economic growth and by water use efficiency. As the number of residents and jobs grows, the more showers are taken, toilets flushed and dishes washed. Not only does demographic and economic growth affect water demand, so too does the efficiency of water use.

Water usage varies significantly across providers and service areas, as shown in Figure 1-9. In 2010, the median water use among the Santa Clara purveyors covered in this report was 173 gallons per capita per day (gcpd). As shown in the figure, customers in Aldercroft Heights County Water District (AHCWD) use significantly less water on average (40 gcpd) than in the other service areas. This is in large part due to the high rates charged by AHCWD. Conversely, customers in Purissima Hills Water District (PHWD) and West San Martin Water Works (WSMWW) use significantly more water on average than in the other services areas. High water demand within PHWD is likely attributable to the size of the homes and landscaped area associated with the minimum one-acre parcels found within the District.

Figure 1-9: Potable Water Use in Gallons per Capita per Day (2010)



Conservation

Over time, water use levels change in response to changes in water prices, improvements in the efficiency of plumbing fixtures and conservation programs aimed at encouraging consumers to upgrade to efficient plumbing fixtures. These effects are interrelated. For example, water price increases can encourage consumers to reduce their water use directly (e.g., fewer showers) or prompt them to upgrade fixtures (e.g., water-efficient toilets). These impacts are readily identifiable in Santa Clara County where conservation efforts and campaigns combined with economic recession have led to lower water use, which has resulted in lower water sales revenues.

During the drought in 2007 to 2009, water agencies implemented mandatory water conservation efforts. Specifically, in March 2009, Santa Clara Valley Water District (SCVWD) adopted a resolution calling for a mandatory 15 percent water conservation. Users exceeded this requirement by achieving 17 percent water conservation. Although drought conditions are no longer a concern, SCVWD continued voluntary water conservation efforts with a target of 10 percent in FY 10–11. Agencies indicated plans to continue conservation efforts in FY 11-12.

Over 200 California water providers are signatories to the California Urban Water Conservation Council (CUWCC) agreement, through which service providers pledge to develop and implement 14 conservation "best management practices." Within Santa Clara County, City of Mountain View, City of San Jose, Santa Clara Valley Water District, Purissima

Hills Water District, San Jose Water Company, Great Oaks Water Company are the only signatories among the water providers.

Projected Demand and Water Supply Capacity

Each agency's projected water demand through 2035 and the capacity to meet that demand with existing and anticipated water supplies was analyzed based on agency-reported projections in the UWMPs. Overall, the water purveyors appear to have sufficient water supply to meet demand during normal years through 2035, and any shortfall in water is anticipated to be made up by enhanced groundwater use. Potential water shortages during single and multiple year drought scenarios were identified for the Cities of Milpitas, Santa Clara, and Mountain View.

By the year 2020, Milpitas may experience water supply shortfalls in drought years, with up to a 2,400 acre foot per year shortfall in the third year of consecutive drought by 2035. Milpitas plans to rely on groundwater pumping from its two municipal wells, increased use of recycled water, and more stringent water conservation programs to weather any drought-related shortfalls.

The City of Santa Clara is considered a temporary and interruptible customer of SFPUC with assurance of supply only through 2018. If the City's total projected supplies include SFPUC supply beyond 2018, the City will be able to meet its anticipated demands to 2035. Without SFPUC supply, there are projected shortfalls by 2020 under normal, single dry, and multiple dry-year sequences with shortfalls of up to 8,000 AF by 2035. The City has conservatively included this scenario in its UWMP, and plans to meet future demand growth by pumping additional groundwater, relying on more recycled water and increased conservation. Similarly, the San Jose Municipal Water System is considered a temporary and interruptible customer of SFPUC with assurance of supply only through 2018; however, the City assumes in its UWMP that it will continue to receive the same share of water from SFPUC through 2035, and consequently no shortages were identified.

The City of Mountain View projects minor supply deficits occurring as early as 2015 during multiple dry year periods, with a supply deficit of up to 2,350 acre feet (18 percent shortfall) during the fifth year of consecutive drought by 2025. These projections assume no change in demand during drought years. The City would be able to increase the amount of groundwater pumped to meet any supply deficit.

SCVWD appears to generally have sufficient water supply during normal supply scenarios; however, there are projected deficits during a single and multiple dry year event as early as 2015, which would require the District to capitalize on its groundwater reserves and surface carryover supplies. A multiple dry-year event would also require enhanced short-term conservation efforts.

For the most part, surface water supplies provided through SCVWD and SFPUC, conditioned by both long-term Central Valley Project/State Water Project allocation sensitivity and the individual supply guarantee limitations, along with local supply availability, are adequate to meet current and future demand projections within the County. Groundwater is a notable "equalizer" in the County with each of the three sub-basins assumed capable of providing significant sustained yield quantities. The biggest uncertainty is in the assumed yield estimates for source area derived (Sierra Nevada) surface water supplies in the long-term for both SFPUC and SCVWD.

FACILITY NEEDS

Each of the providers identified infrastructure needs and deficiencies related to water facilities. The primary need identified among the city water providers was the continued replacement of aging mains that are prone to leaks and breaks. Additionally, several agencies identified necessary improvements to facilities to enhance seismic stability and safety. Facility needs for each of the agencies are outlined in Figure 1-10. For further information and background on an agency's respective needs refer to the provider's individual chapter in this document.

Figure 1-10: Agency Infrastructure Needs

Agency	Infrastructure Needs
Santa Clara Valley Water District	1. Review and corrective measures to the District's dams to enhance seismic stability 2. A means to ensure water quality from the San Luis Reservoir during low levels 3. Repairs to clearwells at the Penitencia water treatment plant 4. Enhanced flood protection along Alamias, Jones, and West Branch Llagas Creeks 5. Remediation of six impaired water bodies (Alamitos and Coyote Creeks, Calero Reservoir, and Guadalupe Creek, Reservoir and River)
Aldercroft Heights County Water District	1. Replacement of a storage tank to enhance seismic stability
Purissima Hills Water District	1. Upgrade and replacement of aging undersized mains that are prone to breaks and leaks
San Martin County Water District	1. Installation of a back-up well with generator for emergency purposes
Pacheco Pass Water District	1. Replacement of the spillway at the North Fork Dam 2. Removal of vegetation at the upstream slope and spillway exit channel
City of Gilroy	1. Replacement of water meters 2. Reconstruction of the First Street main 3. Repairs and painting of water storage tanks
City of Milpitas	1. Upgrades to the Curtis Well pump station 2. Extension of Abel Street/Carlos Street water line 3. Seismic improvements to the backbone water system
City of Morgan Hill	1. Construction of an additional well to provide adequate source capacity through 2035 2. Replacement of the Main Avenue main 3. Rehabilitation of booster pumps and wells 4. Re-coating of water tank
City of Mountain View	1. Replacement of aging water lines 2. Replacing current water meters with remote-read capable meters
City of Palo Alto	1. Replacement of aging water lines 2. Structural reinforcement for the Monte Bello, Corte Madera, Park, Boronda, and Dahl reservoirs 3. Emergency water supply and storage enhancements - rehabilitation of five of the City's existing stand-by wells, construction of three new wells, construction of a 2.5-million gallon storage reservoir, augmentation of the existing Mayfield Pump Station
San Jose Municipal Water	1. Main line extension to Nortech Parkway East to eliminate 'dead end' lines 2. Water main replacement along Bon Bon Drive 3. Ongoing reservoir seismic piping
City of Santa Clara	1. Distribution system replacement and restoration 2. Seismic retrofit for storage tanks 3. Rehabilitation of wells and pumps
City of Sunnyvale	1. Refurbishing, cleaning, interior coating, and exterior painting of water tanks 2. Replacement of water lines where soil conditions are most corrosive 3. Replacement of the SCADA system

Emergency Preparedness

Urban water suppliers are expected to address catastrophic disruptions of water supplies with plans reviewing the vulnerability of source and delivery and distribution systems to events such as regional power outages and system failures.

In 2003, SCVWD initiated the Water Utility Infrastructure Reliability Project (IRP) to determine the current reliability of its water supply infrastructure (pipes, pump stations, treatment plants). The project measured the baseline performance of critical district facilities in emergency events and identified system vulnerabilities. The study concluded that the District's water supply system could suffer up to a 60-day outage if a major event, such as a 7.9 magnitude earthquake on the San Andreas Fault, were to occur. Less severe hazards, such as other earthquakes, flooding and regional power outages had less of an impact on the District, with outage times ranging from one to 45 days.[1]

In light of the potential for a major seismic event or other emergency outage, emergency preparedness and ability to weather any water supply interruption is a primary concern for the providers. Depending on the type and length of the interruption, the water retailers would rely on stored water and enhanced groundwater pumping, and when available, make use of transfers though interties with other providers, to meet demand during an outage.

A majority of the providers maintain interties with other providers for emergency events, with the exception of Aldercroft Heights CWD and the Cities of Gilroy and Morgan Hill.

In the event of an emergency that limited or stopped a provider's supply of water, the system would rely on stored water in the short-term. Figure 1-11 shows the number of days of water storage that each provider maintains given maximum day flows. San Martin County Water District maintains minimal water storage that may be used during an outage, and instead intends to rely on its intertie with West San Martin Water Works. As Aldercroft Heights CWD does not have any neighboring water providers and consequently no interties for emergency purposes, the District maintains substantial (14 days) water reserves compared to the other agencies.

[1] SCVWD, Draft UWMP, 2011, p. 9-7.

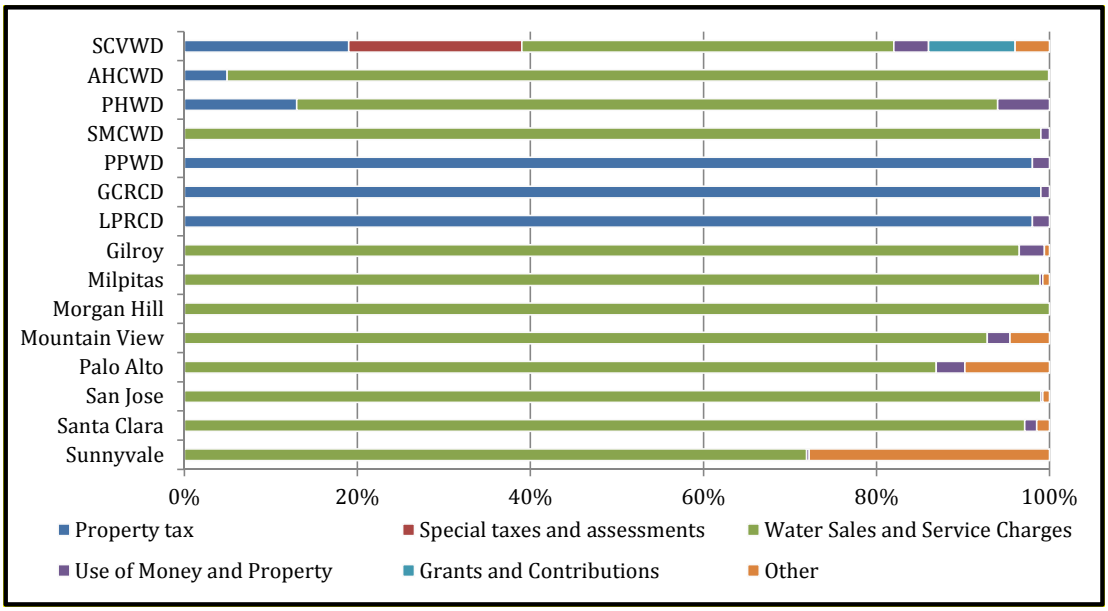
Figure 1-11: Days of Water Storage During Maximum Day Demand

Agency	Days of Stored Water During Max Day Demand
Aldercroft Heights County Water District	14
Purissima Hills Water District	2
San Martin County Water District	0.04
City of Gilroy	1
City of Milpitas	1
City of Morgan Hill	1.25
City of Mountain View	0.9
City of Palo Alto	0.13
City of San Jose - N. San Jose Alviso	1
City of San Jose - Evergreen	1.25
City of San Jose - Edenvale	3
City of San Jose - Coyote Valley	3.3
City of Santa Clara	1
City of Sunnyvale	1

FINANCING

Water rates and connection fees and property tax revenues are the primary financing sources for water enterprises in the Service Review area. The water service providers rely to differing degrees on these and other sources for revenues. The various financing sources and the degree to which the agencies rely on them are shown in Figure 1-12.

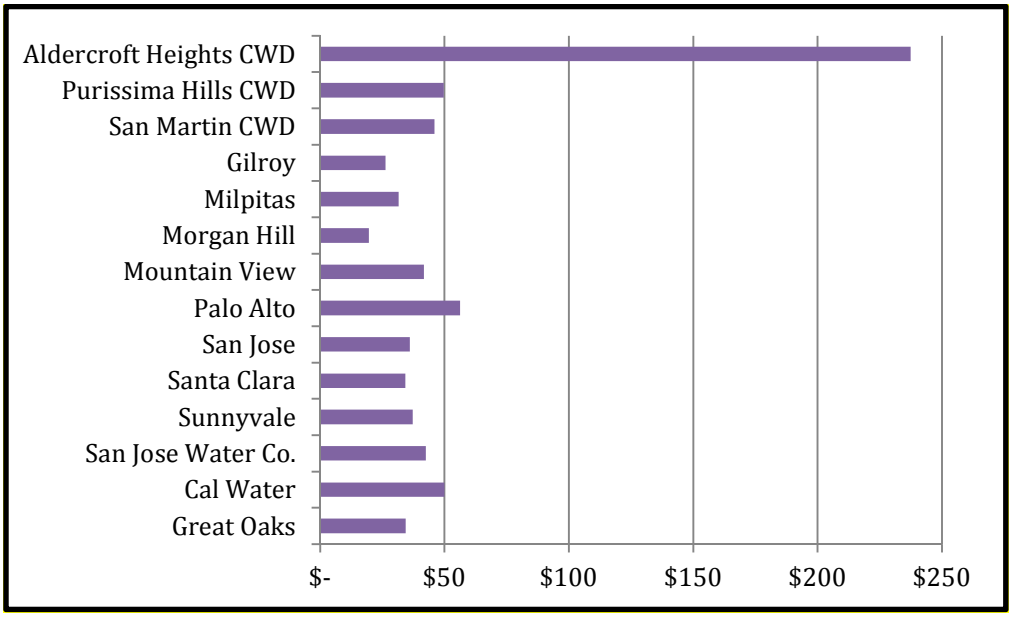
Figure 1-12:Agency Financing Sources



As shown in Figure 1-12, the water purveyors largely depend on water sales revenue to operate the utility. Compared with other municipal services, there are relatively few financing constraints for water enterprises. Generally, agencies may establish service charges on a cost-of-service basis and are not required to obtain voter approval for rate increases or restructuring. The boards of each of the public sector water providers are responsible for establishing service charges. Service charges are restricted to the amount needed to recover the costs of providing water service.

With the exception of Aldercroft Heights CWD, Purissima Hills WD and Gilroy, each of the agencies reviewed here updated their rates in 2011. Rate increases among the retailers ranged from 5.9 percent by San Jose Municipal Water System to 21 percent by Palo Alto, with a median increase of 18 percent. Figure 1-13 shows the average monthly water rates for each retailer for a single family connection assuming an average monthly usage of 7,600 gallons. Based on the average use assumed, Aldercroft Heights CWD charges the highest rates among the purveyors; however, it should be noted that customers within the AHCWD service area use significantly less water on average than in the other service areas, and would likely not use the full assumed amount. The median monthly rate among the providers is $39.50.

Figure 1-13: Monthly Water Rates for a Single Family Connection (FY 11-12)

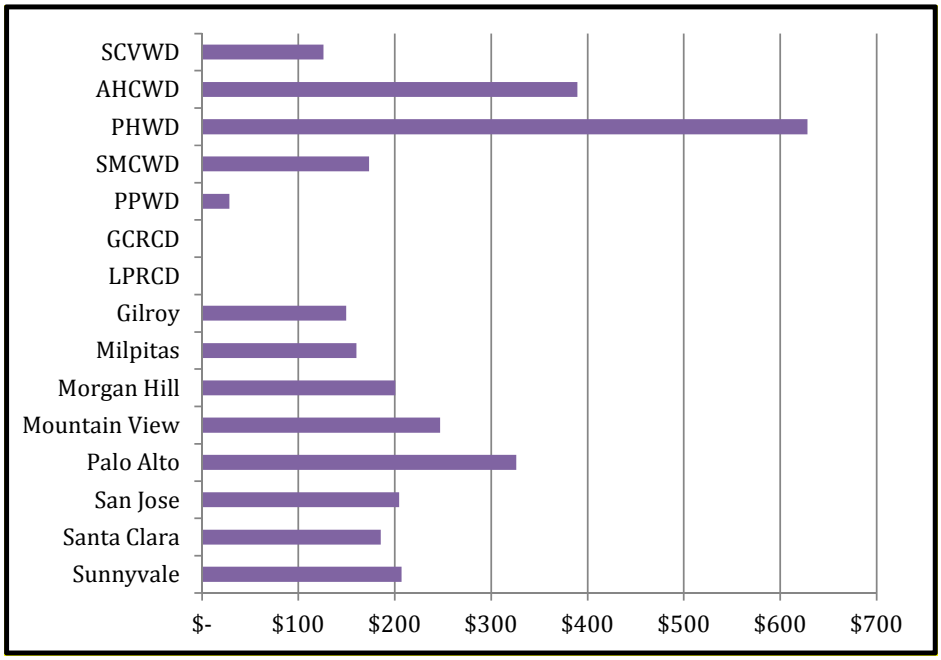


The retailer rates were greatly influenced by recent rate increases by SCVWD and SFPUC. SFPUC raised rates by 38 percent for FY 11-12, and SFPUC anticipates raising rates an average of 10 percent annually over the next 10 years. These increases are the result of the infrastructure projects undertaken by SFPUC to upgrade the regional water distribution system at a cost of $4.6 billion. The degree to which SCVWD increased rates

varied depending on zone of use, contract type, and agricultural or non-agricultural uses. SCVWD rate increases ranged up to nine percent for non-agricultural purposes, as well as non-contract treated water.

Water service costs vary between providers, due to differences in services provided, water source, treatment methods, service areas, infrastructure age, maintenance efforts and capital financing approaches. The providers vary substantially in size of operations. Comparisons may be drawn by focusing on costs per capita served, as shown in Figure 1-14. Operating expenditures ranged from $0.52 and $0.81 per capita in Guadalupe-Coyote RCD and Loma Prieta RCD to $628 per capita in Purissima Hills WD. The median among the water service providers (excluding the two RCDs) was $201 per capita.

Figure 1-14: Operating Expenditures per Capita (FY 09-10)

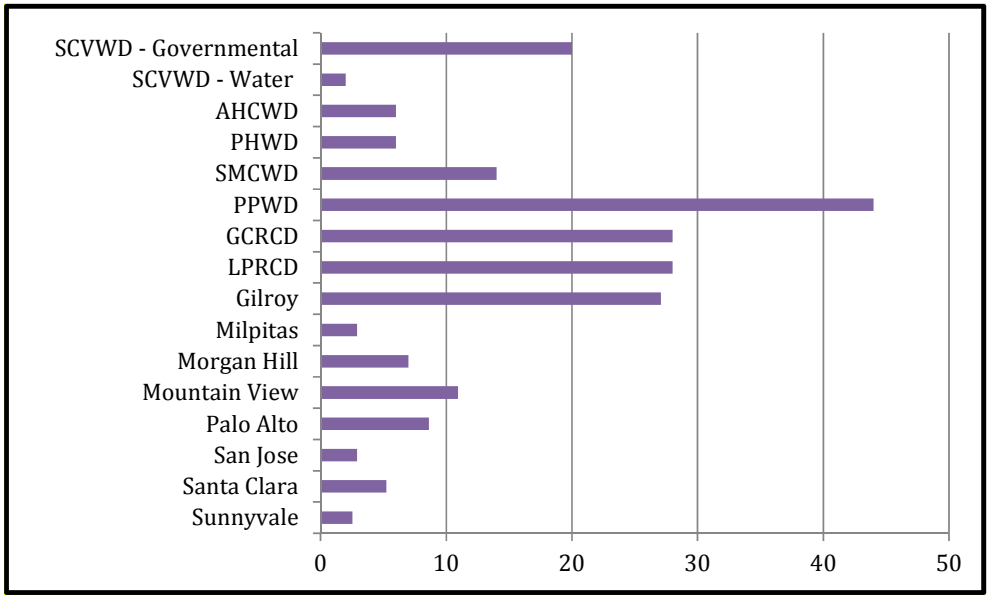


Each of the providers self-reported on the adequacy of the existing financing level to provide services. In general, those agencies that rely primarily on water rates and other service charges to finance services reported that financing levels were adequate, while those that rely on only property taxes to finance all services (Pacheco Pass WD, Guadalupe-Coyote RCD and Loma Prieta RCD) reported that financing levels are inadequate. All agencies reported a decline in revenues to some degree, which has led to expenditures cuts and efforts at improved efficiencies.

Water providers rely on their financial reserves to weather recessions, for rate stabilization purposes, to cover unexpected capital projects and as a form of savings to accumulate what is needed to make needed capital repairs. Unrestricted financial reserves

reflect savings that can be used for any water-related purpose, and are the most flexible funds and most useful for sustaining service levels during tough economic times or for unanticipated capital projects. Unrestricted reserves in terms of months of operating expenditures are shown in Figure 1-15. Interestingly, those agencies that reported an inadequate level of financing tend to have the highest level of reserves.

Figure 1-15: Months of Unrestricted Reserves in Operating Expenditures (FY 09-10)



SERVICE LEVELS

During the course of this service review, several deficiencies in accountability and transparency were identified.

Of the agencies reviewed, Aldercroft Heights CWD, San Martin CWD, and Pacheco Pass WD do not maintain websites where documents and information are publicly accessible. It is a recommended practice that a public agency maintain a website where all agency information is readily available to constituents.

Three special districts have failed to submit regular audited financial statements to the County. County water districts are required to complete annual audits per the district enabling act.[2] Additionally, all special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of

[2] California Water Code §30540.

Supervisors has approved a biennial or five-year schedule.[3] In the case of AHCWD and SMCWD, the Districts must submit audits annually. AHCWD has failed to submit its audit to the County for FY 09-10 within the required 12 month period. SMCWD has failed to submit audited statements for the last five fiscal years. In the case of Pacheco Pass WD, the District is required to submit an audited statement ever five years; however, PPWD failed to submit a report in FY 09-10 when it was required.

Of particular concern is that San Martin CWD has been extending services to connections outside of its boundaries and sphere of influence without LAFCO approval and is presently illegally serving seven connections. SMCWD was informed by LAFCO on several occasions in 1999, 2001, 2005, and 2007, and most recently, during the course of this service review that they must seek LAFCO approval prior to extending services. SMCWD appears to lack accountability and transparency to the public and regulatory agencies. Specifically, those customers that are served outside of the District are considered disenfranchised as they cannot hold office, cannot effectively influence rates, or vote in a district election. The District should not allow any future connections outside its bounds without first seeking LAFCO approval and should work with LAFCO to streamline the annexation of the current extraterritorial connections.

GOVERNANCE ALTERNATIVES

Several governance options were identified over the course of this study, those considered most feasible in the short-term include:

- Reorganization of Pacheco Pass WD with SCVWD and San Benito CWD
- Annexation of extraterritorial service areas by Aldercroft Heights CWD, San Martin CWD, and the City of Morgan Hill

[3] Government Code §26909.

2. BACKGROUND

This report is prepared pursuant to legislation enacted in 2000 that requires LAFCO to conduct a comprehensive review of municipal service delivery and update the spheres of influence (SOIs) of all agencies under LAFCO's jurisdiction. The focus of this report is water service providers throughout the County. This chapter provides an overview of the County's water system, as well as the planning context and regulatory setting affecting water service in the County. The outline of the chapter is as follows:

1) The background of LAFCO,
2) Purpose of the service review,
3) Sphere of influence updating process,
4) Process and methodology of the review,
5) The local and regional planning context,
6) Key laws affecting water supply analysis and planning, and
7) Regulation of water providers.

LAFCOS, SERVICE REVIEWS, AND SPHERES OF INFLUENCE

History of LAFCO

After World War II, California experienced dramatic growth in population and economic development. With this boom came a demand for housing, jobs and public services. To accommodate this demand, many new local government agencies were formed, often with little forethought as to the ultimate governance structures in a given region, and existing agencies often competed for expansion areas. The lack of coordination and adequate planning led to a multitude of overlapping, inefficient jurisdictional and service boundaries, and the premature conversion of California's agricultural and open-space lands.

Recognizing this problem, in 1959, Governor Edmund G. Brown, Sr. appointed the Commission on Metropolitan Area Problems. The Commission's charge was to study and make recommendations on the "misuse of land resources" and the growing complexity of local governmental jurisdictions. The Commission's recommendations on local governmental reorganization were introduced in the Legislature in 1963, resulting in the

creation of a Local Agency Formation Commission, or "LAFCO," operating in every county except San Francisco.

LAFCO of Santa Clara County was formed as a countywide agency to discourage urban sprawl, preserve agricultural and open space resources, promote efficient service provision and encourage the orderly formation and development of local government agencies. LAFCO is responsible for coordinating logical and timely changes in local governmental boundaries, including annexations and detachments of territory, incorporations of cities, formations of special districts, and consolidations, mergers and dissolutions of districts, as well as reviewing ways to reorganize, simplify, and streamline governmental structure. The Commission's efforts are focused on ensuring that services are provided efficiently and economically while agricultural and open-space lands are protected. To better inform itself and the community as it seeks to exercise its charge, LAFCO conducts service reviews to evaluate the provision of services within the County.

LAFCO regulates, through approval, denial, conditions and modification, boundary changes proposed by public agencies or individuals. It also regulates the extension of public services by cities and special districts outside their boundaries. LAFCO is empowered to initiate updates to the SOIs and proposals involving the dissolution or consolidation of special districts, mergers, establishment of subsidiary districts, and any reorganization including such actions. Otherwise, LAFCO actions must originate as petitions or resolutions from affected voters, landowners, cities or districts.

LAFCO of Santa Clara County consists of five regular members: two members from the Santa Clara County Board of Supervisors, two city council members with one permanent seat for San Jose as the largest city, and one public member who is appointed by the other members of the Commission. There is an alternate in each category. All Commissioners are appointed to four-year terms.

The mandate for LAFCOs to conduct service reviews is part of the Cortese-Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act), California Government Code §56000 et seq. LAFCOs are required to conduct service reviews prior to or in conjunction with sphere of influence updates and are required to review and update the sphere of influence for each city and special district as necessary, but not less than once every five years. LAFCO of Santa Clara County completed and adopted its first round of service reviews and sphere of influence updates prior to January 1, 2008, as required by state law.

LAFCO of Santa Clara County is responsible for establishing, reviewing and updating spheres of influence for 44 public agencies in Santa Clara County (15 cities and 28 special districts). LAFCO's service reviews work plan calls for the completion of these studies over the next three calendar years. This report is the second in a series of service reviews by subject that LAFCO plans to complete

Service Reviews

The service review requirement was enacted by the Legislature months after the release of two studies recommending that LAFCOs conduct reviews of local agencies. The "Little Hoover Commission" focused on the need for oversight and consolidation of special districts, whereas the "Commission on Local Governance for the 21st Century" focused on the need for regional planning to ensure adequate and efficient local governmental services as the California population continues to grow.

Little Hoover Commission

In May 2000, the Little Hoover Commission released a report entitled Special Districts: Relics of the Past or Resources for the Future? This report focused on governance and financial challenges among independent special districts, and the barriers to LAFCO's pursuit of consolidation and dissolution of districts. The report raised the concern that "the underlying patchwork of special district governments has become unnecessarily redundant, inefficient and unaccountable."

In particular, the report raised concern about a lack of visibility and accountability among some independent special districts. The report indicated that many special districts hold excessive reserve funds and some receive questionable property tax revenue. The report expressed concern about the lack of financial oversight of the districts. It asserted that financial reporting by special districts is inadequate, that districts are not required to submit financial information to local elected officials, and concluded that district financial information is "largely meaningless as a tool to evaluate the effectiveness and efficiency of services provided by districts, or to make comparisons with neighboring districts or services provided through a city or county."[4]

The report questioned the accountability and relevance of certain special districts with uncontested elections and without adequate notice of public meetings. In addition to concerns about the accountability and visibility of special districts, the report raised concerns about special districts with outdated boundaries and outdated missions. The report questioned the public benefit provided by health care districts that have sold, leased or closed their hospitals, and asserted that LAFCOs consistently fail to examine whether they should be eliminated. The report pointed to service improvements and cost reductions associated with special district consolidations, but asserted that LAFCOs have generally failed to pursue special district reorganizations.

The report called on the Legislature to increase the oversight of special districts by mandating that LAFCOs identify service duplications and study reorganization alternatives

[4] Little Hoover Commission, 2000, page 24.

when service duplications are identified, when a district appears insolvent, when district reserves are excessive, when rate inequities surface, when a district's mission changes, when a new city incorporates and when service levels are unsatisfactory. To accomplish this, the report recommended that the State strengthen the independence and funding of LAFCOs, require districts to report to their respective LAFCO, and require LAFCOs to study service duplications.

Commission on Local Governance for the 21st Century

The Legislature formed the Commission on Local Governance for the 21st Century ("21st Century Commission") in 1997 to review statutes on the policies, criteria, procedures and precedents for city, county and special district boundary changes. After conducting extensive research and holding 25 days of public hearings throughout the State, at which it heard from over 160 organizations and individuals, the 21st Century Commission released its final report, Growth Within Bounds: Planning California Governance for the 21st Century, in January 2000.[5] The report examines the way that government is organized and operates and establishes a vision of how the State will grow by "making better use of the often invisible LAFCOs in each county."

The report points to the expectation that California's population will double over the first four decades of the 21st Century, and raises concern that our government institutions were designed when our population was much smaller and our society was less complex. The report warns that without a strategy open spaces will be swallowed up, expensive freeway extensions will be needed, job centers will become farther removed from housing, and this will lead to longer commutes, increased pollution and more stressful lives. Growth Within Bounds acknowledges that local governments face unprecedented challenges in their ability to finance service delivery since voters cut property tax revenues in 1978 and the Legislature shifted property tax revenues from local government to schools in 1993. The report asserts that these financial strains have created governmental entrepreneurism in which agencies compete for sales tax revenue and market share.

The 21st Century Commission recommended that effective, efficient and easily understandable government be encouraged. In accomplishing this, the 21st Century Commission recommended consolidation of small, inefficient or overlapping providers, transparency of municipal service delivery to the people, and accountability of municipal service providers. The sheer number of special districts, the report asserts, "has provoked controversy, including several legislative attempts to initiate district consolidations,"[6] but

[5] The Commission on Local Governance for the 21st Century ceased to exist on July 1, 2000, pursuant to a statutory sunset provision.

[6] Commission on Local Governance for the 21st Century, 2000, page 70.

cautions LAFCOs that decisions to consolidate districts should focus on the adequacy of services, not on the number of districts.

Growth Within Bounds stated that LAFCOs cannot achieve their fundamental purposes without a comprehensive knowledge of the services available within its county, the current efficiency of providing service within various areas of the county, future needs for each service, and expansion capacity of each service provider. Comprehensive knowledge of water and sanitary providers, the report argued, would promote consolidations of water and sanitary districts, reduce water costs and promote a more comprehensive approach to the use of water resources. Further, the report asserted that many LAFCOs lack such knowledge and should be required to conduct such a review to ensure that municipal services are logically extended to meet California's future growth and development.

Service reviews would require LAFCO to look broadly at all agencies within a geographic region that provide a particular municipal service and to examine consolidation or reorganization of service providers. The 21st Century Commission recommended that the review include water, wastewater, and other municipal services that LAFCO judges to be important to future growth. The Commission recommended that the service review be followed by consolidation studies and be performed in conjunction with updates of SOIs. The recommendation was that service reviews be designed to make nine determinations, each of which was incorporated verbatim in the subsequently adopted legislation. The legislature since consolidated the determinations into six required findings.

Municipal Services Review Legislation

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires LAFCO to review and update SOIs not less than every five years and to review municipal services before updating SOIs. The requirement for service reviews arises from the identified need for a more coordinated and efficient public service structure to support California's anticipated growth. The service review provides LAFCO with a tool to study existing and future public service conditions comprehensively and to evaluate organizational options for accommodating growth, preventing urban sprawl, and ensuring that critical services are provided efficiently.

Effective January 1, 2008, Government Code §56430 requires LAFCO to conduct a review of municipal services provided in the county by region, sub-region or other designated geographic area, as appropriate, for the service or services to be reviewed, and prepare a written statement of determination with respect to each of the following topics:

- Growth and population projections for the affected area;
- Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies;

- Financial ability of agencies to provide services;
- Status of, and opportunities for shared facilities;
- Accountability for community service needs, including governmental structure and operational efficiencies; and
- Any other matter related to effective or efficient service delivery, as required by commission policy.

Purposes of the Report

This Countywide Water Service Review will be available for use by LAFCO, the County, cities, special districts, and the public to better understand how water service is provided within Santa Clara County. Additionally, the review will be a resource to inform LAFCO decisions, including:

- Updating spheres of influence,
- Initiating or considering jurisdictional boundary changes,
- Considering other types of LAFCO applications, and
- Providing a resource for further studies.

LAFCO will use this report as a basis to update the spheres of influence of the four water districts and two resource conservation districts. With regard to the cities' spheres of influence, LAFCO will use information from this report along with the information gathered in subsequent service reviews to update the spheres of influence of cities.

The report contains a discussion of various alternative government structures for efficient service provision. LAFCO is not required to initiate any boundary changes based on service reviews. However, LAFCO, other local agencies (including cities, special districts or the County) or the public may subsequently use this report together with additional research and analysis, where necessary, to pursue changes in jurisdictional boundaries. Government Code Section 56375(a) gives LAFCO the power to initiate certain types of boundary changes consistent with a service review and sphere of influence study. These boundary changes include:

- Consolidation of districts (joining two or more districts into a single new successor district);
- Dissolution (termination of the existence of a district and its corporate powers);

- Merger (termination of the existence of a district by the merger of that district with a city);
- Establishment of a subsidiary district (where the city council is designated as the board of directors of the district); or
- A reorganization that includes any of the above.

LAFCO may also use the information presented in the service reviews in reviewing future proposals for annexations or extensions of services beyond an agency's jurisdictional boundaries or for proposals seeking amendment of urban service area boundaries of cities or sphere of influence boundaries of districts.

Other entities and the public may use this report as a foundation for further studies and analysis of issues relating to water related services in this County.

Sphere Of Influence Updates

The Commission is charged with developing and updating the sphere of influence (SOI) for each city and special district within the county.[7]

An SOI is a LAFCO-approved plan that designates an agency's probable future boundary and service area. Spheres are planning tools used to provide guidance for individual boundary change proposals and are intended to encourage efficient provision of organized community services, discourage urban sprawl and premature conversion of agricultural and open space lands, and prevent overlapping jurisdictions and duplication of services.

Every determination made by a commission must be consistent with the SOIs of local agencies affected by that determination,[8] for example, territory may not be annexed to a city or district unless it is within that agency's sphere. In other words, the SOI essentially defines where and what types of government reorganizations (e.g., annexation, detachment, dissolution and consolidation) may be initiated. If and when a government reorganization is initiated, there are a number of procedural steps that must be conducted for a reorganization to be approved. Such steps include more in-depth analysis, LAFCO consideration at a noticed public hearing, and processes by which affected agencies and/or residents may voice their approval or disapproval.

[7] The initial statutory mandate, in 1971, imposed no deadline for completing sphere designations. When most LAFCOs failed to act, 1984 legislation required all LAFCos to establish spheres of influence by 1985.

[8] Government Code §56375.5.

SOIs should discourage duplication of services by local governmental agencies, guide the Commission's consideration of individual proposals for changes of organization, and identify the need for specific reorganization studies, and provide the basis for recommendations to particular agencies for government reorganizations.

The Cortese-Knox-Hertzberg (CKH) Act requires LAFCO to develop and determine the SOI of each local governmental agency within the county and to review and update the SOI every five years, as necessary. LAFCOs are empowered to adopt, update and amend the SOI. They may do so with or without an application and any interested person may submit an application proposing an SOI amendment.

LAFCO may recommend government reorganizations to particular agencies in the county, using the SOIs as the basis for those recommendations. In determining the SOI, LAFCO is required to complete a service review and adopt the six determinations previously discussed. In addition, in adopting or amending an SOI, LAFCO must make the following determinations:

- Present and planned land uses in the area, including agricultural and open-space lands;
- Present and probable need for public facilities and services in the area;
- Present capacity of public facilities and adequacy of public service that the agency provides or is authorized to provide;
- Existence of any social or economic communities of interest in the area if the Commission determines these are relevant to the agency; and
- In the case of special districts, the nature, location, and extent of any functions or classes of services provided by existing districts.

By statute, LAFCO must notify affected agencies 21 days before holding the public hearing to consider the SOI and may not update the SOI until after that hearing. The LAFCO Executive Officer must issue a report including recommendations on the SOI amendments and updates under consideration at least five days before the public hearing.

A CEQA determination is made by LAFCO on a case-by-case basis for each sphere of influence action and each change of organization, once the proposed project characteristics are sufficiently identified to assess environmental impacts.

Urban Service Area

In Santa Clara County, the SOI as defined in state law is relevant for special districts; however, for cities, the inclusion of an area within a city's SOI should not necessarily be seen as an indication that the city will either annex or allow urban development and services in the areas. The urban service area (USA) is the more critical boundary considered by LAFCO for the cities, and serves as the primary means of indicating whether an area will be annexed to a city and provided with urban services.

Review and amendment of USA boundaries is the Commission's primary vehicle for encouraging orderly city growth. Within the USAs, LAFCO does not review city annexations and reorganizations if the proposals are initiated by city resolution and meet certain conditions. State law gives cities in Santa Clara County the authority to approve such reorganizations.

SERVICE REVIEW PROCESS AND METHODOLOGY

Standard analytical tools and practices were used to gather and analyze information for the water service review. The service review process is outlined as follows:

- **Technical Advisory Committee**: LAFCO formed a committee to provide input on the service review and insight into any particular water related issues.
- **Outreach**: LAFCO performed outreach and explanation of the project through a letter and informational flier.
- **Establishment of Criteria**: Preliminary criteria to be used in making the determinations required under the laws governing service reviews were developed. These criteria were presented to the LAFCO staff and Technical Advisory Committee for review and comment.
- **Data Discovery**: Collection of data from available online and central data resources (i.e., agency websites, California Department of Public Health, Santa Clara County and Department of Environmental Health, the Environmental Protection Agency). Population information and projections, developed by the Association of Bay Area Governments (ABAG),.
- **Request for Information**: Creation of a personalized questionnaire based on available information for each agency, and distribution to the agencies for completion. A dedicated online website was used to allow agencies to upload requested information.

- **Interviews**: After reviewing each agency's questionnaire response and submitted documents, the agencies were interviewed to fill in missing information, follow up on current matters, as well as to see what progress was made on issues identified in the previous service review. Interviews were conducted with a number of stakeholders, including managing and operating staff at the various agencies, the Santa Clara and San Benito County Auditor Controllers Office, staff from the California Department of Public Health, Santa Clara County Department of Environmental Health, California Division of Safety of Dams, and National Resource Conservation Services. A list the individuals interviewed during this engagement can be found in the appendix.

- **Drafting of Agency Chapters**: Chapters on each of the agencies were compiled, using a standard format, based on the interviews and data collected. Agencies responded to information requests in varying levels of detail. Reasonable efforts were taken to obtain a level of consistency in the data to make the required determinations and analyze issues.

- **Agency Review for Accuracy**: The chapters were provided to each agency for internal review and comment, to ensure accuracy prior to release of the document.

- **Data Analysis and Service Review Determinations**: Information gathered from the agencies and the interviews was analyzed and applied to the determination criteria to make the required determinations for each agency and reach conclusion about the focus issues identified in the RFP.

- **Public Review Draft Released**: The draft document is released for public review and comment.

- **LAFCO Hearing**: LAFCO holds a public hearing to solicit agency and public feedback and comments on the draft report.

- **Final Draft Released**: The revised redlined draft document is released with a comment log indicating any action taken pursuant to the comment.

- **Adoption of Final Report**: LAFCO holds a public hearing where the Commission may adopt the final report.

Review Criteria

Each agency under LAFCO jurisdiction is assessed in each category using the criteria described below.

Growth and population projections for the affected area

- The amount and percent of population growth projected by the Association of Bay Area Governments between 2010 and 2035.
- The type and extent of any significant planned or proposed development.

Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies

- The total annual raw water supply under entitlement for the agency's use from various sources (with each source and authorized use identified).
- The maximum total annual raw water supply that can be guaranteed every year for the agency's use from various sources (this is the agency's "firm yield"). Identification of the primary causes of the differences between total raw water supply under entitlement and "firm yield"; and what augmentations each agency is pursuing to close that gap.
- The percentage of the firm yield water supplies in use during average and peak demand periods.
- Projected firm yield estimates over the future planning horizon in 5-year increments (i.e., 2010, 2015, 2020, etc.)
- The age and condition of the conveyance, treatment, distribution and storage facilities as reported by the agency (including groundwater wells).
- The physical and operational capacities of the treatment, distribution, and storage system.
- The need for capacity enhancement based on the percent of existing capacity in use during average and peak demand periods
- The need for capacity redundancy and/or safeguards against service interruptions.
- The number of days in full compliance with Primary Drinking Water Regulations in 2010 where 361 days or 99 percent is the industry standard.
- The number and type of health and monitoring violations for drinking water recorded by EPA since 2000.
- The extent of the agency's water reserves in days of available water supply should a major disruption in raw water delivery occur

- An assessment of the adequacy of the agency's system, operations, and management, including any required improvements, as evaluated and recommended by the California Department of Public Health during the most recent inspection.

- Infrastructure needs and agency's plans to address these needs, as reported by the agency, or identified in capital improvement plans, and/or recommended by the Department of Public Health.

- The percent of the system's capacity in use during average and peak demand periods.

- Projected demands (by use category) to 2035 as reported by the agency.

- Comparison of available firm yield, system capacities, and projected demands to illustrate each agencies' ability to serve in 5-year increments to 2035 (i.e., 2010, 2015, 2020, etc.)

- Management practices: To establish public trust and accountability, best management practices include 1) preparing a budget before the beginning of the fiscal year, 2) conducting periodic financial audits, 3) maintaining relatively current financial records, 4) evaluating rates and fees periodically, 5) planning and budgeting for community service needs, and 6) an established process to address complaints.

Financial ability of agency to provide services

- The adequacy of the level of financing and any financing challenges or constraints as reported by the agency.

- Rates: The degree to which the rates (and other revenue, if applicable) are able to cover annual operating and capital costs, anticipated future capital costs, and maintain a healthy a reserve.

- The degree to which the agency is investing in capital as compared to depreciation of capital assets during FYs 08, 09, and 10.

- Capital planning: Whether or not the agency has an up-to-date capital improvement plan with estimated timing and anticipated financing sources for each project.

- Capital reserves: the capital reserve fund balance as of June 30, 2010 and the anticipated capital funding needs based on identified infrastructure needs and estimated costs.

- Reserves: the audited unrestricted fund balance as of June 30. A reserve of three months of operating costs is considered reasonable.

Status of and opportunities for shared facilities

- The degree of existing cost minimization efforts through facility, personnel and equipment sharing.

- The potential for facility, personnel, and equipment sharing as reported by the agency.

Accountability for community service needs, including governmental structure and operational efficiencies

- Public Access and Outreach: Agency efforts to engage and educate constituents through outreach activities and availability of information on a website, in addition to compliance with open meeting and public records laws.

- Governance and Service Delivery Options: The potential to restructure the governance of agencies and/or service providers, or change the service provider with the goal of increasing service efficiency.

SETTING

As described in the following sections, the County's available water supply is subject to imposed regulatory constraints (e.g., Delta Flow Criteria, new instream flow standards, etc.) and ongoing climatic shifts leading to associated effects to California's weather patterns and resultant hydrology.

POTENTIAL EFFECTS OF CLIMATIC SHIFTS ON WATER SUPPLY

Ongoing climatic shifts will affect water supply reliability throughout Santa Clara County in the future. However, the degree, timing, and long-term effect will depend on numerous factors including natural climatic cyclicality (i.e., variability), atmosphere-ocean interactions, the robustness of the Pacific oscillation cycles, global emissions of greenhouse gases, and our Statewide adaptive capabilities of offsetting the resulting hydrologic changes, to name but a few. Since the delicate atmosphere-ocean feedback mechanisms that dictate global circulation of both the atmospheric and oceanic systems are driven by the energy balance of the earth, changes in that balance will affect our climate. While many believe this to be a political debate, climatology is a physical science governed by incontrovertible physical laws. Shifts in the energy balance, such as those caused by attenuated outgoing longwave radiation regardless of cause will affect climate to some degree. How such climatic shifts ultimately affect California and, more specifically, Santa Clara County, will depend on each of the aforementioned factors. A dominating factor in the weather of California is the semi-permanent high pressure area of the north Pacific Ocean. This pressure center typically moves northward in summer, holding storm tracks well to the north and, as a result, California receives little or no precipitation from this source during that period. In winter, however, the Pacific high typically retreats southward permitting storm centers to swing into and across California. These storms bring widespread precipitation to the State. When changes in the circulation pattern, however, permit storm centers to approach the California coast from a southwesterly direction, copious amounts of moisture are carried by the northeastward streaming air (the "Pineapple Express"). This circulation of the Pacific high, when combined with the topography of California is what influences the actual precipitation patterns we observe on the ground.

A major oscillation in the Pacific atmospheric circulation is known as the El Niño Southern Oscillation (ENSO) condition. Under an ENSO condition, sea surface temperatures in the eastern Pacific are above normal and the central and eastern Pacific experience increased convection activity. It is this convection activity that manifests itself into what we observe as a typically wet winter in California. The opposite ENSO phase is known as La Niña where, cold upwelling water in the eastern Pacific coincides with convection activity displaced further westwards towards the central Pacific. In California,

we typically observe this more distant displacement of Pacific convection activity as a drier period. One need only recall the recent wet and dry weather episodes in California to appreciate the large scale effects that the ENSO can have on our observed precipitation and air temperatures. Shifts in global circulation, due to climate change that affect ENSO, will result in associated effects to California's weather patterns and resultant hydrology.

In general, from a hydrological perspective, climatic shifts have the effect of reducing or at least changing the overall managed water asset pool, or what hydrologists refer to as system yield. Climatic perturbations will result in an added diminishment to a system yield that is already under increasing pressures from imposed regulatory constraints (e.g., Delta Flow Criteria, new instream flow standards, etc.).

For Santa Clara County, these effects will be experienced in three primary ways. First and foremost, will be a reduction of available imported water supplies. Second, will be a decrease in locally-derived water supplies, should the prevailing storm tracks experience permanent latitudinal shifts. And finally, as the volume of freshwater inflows from melting permanent icepacks coupled with thermal expansion of the oceanic water bodies will lead to a rise in mean sea levels worldwide. The first two represent the primary concerns for Santa Clara County, for the potential effects imparted by those processes will be observed far before any measurable detection of sea level rise along the north county shorelines.

California's precipitation (and, therefore, primary water source) is largely focused in upper watershed areas or source areas. This time sensitive supply will likely experience both a change in character, from snow to rain, where a higher proportion of the annual precipitation could occur as rain, and a change in overall precipitation quantity as well as timing. With a shift in primary precipitation from snow to rain, the responsiveness of the draining streams and rivers will also be affected. No longer will the time-released capability of the existing snowpack play the role that it does today. It is expected, therefore, that alterations in hydrologic composition will occur and exhibit a more pronounced shift from snow-dominated to rain or rain/snow- dominated systems. For Santa Clara County this has implications to water supply security by reducing the ability of the existing CVP/SWP terminal reservoirs to manage altered inflow under their existing operational rules.

Generally, one can surmise that, with less snowfall, watershed responses will be quicker and, in many cases, earlier. In fact, some claim that this progression has already started (or has been in place for some time) and the data seem to support this contention. The spring pulse, which represents the largest flow period for the river has been reduced in importance by approximately 10 percent over the past 100 years in many CVP mainstem tributaries. Such inferences to water managers is significant, since it is during this time period that much of the allocated quantities (e.g., irrigation deliveries, instream needs, refuges/wetlands, etc.) are assigned.

For all of the regions and systems within the State that rely on river flows, a decrease in the proportionality of the spring pulse can have significant implications as demands for allocations continue to increase. Under these diverging conditions, there will quite simply be less water to go around. This anticipated shortage includes the entire Delta watershed including the Delta itself, its upper catchments, CVP/SWP terminal reservoirs, the mainstem rivers (Sacramento and San Joaquin) and their tributaries (e.g., Feather, American, Stanislaus, etc.), and to a lesser extent the Coastal watersheds and Southern California watersheds. Santa Clara County, which relies significantly on imported water from the source area watersheds of the Sierra Nevada and lower Cascades, stands to be notably affected by these changes. This would include the Hetch Hetchy system relied upon by SFPUC, and consequently, all of the BAWSCA partners that use SFPUC water.

Acknowledging the various trends set forth in the numerous hydrological and climatological studies is very useful in providing the baseline from which to forewarn policy makers, water managers, and resource management practitioners of the potential repercussions of climatic shifts to water resources, including governance issues such as water rights.

Some of the likely trends in the exact source area watersheds upon which Santa Clara County rely include, but are not limited to:

- Lower summer and late-spring runoff,
- Higher mid-winter streamflows,
- Altered total annual precipitation,
- Shift in precipitation form, from snow to rain,
- Snowpack peak water content earlier in the year,
- Lower natural snowpack storage and, therefore, a decrease in time-delay capability,
- More responsive watersheds (quicker flow response),
- Watershed saturation and storage will occur earlier in the season,
- Rates of water flows will by stunted (a more flattened unit hydrograph),
- Existing ephemeral streams may dry up earlier,
- Intensities of individual precipitation events may increase, and
- Likely shift towards overall drier annual conditions.

For each of these general trends, however, variations between watersheds will exist. Each watershed, some even adjacent to each other, will respond differently depending on their own inherent physiologic, geologic, pedologic, and hydrologic characteristics. Universal applicability of these trends across all watersheds is not possible—despite modelers' attempts to do so. The degree to which these trends play out across California will depend significantly on the robustness of the shifts in Pacific storm tracks, which as discussed earlier, will depend on a complex series of atmospheric and hydroclimatological interactions.

For Santa Clara County, the potential implications to water supply and water resources management resulting from these likely trends include, but are not limited to:

- Reduced Federal/State contract deliveries,
- Increased frequency of shortage impositions by Federal/State water managers on contractor deliveries,
- Shifted seasonal availability from which Sierra Nevada supplies would be available,
- Long-term shift away from imported supplies,
- Increased need to develop new local/regional storage—with longer carryover potential,
- Higher variability in inter-annual localized reservoir inflows (more intense drier and wetter periods),
- Greater urgency to develop groundwater storage and banking,
- Increased localized storm intensities,
- Revisiting localized flood detention/stormwater management strategies,
- Increased recycled water development,
- Longer-term sea level rise, and
- Increased frequency of seasonal desiccation of localized streams, but coincident with higher peak flow events.

LOCAL AND REGIONAL PLANNING CONTEXT

Regional Water Planning

Regional water planning has become increasingly critical to increase drought preparedness, regional self-sufficiency, sustainable resource management, and to improve coordination among land use and water planners. The Legislature promoted the concept by authorizing local public agencies to form regional water management groups and adopt regional plans to address qualified programs or projects (SB 1672). The legislation requires the State Department of Water Resources (DWR) to prioritize funding for projects identified in integrated regional water management plans (IRWMPs). Integrated resource planning is a comprehensive systems approach to resource management and planning that explores the cause-and-effect relationships affecting water resources. The plans are recommended to not only analyze the watershed and espouse principles, but also to effect change by including a finance plan with prioritized objectives, an implementation plan, and plans for ongoing performance measurement to evaluate progress.

Bay Area Integrated Regional Water Management Plan

San Francisco Bay Area water, wastewater, flood protection and stormwater management agencies; cities and counties represented by ABAG; and watershed management interests represented by the California Coastal Conservancy (CCC) and non-governmental organizations signed a Letter of Mutual Understanding (LOMU) to develop an Integrated Regional Water Management Plan (IRWMP) for the San Francisco Bay Area.

Participants included the Bay Area Water Agencies Coalition (BAWAC) involving water supply and water quality, the Bay Area Clean Water Agencies (BACWA) involving wastewater and recycled water, Bay Area Flood Protection and Stormwater Management Agencies and Districts involving flood protection and stormwater management, and ABAG and the CCC involving watershed management and habitat protection and restoration.

The combined efforts of these participating organizations culminated in adoption of the Bay Area IRWMP in 2006. The overall objectives of the Plan are to:

- Foster coordination, collaboration and communication among Bay Area agencies responsible for water and habitat-related issues;
- Achieve greater efficiencies and build public support for vital projects; and
- Improve regional competitiveness for project funding.

Urban Water Management Plans

The 2010 Urban Water Management Plans (UWMPs) were required to be adopted by July 1, 2011 and submitted to DWR by August 1, 2011. Usually, UWMPs are due on December 31 of years ending in 0 and 5, but a 6-month extension has been granted for submittal of the 2010 UWMPs to provide additional time for water suppliers to address the SBX7 7 water conservation requirements noted in a following section. A new Guidebook to assist in the preparation of the 2010 Urban Water Management Plans is available from DWR. These new UWMPs update baseline water supply, infrastructure, conservation, and water demand/needs information across Santa Clara County.

Adoption dates and references to individual city and special district UWMPs are contained within each agency chapter.

Santa Clara Valley Habitat Conservation Plan and Natural Community Conservation Plan

The cities of Gilroy, Morgan Hill and San Jose, the County of Santa Clara, the Santa Clara Valley Transportation Authority and the Santa Clara Valley Water District have initiated a collaborative process to prepare and implement a Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) for the Santa Clara Valley. These Local Partners, in association with the U.S. Fish and Wildlife Service, California Department of Fish and Game, stakeholder groups and the general public will develop a long-range plan to protect and enhance ecological diversity and function within a large section of Santa Clara County, while allowing for currently planned development and growth. The Plan will provide a framework for the protection of natural resources while streamlining and improving the environmental permitting process for both private and public development including activities such as road, water, and other infrastructure construction and maintenance work. The plan will create a number of new habitat reserves that will be larger in scale and more ecologically valuable than the fragmented, piecemeal habitats currently yielded by mitigating projects on an individual basis.

Objectives of the Santa Clara Valley HCP/NCCP include:

- Conserving natural biological communities at the ecosystem scale by agreeing as a region on essential habitat for the protection of certain endangered and threatened species, and proactively preserving that habitat to both mitigate for the environmental impacts of development and enhance and restore the natural communities that support endangered plants and animals.

- Accommodating land uses compatible with local General Plans by streamlining the permitting process and allowing public and private development and operations/maintenance projects requiring permits from state and federal agencies

to proceed without the costly and time-consuming delays associated with negotiating endangered species issues on a project-by-project basis.

- Facilitating the provision of water supply and flood protection by preserving and enhancing watersheds and by meeting state and federal habitat requirements for contracts to import water from outside the County.

- Providing a process with extensive and numerous opportunities for public involvement throughout development and implementation of the HCP/NCCP.

The Applicants are requesting a 50-year Section 10(a)(1)(b) incidental take permit because 21 proposed Covered Species, including 11 animal species and 10 plant species, could be affected by development, operations and maintenance, and reserve management activities within the proposed 509,883-acre permit area, located in the Santa Clara Valley. Public comment closed on April 18, 2011.

REGULATION OF WATER PROVIDER AGENCIES

Water providers are subject to numerous federal and state requirements covering water rights, long-term water planning, protecting water systems from terrorism vulnerabilities, and ensuring that water employees are adequately trained to perform their functions, among others. This section provides an overview of the more significant and recent requirements.

Federal, state and local agencies play regulatory roles in Santa Clara water.

Figure 2-1: Water Regulatory Agencies

Agency	Regulatory Role
U.S. Bureau of Reclamation	Central Valley Project
U.S. Environmental Protection Agency	Drinking water quality standards, source water protection, contaminated site remediation
State Water Resources Control Board	Water rights, water quality standards, water protection plans, discharger enforcement
CA Department of Water Resources	State Water Project, water planning, dam safety, flood control
CA Department of Public Health	Water provider operational permits, drinking water quality standards, water employee certification, water security
CA Department of Fish and Game	Stream flow requirements, streambed alterations, species conservation
CA Department of Toxic Substances Controls	Oversight of hazardous substances, remediation of contaminated sites
Santa Clara County Department of Environmental Health	Drinking water quality standards
Santa Clara Valley Water District	Monitoring and mangement of groundwater use

The U.S. Bureau of Reclamation (USBR) operates the Central Valley Project, an extensive network of dams, canals and related facilities. USBR serves as watermaster overseeing contentious water rights issues, and runs drought protection programs.

The U.S. Environmental Protection Agency (EPA) is responsible for enforcing drinking water quality standards, although much of this authority is delegated to the states. EPA conducts groundwater protection and contaminated site remediation programs.

The State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine Regional Water Quality Control Boards located in the major watersheds of the state. SWRCB is responsible for granting water rights permits and approving certain transfers of water rights, to investigate violations and reconsider or amend water rights. The nine Regional Water Quality Control Boards (RWQCBs) develop and enforce water quality objectives and implementation plans.

DWR is responsible for the planning, construction and operation of State Water Project facilities and sets conditions on use of SWP facilities. In addition, DWR is responsible for statewide water planning, evaluating urban water management plans, overseeing dam safety and flood control, and transfer of certain water rights permits (e.g., pre-1914).

The California Department of Public Health (DPH) is responsible for the enforcement of the federal and California Safe Drinking Water Acts and the operational permitting and regulatory oversight of public water systems of more than 15 connections. DPH also conducts water source assessments, oversees water recycling projects, permits water treatment devices, certifies water system employees, and promotes water system security.

The California Department of Toxic Substances Control (DTSC) is responsible for oversight of hazardous substances and remediation of contaminated sites, including water sources. The California Department of Fish and Game (DFG) has jurisdiction over conservation and protection of fish, wildlife, plants and habitat. DFG determines stream flow requirements in certain streams, acts as permitting agency for streambed alterations, presents evidence at water rights hearings on the needs of fish and wildlife, and enforces the California Endangered Species Act.

The County of Santa Clara's Department of Environmental Health (DEH) is responsible for monitoring the State Small Water Systems—systems of less than 15 connections that serve less than 25 individuals—within the County for water quality.

Water Supply Regulations

Water rights are subject to various and complex legal requirements, many of which have been resolved in the courts. For surface water sources within California, the state monitors water rights and allocations. The groundwater basins in Santa Clara County are not adjudicated, SCVWD does monitor and manage the groundwater basins in the County, as well as the use and operation of wells in the County.

Since 2001, land use agencies in California have been required to obtain written verification of sufficient water supply before approving plans for new development. Any project subject to the California Environmental Quality Act (CEQA) supplied with water from a public water system must be provided a water supply assessment, except as specified in the law. The plan must include information relating to the quality of existing sources of water available to an urban water supplier over given periods and include the manner in which water quality affects water management strategies and supply reliability.[9]

[9] California DWR, 2003, p. 68.

In recent years, state law has increased infrastructure and reporting requirements for the State Water Project (SWP). DWR began preparing a SWP water delivery reliability report in response to the 2001 legislation requiring water supply assessments for new development. Evaluation of the impacts of earthquakes, natural disasters and climate change on the Sacramento-San Joaquin Delta on water supplies must be conducted by DWR and the Department of Fish and Game (DFG), including comparative rating of policy options. Recent law imposed new requirements on DWR to expand the content of its statewide water plan.

The Natural Resources Defense Council released a 2001 study raising concerns over groundwater contamination in California . The report described the regulatory framework as fragmented and an "ineffective patchwork of monitoring and assessment"[10] and described planning and data as inadequate. Legislation followed shortly thereafter to establish comprehensive groundwater monitoring and increase the availability of information about groundwater quality to the public. The legislation requires the State Water Resources Control Board (SWRCB) to integrate existing monitoring programs and design new program elements, as necessary, to establish a comprehensive statewide groundwater quality monitoring program.

Urban water suppliers are required by the Urban Water Management Planning (UWMP) Act to prepare a water shortage contingency plan every five years. The plan describes and evaluates sources of water supply, efficient uses of water, demand management measures, implementation strategy and schedule, and other relevant information and programs. Those reliant on groundwater must provide evidence to the State of their water rights, and if the particular groundwater basin is overdrafted (i.e., the water used exceeds the water replenished over the long-term), must describe efforts to correct the problem.

Enhanced water conservation is the policy goal of other recent state law. DWR was required by legislation to report on opportunities and constraints for increasing recycled water use in 2003. Since 2005, urban water suppliers have been required to install water meters on municipal and industrial services connections, and must begin by 2010 to charge customers based on volume of water.

The federal government recently required water providers to prepare terrorism vulnerability assessments and implementation of needed corrections. Water treatment personnel must meet State certification requirements.

[10] Helperin, Beckman and Inwood, 2001, pp. 72-75.

Source Quality

To prevent further deterioration of impaired water bodies, the EPA and state and regional water quality boards have established Total Maximum Daily Load standards (TMDLs) for many impaired water bodies. TMDLs set numerical targets for the amount of pollutants allowed in a water body and methods for meeting those targets. TMDLs are established for high-priority, impaired water bodies. Numerous TMDLs have been established since 2003 in Santa Clara County to mitigate the effects of trash, bacteria, nutrients, and other pollutants.

Two primary articles of legislation provide the legal basis and authority for water quality standards in California. The Federal Clean Water Act (CWA) specifically and directly addresses the matter of water pollution control. The primary California legislation addressing the control of water quality is the "Porter-Cologne Water Quality Control Act."

The CWA requires that states adopt water quality standards, including standards for toxic substances. The states are also required to have an ongoing planning process, to conduct public hearings once every three years to review water quality standards and revise them if necessary. After about 20 years of water pollution regulation from point sources, the act was amended in 1990 to require management of stormwater and urban runoff water quality.

The Porter-Cologne Water Quality Control Act established a comprehensive program for the protection of water quality and the beneficial uses of water. It applies to surface waters, wetlands and groundwater, and to both point and nonpoint sources of pollution or waste discharge.[11] In addition, Title 23 of the California Code of Regulations (CCR) contains administrative and regulatory elements of water quality and quantity management in California. Other pertinent state law affecting water quality in California include regulations set forth by the Health and Safety Code, the Fish and Game Code, the Public Resources Code, and the Revenue and Taxation Code. The California Environmental Quality Act (CEQA) requires all state agencies, boards and commissions to include an environmental impact report (EIR) in any report on any project having a significant effect on the environment.

CWA delegates the responsibility to administer the act to the EPA. In turn, the EPA has delegated responsibility for portions of CWA to state and regional boards, including water quality planning and control programs such as the National Pollutant Discharge Elimination System (NPDES).

CWA directs states to review water quality standards every three years and, as appropriate, modify and adopt new standards. CWA also regulates wastewater operation

[11] California Water Code §1300.

through state boards. CWA authorizes the EPA to administer requirements and primarily deal with the quality of effluent which may be discharged from treatment facilities, the recycling of residual solids generated in the process, the reuse of reclaimed water for irrigation and industrial uses to conserve potable water, and the nature of waste material (particularly industrial) discharged into the collection system.

The Porter-Cologne Water Quality Control Act directs the California state and regional boards to review and update Water Quality Control Plans, or Basin Plans, periodically. The act also authorizes state boards to adopt water quality control plans. In the event of inconsistencies among state and regional board plans, the more stringent provisions apply.

To reduce pollution in watersheds, CWA directed the states to establish TMDLs of pollutants. The San Francisco Bay RWQCB has jurisdiction in Santa Clara County, and thus the authority to establish TMDLs in the County. The TMDLs require local agencies to monitor pollutant levels and develop remedial actions that will prevent contaminants from exceeding maximum allowable levels. TMDLs present numerical targets for water quality pollutant levels in impaired water bodies.

Water bodies in Santa Clara County that are significantly affected by pollutants and classified as impaired include Alamitos Creek, Calero Reservoir, Coyote Creek, and Guadalupe Creek, Reservoir, River. The priority level of the impaired water body is shown in Figure 2-2 as determined by the San Francisco Bay RWQCB. Primary pollutants that affect the County's water bodies are mercury and diazinon.

Figure 2-2: Santa Clara County Impaired Water Bodies

Water Body	Pollutant	Priority
Alamitos Creek	Mercury	Medium
Calero Reservoir	Mercury	Medium
Coyote Creek	Diazinon	High
Guadalupe Creek	Mercury	Medium
Guadalupe Reservoir	Mercury	Medium
Guadalupe River	Diazinon/Mercury	High/Medium

Source: 2002 CWA Section 303(d) List of Water Qulity Limited Segments

Potable Water Regulations

Potable water systems in Santa Clara County are regulated by a number of agencies, depending on the type of entity (public or investor-owned) and size of system (number of connections). The regulatory oversight includes both operational for service areas, system capacity and rates, and health for water quality.

Various operations and activities of these water systems are regulated by several agencies depending on size (number of connections and population served), water source, and ownership. The primary regulators for health purposes are the County Department of Environmental Health (DEH) for systems consisting of five to 14 connections and the California Department of Public Health (DPH) for systems of greater than 15 connections. Systems of four or less connections are not regulated by a public health agency. Water systems that are investor owned, meaning that the owners, whether it be an individual or group, are not customers of the water system, are regulated by the California Public Utilities Commission (CPUC). CPUC oversees the service areas and rates of these utilities. A system may be regulated by both CPUC and a public health agency; the two are not mutually exclusive. A breakdown of the regulating agency by size of the water system is shown in Figure 2-3. Regulation of the various sized systems is described in more detail below.

Figure 2-3: Regulating Agencies Based on Size of System

System	*County*	*State*	*PUC*	*SCVWD*
Individual	✓			✓
Shared (2-4 connections)	✓		✓	✓
Small (5-14 connections)	✓		✓	✓
Public (15 or more connections)	✓	✓	✓	✓

Individual Private Water System – 1 connection

A private water system which receives water from a well and serves only one owner is not subject to the regulatory authority of the State. Local regulations are primarily related to new well construction or abandonment. For any new system, a clearance must be obtained from the County through the Department of Environmental Health prior to construction. As a condition of approval, the applicant must demonstrate acceptable water quality through lab testing and analysis, the reliability of water supply, and adequate storage. Source capacity must be equal to or exceed a sustained 2.5 gallons per minute during a twenty-four hour period of continuous pumping, or until 3,600 gallons have been achieved during a time period of twenty-four hours or less of continuous pumping. In addition, a sustained 2.5 gallons-per-minute yield must be demonstrated during the dry season of August through October. Minimum required storage capacity is 1,000 gallons.

In addition, the system is subject to the SCVWD's Well Ordinance 90-1 and a permit must be obtained prior to construction. Any change in the well's status, including abandonment, requires a permit to change the classification. System maintenance and water quality monitoring is the responsibility of the system's owner.

Shared Water System – 2 to 4 connections

The regulatory authority for shared systems with two to four connections is similar to that of individual systems, with a few exceptions. A clearance must be obtained from the County prior to construction. As with individual systems, the same requirements apply for water quality, adequate supply and storage with the minimum capacity applicable to each connection.

If the system is operated as a corporation, association or mutual water company and only providing water to its stockholders and members at cost, or to the State or any state agency or department, or any public district (city, county, school district, etc.), or federal agency for use in fire protection or park operations, then it is not subject to the regulation of the California Public Utilities Commission. In addition, mutual water companies may provide water in an emergency to property located within or adjacent to the service area of the MWC without changing the MWC's status.

If the system is providing water to anyone other than the above, the water company will be subject to the regulatory oversight of the Public Utilities Commission. The system would have to be approved by the CPUC for its operational components, including service area, system capacity and rates.

If the system's water source includes groundwater, it is subject to the Santa Clara Valley Water District's Well Ordinance 90-1 as described above. Water quality is monitored by the individual owners; neither the County nor the California Department of Public Health inspects these smaller systems.

Small Water System – 5 to 14 connections (State Small Water Systems)

Water systems with five to fourteen connections are known as "State Small Water Systems." A permit from the County's Department of Environmental Health is required for construction and operation. Any change in ownership requires submission of a new application. No permit will be issued if water service for each or all connections is available from an existing public, private or mutual water system. As a condition of approval, the applicant must demonstrate that there is adequate system capacity to supply a minimum of three gallons per minute for at least twenty-four hours for each connection.

As with the smaller systems described above, ownership determines operational oversight. If it is operated as a corporation, association or mutual water company and only providing water to its owners or stockholders, it does not fall under the jurisdiction of the CPUC. If it is providing water to anyone else, it will be subject to the jurisdiction of the CPUC and General Order Nos. 103 and 96-A.

If the system's water supply includes groundwater, it is subject to the Santa Clara Valley Water District's Well Ordinance 90-1 as described above, requiring the appropriate permitting and reporting for construction, inactivity and abandonment.

The County of Santa Clara's Department of Environmental Health is responsible for monitoring the State Small Water Systems within the County for water quality. System operators are required to submit testing results at least once every three months. In addition, the State Department of Public Health may monitor systems with less than 15 service connections that meet the population threshold of 25 individuals served daily at least 60 days out of the year.

Public Water System – 15 or more connections

Water systems with 15 or more connections that serve at least 25 individuals at least 60 days out of the year are considered public water systems. These typically include county and municipal water districts, private water companies and larger mutual water companies. The public water agencies are subject to the numerous code sections in both the State's Public Utilities Code and Health and Safety Code. Private water companies are subject to the regulatory oversight of the CPUC as described above. MWCs do not fall under the Commission's purview provided they meet the service limitations described above.

If the system's water source includes groundwater, it will be subject to the Santa Clara Valley Water District's Well Ordinance 90-1 as described above, requiring the appropriate permitting and reporting.

DPH monitors the water quality of the systems with regular inspections, testing, and reporting.

Applicable Regulations

Some of the regulations applicable to water systems within the County include the following:

- California Health and Safety Code
- California Public Utilities Code
- California Public Utilities Commission: The California Public Utilities Commission (CPUC) governs the provision of water by private entities, including service area, system design, levels of service and rates. The Commission regulates investor-owned water systems, but does not have jurisdiction over municipal utilities or districts. Mutual water companies or companies owned by homeowner associations are exempt if they serve only their stockholders or members. The following General Orders apply:

- General Order No. 103: Rules Governing Water Service Including Minimum Standards for Design and Construction, and
- General Order No. 96-A, Rules Governing the Filing and Posting of Schedules of Rates, Rules, and Contracts.

- County of Santa Clara Ordinance Code
  - Division B7, Section 12 addresses water supply for fire flow and authorizes the County Fire Marshall to determine adequacy based on location and building types
  - Division B11 - Environmental Health includes the County regulations for construction of individual or small private water systems and State Small Water Systems.
- Santa Clara Valley Water District Well Ordinance 90-1 regulates the classification, construction and destruction of wells within Santa Clara County. All wells must be classified as active, inactive or abandoned/unused. Active wells within the Districts' groundwater charge zones are subject to the District's groundwater production requirements and require the filing of groundwater production statements. Any change in well status requires a permit issued by the District, including new well construction and abandonment.

Water Quality

There are a number of threats to drinking water: Improperly disposed chemicals, animal wastes, pesticides, human wastes, wastes injected deep underground, and naturally occurring substances can all contaminate drinking water. Likewise, drinking water that is not properly treated or disinfected, or which travels through an improperly maintained distribution system, may also pose a health risk.

The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. The law requires many actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs and groundwater wells—and applies to public water systems serving 25 or more people. It authorizes the EPA to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants and to oversee the states, localities and water suppliers that implement the standards. EPA drinking water standards are developed as a Maximum Contaminant Level (MCL) for each chemical or microbe. The MCL is the concentration that is not anticipated to produce adverse health effects after a lifetime of exposure, based upon toxicity data and risk assessment principles. EPA's goal in setting MCLs is to assure that even small violations for a period of time do not pose significant risk to the public's health over the long run. National Primary Drinking Water Regulations (NPDWRs or primary

standards) are legally enforceable standards that limit the levels of contaminants in drinking water supplied by public water systems. Secondary standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards. Federal and State regulations on maximum contaminant levels in drinking water have evolved and expanded since 1977.

The California DPH and Santa Clara DEH implement the SDWA in Santa Clara County. These agencies require public water systems to perform routine monitoring for regulated contaminants that may be present in their drinking water supply. To meet water quality standards and comply with regulations, a water system with a contaminant exceeding an MCL must notify the public and remove the source from service or initiate a process and schedule to install treatment for removing the contaminant. Health violations occur when the contaminant amount exceeds the safety standard (MCL) or when water is not treated properly. In California, compliance is usually determined at the wellhead or the surface water intake. Monitoring violations involve failure to conduct or to report in a timely fashion the results of required monitoring.

Each of the domestic water providers is inspected by the respective regulatory agency periodically. All of the systems under LAFCO jurisdiction in Santa Clara County are inspected by DPH. Each of the providers was last inspected in 2010.

KEY LAWS AFFECTING WATER SUPPLY ANALYSIS AND PLANNING

New and pending changes to various regulatory provisions are continually challenging water resource and related land use planning agencies across California. In the water resources arena, changes, updates and completely new regulatory requirements run the full gamut of issues; including those affecting water supply, flood control, water quality, groundwater, environmental restoration (instream flow maintenance), water conservation, recycled water, etc. Since 2005, when the last Santa Clara Countywide Water Service Review was completed, several new and significant changes in water-related regulations in California have been passed. In several cases, these have imparted significant influence on how traditional water planning activities are being implemented.

Such regulatory changes or pending changes will affect the water providers in Santa Clara County to varying degrees depending on the relevancy of the change to their specific operational circumstance (e.g., water supplies, infrastructure, treatment, etc.). A presentation of the more prescient changes are identified and discussed below. The potential implications to Santa Clara County's water providers are noted and discussed.

State Comprehensive Package of Water Legislation 2009

On November 12, 2009, Governor Arnold Schwarzenegger signed into law a sweeping package of water legislation seeking to improve water supply reliability throughout California. Each of the bills, as they are commonly recognized, are summarized below.

SBX7 1 (Simitian) Delta Governance: Delta Stewardship Council, Delta Conservancy, Delta Protection Commission

SB 1 enacts the Sacramento-San Joaquin Delta Reform Act (Act) (Water Code § 85000 et seq.), which declares that "existing Delta policies are not sustainable" and "resolving the crisis requires a fundamental reorganization of the State's management of Delta watershed resources." The Act established the Bay Delta Conservation Plan (BDCP) and all Delta-related actions (e.g., Delta Flow Criteria). It is intended that, ultimately, the Delta Plan will provide the roadmap necessary to address long-standing issues regarding the Delta, issues that have, and continue to affect exporters such as the Santa Clara Valley Water District (SCVWD) through constrained Delta pumping.

SBX7 2 (Cogdill) Water Bonds

This is the major infrastructure funding for new California water projects under the Safe, Clean and Reliable Drinking Water Supply Act of 2010. While rejected by the voters last November, it will appear again on the 2012 ballot. If approved, it would authorize the

issuance of bonds in the amount of $11.14 billion pursuant to the State General Obligation Bond Law to finance a safe drinking water and water supply reliability program. The total bond amount includes $455 million for drought relief, $1.4 billion for regional water supply projects, $2.25 billion for Delta sustainability projects (including $1.5 billion for the BDCP), $3 billion for water storage, $1.785 billion for watershed conservation, $1 billion for groundwater cleanup and protection, and $1.25 billion for water recycling and water conservation. New water storage, given the State's current ability to effectively rely on existing storage capacity is a priority within the bond. New storage Statewide will help federal and State water contractors better meet inter-annual delivery targets through increased allocations. This would have direct bearing on Santa Clara County's future water supply sustainability. The County, through its various water purveyors (e.g., SCVWD) could apply for, and benefit from individual programs (e.g., new storage projects including regional water supply projects, water recycling, water conservation) or, from the broader BDCP that will ultimately help provide sustainability of Delta exports to which the County depends.

SBX7 6 (Steinberg) Groundwater Elevation Monitoring

This introduces new groundwater elevation monitoring for water providers. Under SB 6, systematic monitoring of groundwater levels in all basins and sub-basins of the state are to be collected and made readily available to the public. Monitoring would document seasonal and long-term trends in groundwater elevations. The legislation states that the new monitoring requirements will apply only to groundwater "basins" or "sub-basins," as defined by the Department of Water Resources in Bulletin 118. Reports describing the status of the State's groundwater basins and sub-basins would be made to the Governor and Legislature. Water purveyors themselves are required to implement these programs.

SBX7 7 (Steinberg) Water Conservation

One of the most recognized requirements, under SB 7, urban water suppliers have until 2020 to cut per capita urban water use by 20 percent statewide, and agricultural water suppliers must now adopt water management plans and carry out certain efficient water management practices. SB 7 requires the State to reduce urban per capita water use by 20 percent no later than December 31, 2020, and by at least 10 percent no later than December 31, 2015. The law requires urban retail water suppliers, which include all public or private entities that directly provide potable municipal water to more than 3,000 end users or that serve more than 3,000 acre feet of potable water each year, to develop urban water use targets to help achieve the water use reduction goals. While the law does not require individual urban retail water suppliers to reduce per capita water usage by more than 20 percent, each supplier will have to reduce per capita daily water use by at least 5 percent, unless water use already is 100 gallons per capita per day or less. Urban retail water suppliers will have to meet their own urban water use targets, which they will

establish after noticed public hearings. These water conservation targets will affect all of the major water purveyors in Santa Clara County.

SBX7 8 (Steinberg) Water Rights Enforcement

Under SB 8, the State Water Resources Control Board (SWRCB) will expand its water rights enforcement staff and levy substantial financial penalties against water users who fail to accurately report their diversion and use of surface water. SB 8 amends a long-neglected provision of the Water Code that requires riparian water users and holders of pre-1914 appropriative rights to file Statements of Water Diversion and Use with the SWRCB every three years (Water Code § 5100 et seq.). Purveyors in Santa Clara County who hold such rights (e.g., SCVWD) would be required to meet these new reporting requirements.

Bay-Delta Actions including the BDCP

This is the new HCP/NCCP (Habitat Conservation Plan and Natural Communities Conservation Plan), which will ultimately set the "environmental" windows for export diversions through the Delta that would go to places like Santa Clara County. The BDCP focuses on the recovery of ESA-listed species and their habitat in the Bay Delta and will include major proposals for changing how water is diverted and conveyed through the Bay Delta to both the State and federal water export facilities in the south Delta. The final plan will include various projects including a Non-Physical Barrier; Delta Risk Management Strategy; Subsidence Reversal/Carbon Sequestration Studies; among others. As noted previously, these actions, by virtue of their influence on Delta pumping, will ultimately affect the sustainability of water deliveries to Santa Clara County via the Delta pumps.

Continuing Jurisdiction of U.S. District Court Judge Oliver Wanger - U.S. Bureau of Reclamation Operations and Criteria Plan Biological Opinions

This operational guideline (Operations and Criteria Plan), used by the U.S. Bureau of Reclamation, has been under challenge since 2007 through various biological opinions that have been prepared on the plan. Numerous rulings from Judge Wanger have been made on these biological opinions with several revisions completed, and currently, a new National Environmental Policy Act process is underway to assess the cumulative environmental and socio-economic effects of the alternative actions identified in the opinions. The court's final rulings will dictate how the CVP (and SWP) are operated with respect to listed federal fish species. This will have significant effect on how the Delta facilities are operated—a vital element for Santa Clara's imported federal and State water supplies.

Delta Flow Criteria

On August 3, 2010, the State Water Resources Control Board (Board) adopted Resolution 2010-0039 approving a report determining new flow criteria for the Sacramento-San Joaquin Delta ecosystem necessary to protect public trust resources pursuant to the Board's public trust obligations in compliance with Water Code section 85086. In recognition of the fact that recent Delta flows are insufficient to support native Delta fish for today's habitats, flow criteria recommendations included maintaining:

- 75 percent of unimpaired Delta outflow from January through June;
- 75 percent of unimpaired Sacramento River inflow from November through June; and
- 60 percent of unimpaired San Joaquin River inflow from February through June.

Such flow criteria, when ratified into new standards for the Delta, will significantly affect overall system operations and the ability of exporters, such as SCVWD, to increase or even maintain deliveries through the Delta pumps.

Federal Water Contract Shortages

This new U.S. Department of Interior policy will, under certain dry-years, cut CVP municipal and industrial water service contractors to 50 percent of historical deliveries based on a prorated municipal and industrial versus agricultural contract step-down from 100 percent and in consideration of public health and Welfare issues. An EIS is under preparation on this new policy and will be completed in 2012. This new policy will significantly affect the safe yield of those holding CVP M&I water service contracts, such as SCVWD.

SWRCB Instream Flow Studies

As part of the SWRCB's recognition that the State may be over allocated in terms of water rights, they are initiating instream flow studies on 127 priority streams across the State; with the ultimate goal of establishing instream flow standards. Two of those streams are in Santa Clara County. Equally important will be the new flow standards in the CVP/SWP mainstem tributaries which, if attenuated, will affect overall U.S. Bureau of Reclamation (Operations and Criteria Plan) flexibility in meeting Delta water quality standards, and thereby, Delta export pumping.

Chromium-6 - California and Federal

At the end of 2010, California's Office of Environmental Health Hazard Assessment published a revised draft technical support document for a proposed public health goal (PHG) for chromium 6 in drinking water. The new draft PHG is 0.02 parts per billion (20 parts per trillion), reduced from the 0.06 ppb identified in the first draft released in 2009. Chromium-6 in drinking water has been raised as an issue in Santa Clara County.

The U.S. EPA released a guidance document in January 2011 recommending that public water systems conduct enhanced monitoring and sampling for chromium 6.

DWR Drought Protection Programs

Since the completion of the last service review, DWR has developed numerous programs and initiatives aimed at drought protection. A few of the more notable actions include: Drought preparedness workshops; Five-Year Drought Contingency Plan (DCP); Drought Monitoring; Coordination with world-wide drought efforts; Urban Water Management Plans (UWMPs); and the 2009 Drought Water Bank. In general terms, these will assist water purveyors in Santa Clara County in coping with future drought or dry-year conditions.

From a water conservation perspective, several initiatives were launched by DWR. These included: Statewide Save Our Water Program; Water Savings at State Facilities; New Dual Plumbing Standards; and a Model Landscape Ordinance, to name but a few.

Water Supply Assessments and Water Supply Verifications under SB 610 and 221

Senate Bills 610 (Chapter 643, Statutes of 2001) and Senate Bill 221 (Chapter 642, Statutes of 2001) amended State law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and SB 221 are companion measures, which seek to promote more collaborative planning between local water suppliers and cities and counties. Both statutes require detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. Both statutes also require this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Finally, both measures recognize local agencies will have responsibility for determining the availability of water for projects and the approval of projects.

In 2005, Water Supply Assessments (WSA) and Water Supply Verifications (WSV) under SB 610 and 221, respectively, had only begun to appear. Today, they are a common

feature in the integration between water resources and land development. A complete Urban Water Management Plan can be a foundational document and source of information for SB 610 Water Supply Assessments and SB 221 Written Verifications of Water Supply.

An SB 610 Water Supply Assessment is required if the project is subject to CEQA and the project meets one of the criteria defined under Water Code Section 10912(a).

If a public water system has fewer than 5,000 service connections, then "project" means any proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of the public water system's existing service connections, or a mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system's existing service connections.

The SB 610 process requires the interaction and cooperation of the water supplier and the CEQA lead agency. When a CEQA lead agency determines that a project meets one of the size or demand thresholds triggering SB 610, it requests that the water supplier prepare the WSA. The water supplier must assemble specified information relating to available water supplies and approve the WSA within 90 days, which it then passes on to the CEQA lead agency. SB 610 does not require public participation in the preparation of a WSA. The lead agency must include the WSA in the CEQA document and may also include an evaluation of the WSA. Finally, the CEQA lead agency—not the water supplier—must independently determine, "based on the entire record," whether adequate water supplies exist to serve the project. That is, regardless of the conclusions in the WSA, the CEQA lead agency makes the final decision regarding whether an adequate water supply is available to serve the project.

Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 is intended as a 'fail safe' mechanism to ensure that collaboration on finding the needed water supplies to serve a new large subdivision occurs when it should—before construction begins. Verification must conclude whether the water purveyor is able or unable to provide a sufficient water supply based upon an analysis as to whether water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agriculture and industrial uses. All of the following must be considered: 1) historical record for at least 20 years, 2) urban water shortage contingency analysis, 3) supply reduction for "specific water use sector" per water supplier's resolution, ordinance, or contract, and 4) amount of water that can be reasonably relied upon from specified supply projects, subject to the determinations outlined in Gov. § 66473.7(d) (Gov. § 66473.7(a)(2)) (Gov. § 66473.7(c).

SPECIAL DISTRICTS

3. SANTA CLARA VALLEY WATER DISTRICT

AGENCY OVERVIEW

The Santa Clara Valley Water District (SCVWD) is the primary water resources agency for Santa Clara County. First formed as the Santa Clara Valley Water Conservation District in 1929, it now acts not only as the County's water wholesaler, but also as its flood protection agency and is the steward for its streams and creeks, underground aquifers and district-built reservoirs. A Service Review for the District was last conducted in 2005.

The District provides integrated services related to water management, including water wholesaling, flood control, groundwater management, and watershed stewardship. No other agencies were identified that could provide these services on a county-wide basis.

The Santa Clara Valley Water District was created by an act of the California Legislature, and operates as a State of California Special District, with jurisdiction throughout Santa Clara County. Since the completion of the last LAFCO service review for SCVWD, the District Act was amended twice—first in 2006 by the enactment of AB2435 and then in October 2009 with the passage of AB 466.

In 2006, changes were made to bring the District in line with other special districts of its type. The amendments were mainly directed at collaboration with other districts, preservation of open space, the Board of Directors' structure, and budget approval and adoption.[12]

The bill of 2009 amendments clarified the composition of the Board of Directors, election process, terms of office, and directed the Board to review the financial reserve at the time of budget adoption.[13]

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[12] Assembly Committee on Local Government, *Bill Analysis*, 2006, ftp://leginfo.public.ca.gov/pub/05-06/bill/asm/ab_2401-2450/ab_2435_cfa_20060425_151233_asm_comm.html.

[13] Assembly Committee on Local Government, *Bill Analysis*, 2009, ftp://leginfo.public.ca.gov/pub/09-10/bill/asm/ab_0451-0500/ab_466_cfa_20090828_172844_asm_floor.html.

Type and Extent of Services

Services Provided

The District owns and manages 10 local surface reservoirs and associated creeks and recharge facilities, manages the County's groundwater basins and 3 water treatment plants, imports water from the Central Valley Project and the State Water Project, and delivers recycled water to parts of the County. The District is also responsible for flood protection within the County. Its stewardship responsibilities include creek restoration and wildlife habitat projects, pollution prevention efforts and a commitment to natural flood protection.

The Santa Clara Valley Water District is the groundwater management agency and the primary water wholesaler within Santa Clara County. Its water utility enterprise manages all aspects of water supply, including planning: conjunctive management of surface and groundwater resources; imported water acquisitions; coordination with local, state and federal water interests; water treatment and delivery system operations; new water resources development; groundwater basin protection; infrastructure and asset management planning; emergency operations; financial, strategic and business planning; and communication. Its watershed operations business is responsible for flood protection, ensuring clean, safe water in creeks and bays, creating healthy creek ecosystems and establishing partnerships for trails, parks and open space along waterways.

Services to Other Agencies

The District provides services to other agencies under contracts. SCVWD has 70-year contracts dating from 1981 to provide treated drinking water to eight retail agencies in the northern part of Santa Clara County, including the Cities of Mountain View, Sunnyvale, Santa Clara, San Jose, Cupertino, Milpitas, and the San Jose Water Company and the California Water Service Company. The areas served with SCVWD treated water are contained within the individual retail agencies' service areas. The period of service is continuous, except for those rare times when SCVWD facilities are down for maintenance and treated water cannot be provided. Retail agencies that may be affected are notified well in advance.

SCVWD constantly receives and approves annual updates on three-year treated water delivery schedules from retail agencies that contract for treated water.

SCVWD has an emergency intertie with San Francisco Public Utilities Commission (SFPUC) under which treated water from the District can be exchanged with SFPUC water under emergency conditions or planned outages.

The District provides contract services to individuals as well. SCVWD issued permits to individuals to receive untreated (raw) surface water for agricultural purposes. The quantities and areas served with raw water are small and within the SCVWD service area.

The periods of service are in accordance with approved schedules and are subject to District's operational constraints. Since 2005, the District received a number of requests for untreated surface water service. These requests were evaluated on a case-by-case basis.

SCVWD has a wholesaler-retailer agreement with the City of Gilroy to provide non-potable recycled water to Gilroy for distribution to individual retail customers. The recycled water is provided through an agreement with the South County Regional Wastewater Authority (SCRWA). The District has a producer-wholesaler agreement with SCRWA, wherein SCRWA provides non-potable recycled water to SCVWD for distribution to water retailers in southern Santa Clara County, such as City of Gilroy. The area served with this recycled water is within the southern portion of Santa Clara County. Periods of service are in accordance with agreements between the City of Gilroy and the retail customers.

In 2010, the District entered into a 40-year recycled water facilities and programs integration agreement with the City of San Jose. Under the agreement, SCVWD and San Jose will jointly manage the production, distribution and use of recycled water from the South Bay Water Recycling System.

In addition, in 2008, SCVWD received a request from Purissima Hills Water District for treated water service which was denied, due to concerns regarding availability of system capacity and availability of water supply during drought conditions.

Contracts for Water Services

The District receives water services from other agencies under contracts. SCVWD receives untreated surface water exported from the Sacramento-San Joaquin Delta via the State Water Project (SWP) and the federal Central Valley Project (CVP). SWP water is used at the SCVWD treatment plants and distributed as treated water to retail agencies in the northern portion of Santa Clara County. Some SWP water is used for groundwater recharge. CVP water is used at the District's treatment plants, for groundwater recharge throughout the County, and for irrigation. The periods of water service from the SWP and CVP are continuous, except for periodic facility outages, and in accordance with annual delivery schedules that SCVWD submits.

The District's contract quantity for SWP water is 100,000 AF, and the contract quantity for CVP water is 152,500 AF. The District also shares a 6,260 AF long-term contract with Westlands Water District for CVP water assigned from Mercy Springs Water District. The quantities of SWP and CVP water supplies vary greatly from year to year depending on hydrologic conditions and regulatory restrictions placed on Delta export facilities. To manage these variations in wet year and dry year deliveries, SCVWD contracts with other agencies and entities in the State to purchase, sell, or exchange imported water.

SCVWD has an agreement with Semitropic Water Storage District to store (bank) excess imported water and to take previously-stored water. SCVWD exercised numerous banking and extraction transactions since 2005.

As was mentioned before, SCVWD has an emergency intertie with SFPUC under which treated water from SCVWD can be exchanged with SFPUC water under emergency conditions or planned outages. Since 2005, both SCVWD and SFPUC have requested their respective water systems be on standby and exercised the intertie to exchange water during periods of maintenance and construction.

Figure 3-1: SCVWD Transfers and Exchanges Transactions since 2005

Year	Agency	Term	Type
2005	Browns Valley Irrigation District	1 year	Purchase
	Kern County Water Agency	1 year	Exchange
	San Luis and Delta-Mendota Water Authority - Exchange Contractors	1 year	Purchase
	Environmental Water Account (DWR and USBR)	1 year	Sale
	USBR – Refuges	1 year	Sale
2006	San Luis and Delta-Mendota Water Authority - Exchange Contractors	5 year	Purchase
	San Luis Water District	1 year	Sale
2007	Browns Valley Irrigation District	1 year	Purchase
	San Luis and Delta-Mendota Water Authority – VAMP	5 year	Purchase
2008	Browns Valley Irrigation District	1 year	Purchase
	San Luis Water District	1 year	Exchange
	DWR - Yuba Accord	17 years	Purchase
	San Luis and Delta-Mendota Water Authority - Yuba Accord	17 years	Purchase
2009	Poso Creek Water Company	1 year	Sale
	DWR - Drought Water Bank	1 year	Purchase
	Browns Valley Irrigation District	1 year	Purchase
	San Luis and Delta-Mendota Water Authority - Pooled Water Program	1 year	Purchase
	DMB Communities, LLC	1 year	Purchase
	Patterson Irrigation District	4 year	Purchase
2010	Browns Valley Irrigation District	1 year	Purchase
	DWR-Metropolitan Water District	1 year	Exchange
	San Luis and Delta-Mendota Water Authority - Exchange Contractors	3 year	Purchase
2011	San Benito County Water District	10 year	Exchange
	DWR-Metropolitan Water District	1 year	Exchange

Collaboration

The District collaborates with other agencies through its participation in regional plans and collaborative planning groups. SCVWD participates in the Bay Area Integrated Regional Water Management Plan (IRWMP) which was adopted in 2006 and is being updated in 2011. The District is a member of the Bay Area IRWMP Coordinating Committee. SCVWD is also a member of the Pajaro River Watershed IRWMP Regional Water Management Group. The Pajaro River Watershed IRWMP – the collaborative effort of Santa Clara Valley Water District, San Benito County Water District and Pajaro Valley Water Management Agency – was adopted in 2007 and is being updated in 2011. In addition, the District participates in numerous collaborative planning groups to protect and advance its water supply, flood protection and watershed management interests. The District reported that these groups had largely met SCVWD expectations.

Boundaries

SCVWD is a countywide district and its boundaries are the same as Santa Clara County boundaries. The boundary area consists of 1,304 square miles. Since its formation as the Santa Clara Valley Water Conservation District, the District has gradually grown to its current size through several consolidations with other agencies. Today's District represents a consolidation of four agencies. In 1954, the Central Santa Clara Valley Water Conservation District was annexed into the Santa Clara Valley Water Conservation District. In 1968, Santa Clara Valley Water Conservation District merged with Santa Clara County Flood Control and Water District and adopted the dual missions of providing water supply and flood protection. In 1987, the Gavilan Water District was annexed into the Santa Clara Valley Water District. "The merger's catalyst was the belief that a coordinated operation of the County's water supply and flood control systems would result in optimum water resource management."[14] In 1968, SCVWD and Santa Clara County merged their water functions and the County Board of Supervisors began reviewing and approving the District's annual budget. In 2006, however, Assembly Bill 2435 was passed which ended the County's oversight of the District's budget.[15]

Sphere of Influence

The Sphere of Influence (SOI) for SCVWD is coterminous with its boundary and County's boundary. The SOI for the Santa Clara Valley Water District was last reviewed in 2007 and no changes were made at that time.

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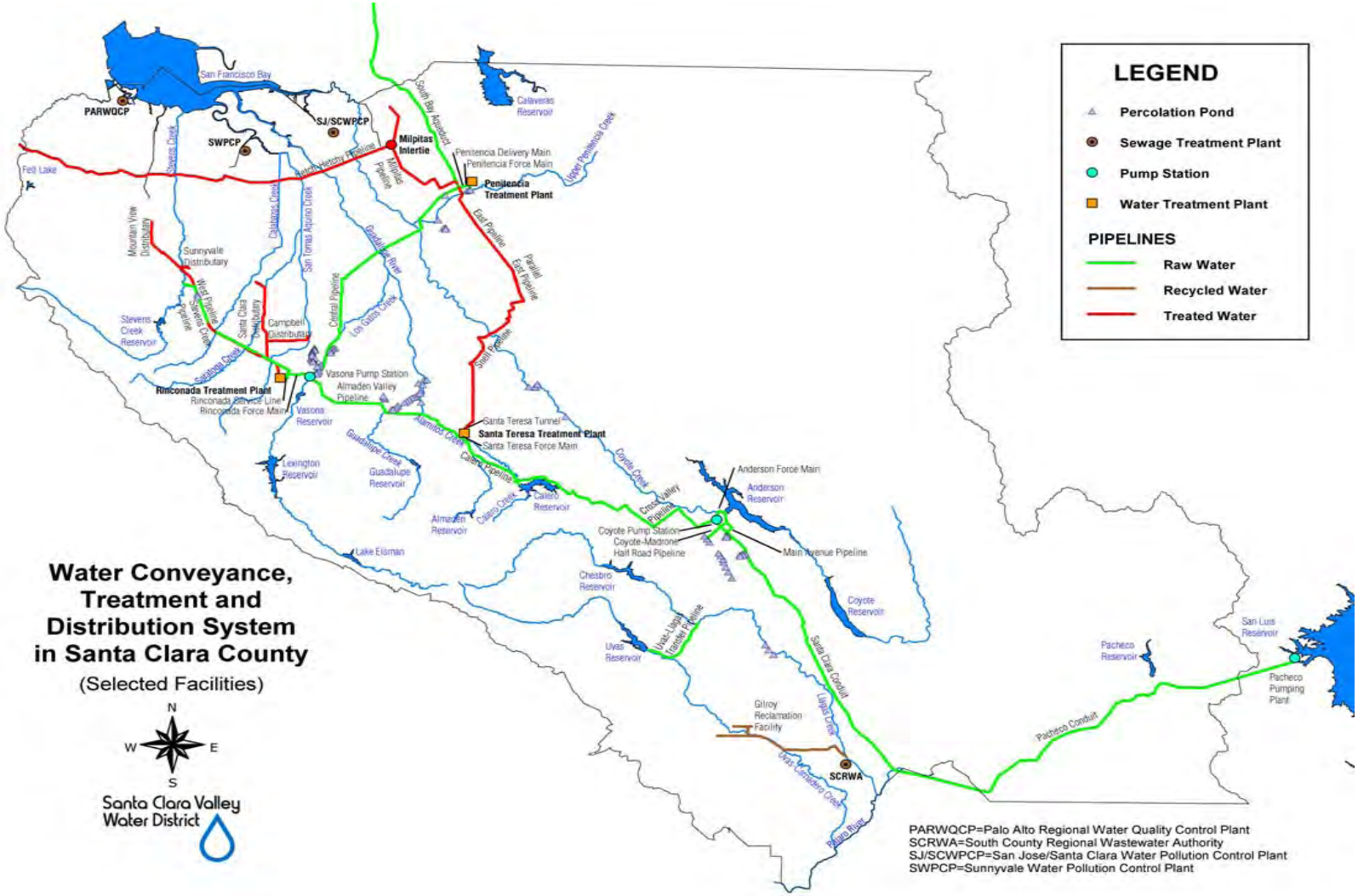
[14] SCVWD, *Comprehensive Annual Financial Report*, 2010, p.2.

[15] SCVWD, *Comprehensive Annual Financial Report*, 2010, p.2.

Figure 3-2: Santa Clara Valley Water District Boundaries and SOI



ACCOUNTABILITY AND GOVERNANCE

Prior to the 2009 amendments to the District Act, SCVWD was governed by a seven-member Board of Directors; five directors were elected by geographic areas which coincided with the County's supervisorial districts and two at-large directors were appointed by the County Board of Supervisors. The Directors served staggered four-year terms.[16]

As of December 3, 2010, the Board of Directors consists of seven elected members and no appointed members. The Board divided the District into seven electoral districts approximately equal in population. The electoral districts are in the process of being updated to reflect the 2010 Census results. The first elections for the first, fourth, sixth and seventh districts were conducted on November 2, 2010 as part of the statewide general elections. The first elections for the second, third and fifth electoral districts will take place on November 6, 2012 as part of the statewide general elections. The board members serve overlapping four-year terms. Should there be a vacancy on the Board, it is filled by an appointment from the Board of Directors of the District or by calling an election. If a person is appointed to fill a vacancy, that person will represent the district at large. Any elected board member may be recalled by the voters. The boundaries of each electoral district are to be reviewed every November of the year following the year in which the census is taken.

Directors receive meeting fees of $286.03 per meeting up to ten meetings per month in accordance with District Ordinance 10-02 pursuant to Chapter 2, Division 10 of the California Water Code. Directors receive actual and necessary expense reimbursement in accordance with Board Governance Process Policy GP-10 Cost of Governance. In addition, Directors receive $2,500 per Director per year for actual and necessary expenses in accordance with District Ordinance 02-01, Resolution No. 02-44. Board members are eligible for medical, dental, vision and life insurance benefits. Former Board Members, elected to terms that began prior to January 1, 1995, are eligible for continuation of the District's health benefits based on years of service.

The Board of Directors' regular meetings occur on the second and fourth Tuesday of every month in the board room of the District Headquarters Building. The meeting agendas and supplemental materials are posted on the District's website ten days prior to the date of the board meeting. Supplemental information is distributed and posted at least 72 hours prior to the date of the meeting. Constituents are able to subscribe to electronic agenda notification online. Board meetings can also be viewed live via the District website at

[16] LAFCO of Santa Clara County, *Countywide Water Service Review*, 2005, p. 31.

www.valleywater.org. Archived videos of the Board meetings are also available on the District website.

In addition, agendas for all Board of Directors meetings and committee meetings held at the district office are posted on the marquee outside of the SCVWD headquarters building. For committee meetings held off-site, an agenda is posted in a publicly accessible location where the meeting is to be held. Agendas for all Board and Committee meetings are also posted on the District webpage. For public hearings on Board of Directors' compensation, groundwater charges and benefit assessments, the agendas are also publicized in local newspapers. Notices for meetings are sent by mail and email to interested parties on a distribution list. Minutes of the Board of Directors and Committee meetings are available on the District's website.

Figure 3-3: SCVWD Governing Body

Santa Clara Valley Water District				
District Contact Information				
Contact:	Jim Fiedler, Chief Operating Officer, Water Utility			
Address:	5750 Almaden Expressway, San Jose, CA 95118			
Telephone:	408-265-2607			
Email/website:	jfiedler@valleywater.org			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Donald F. Gage	Director, District 1 (Chair)	December-14	Elected	4 years
Joe Judge	Director, District 2	December-13	Elected	4 years
Richard P. Santos	Director, District 3	December-13	Elected	4 years
Linda J. LeZotte	Director, District 4	December-14	Elected	4 years
Patrick Kwok	Director, District 5	December-13	Elected	4 years
Tony Estremera	Director, District 6	December-14	Elected	4 years
Brian A. Schmidt	Director, District 7	December-14	Elected	4 years
Meetings				
Date:	Second and fourth Tuesday of every month.			
Location:	SCVWD Headquarters Building.			
Agenda Distribution:	Posted on the website and outside of HQ Building, mailed and emailed to distribution list.			
Minutes Distribution:	Posted on the website.			

In addition to the legally required agendas and minutes, the District engages its voters and customers through a variety of means including mass communications through news media, social media and marketing campaigns. SCVWD also implements targeted outreach to diverse audiences such as the neighbors of water district facilities, flood protection project beneficiaries, service and permit requestors, participants in water conservation programs, and youth and teachers. A variety of techniques are used for this targeted outreach including community meetings, direct mailers, classroom presentations, workshops, and signage.

The District provides a substantial amount of public information on its website regarding the services provided by the District, including water conservation and groundwater protection. The District's financial reports are available as well.

To provide a framework and direction for District activities, the Board of Directors has formally adopted board governance policies which address the governance process; the Board's linkage to the public, the Board's linkage to Board Appointed Officers (Chief Executive Officer District's Counsel, and Clerk of the Board); executive limitations and the goals of the District. The Board reviews the policies annually in public session to ensure transparency and promote greater public participation in policy development.

As an additional measure of local accountability, the District has established board advisory committees that assist in developing policies to guide District operations. The committees are as follows:

- Santa Clara Valley Water Commission: assists the Board in developing and recommending policies for water supply and water quality, as well as in the annual review of groundwater charges;
- Agricultural Water Advisory Committee: assists the Board in developing and recommending policies regarding water supply for agricultural uses;
- Environmental Advisory Committee: assists the Board in developing and recommending policies for environmental restoration and enhancement and environmental policy in general;
- Landscape Advisory Committee: assists the Board in developing and recommending policies for water conservation and providing a link between Santa Clara County's landscape industry and the Board; and
- Five Flood Protection and Watershed Advisory Committees: assist the Board in developing and recommending policies for flood protection and stream stewardship in the following watersheds: Lower Peninsula, West Valley, Guadalupe, Coyote and Uvas/Llagas.

The Board has also established ad hoc committees for specific, ad hoc purposes and discontinued these committees when their assignments are completed. The District has an independent monitoring committee for the Clean, Safe Creeks & Natural Flood Protection special tax approved by the voters in November 2000. The committee is comprised of citizen volunteers and an independent oversight report is prepared by the committee annually.

Additionally, SCVWD works with a committee comprised of all of the water retailers in Santa Clara County to coordinate and provide information on water supply, water rates and water conservation matters facing water retailers and the district.

In 2005, the retailers had an opportunity to become a board advisory committee, but decided against it opting to remain a staff-level advisory committee and continue taking advantage of the informal staff-to-staff communications. SCVWD Board Members typically attend the retailer committee meetings to learn more about retailer issues and be in touch with the needs of the District's key customers. Water retailer meetings take place quarterly and include standing, new and current topics on a variety of operational issues proposed by water retailers and the District. The water retailers' advisory committee also has the following subcommittees that meet on an as-needed basis: water supply, water quality, groundwater, recycled water, finance, treated water, water conservation and emergency preparedness.

In response to past concerns on District costs, the District reduced expenditures by eliminating 92 positions (11 percent of the district-wide workforce) since 2008, reducing overtime by five percent and district vehicles by 13 percent. It also prioritized capital projects, postponing or eliminating lower priority projects, thus, saving millions of dollars. As a result, its water rates remained flat from FY 2008-09 to FY 2010-11. SCVWD reports that today's relationship between the District and the retailers is strong. In a recent retailer feedback survey, the retailers provided an average overall score of "very good/excellent" for the District's overall performance rating.

If a customer is dissatisfied with District's services, complaints may be submitted through the online Access Valley Water portal on the SCVWD website.[17] The ombudsman responsible for handling complaints at the SCVWD is the Program Administrator in the District Communications Unit. The District received 92 complaints in 2010, two of which were regarding water odor or taste. The remaining complaints covered all aspects of District business, as well as non-SCVWD issues. Some of the issues included noisy geese at SCVWD groundwater recharge facilities, erosion on a creek bank, and a leaking fire hydrant.

The District demonstrated full accountability and disclosure during the service review process by responding to questionnaire and interview requests and providing all necessary documentation.

[17] https://clients.comcate.com/newrequest.php?id=80

MANAGEMENT AND STAFFING

In 2003, the District reorganized its operations into two separate core business areas: Water Utility Enterprise and Watersheds. The Water Utility Enterprise is comprised of the Water Utility Operations and Water Supply Management divisions, the Office of Emergency Services, and the Planning, Finance and Communications Unit. Watershed Operations is structured into three divisions. Each division is responsible for both a geographic area of focus and programs and services that support the operation as a whole such as regulatory compliance, ecological services, vegetation management, community projects review, stream water quality and watershed planning. A business management unit is charged with financial planning, customer relations, and maintaining the Watersheds' ISO 9001:2000 and 14001 certifications.

The District has 761 employees, 302 of which are directly employed in water utility services (229 employees dedicated to water utility operation functions and 73 employees dedicated to capital improvement services). In the last three fiscal years, SCVWD has eliminated 82 positions to reduce the costs and the size of the District. In FY 11-12, the District plans to cut an additional ten positions.[18]

The Office of the CEO oversees three departments—Watersheds, Water Utility and Administration—and is directly accountable to the Board of Directors. Several support units report to the CE, including the Office of CEO Support, Workforce Development, District Communications, Local Government Relations, and State Government Relations. District Counsel and the Clerk of the Board provide support to the Board of Directors.[19]

SCVWD performs regular annual and semi-annual evaluations of its employees. Unit managers evaluate their employees. The heads of the units, divisions and departments are evaluated by their respective managers, and the CEO is evaluated directly by the Board of Directors. The District tracks the workload handled by its staff through bi-weekly timesheets where tasks are coded by project specific jobs.

In 1999 the Board of Directors formally adopted a series of "ends policies," or goals for the District. These policies are used in the decision-making process and each program or project must directly support at least one of these policies.

Overall district operations are evaluated during quarterly review meetings where the District's performance is compared to adopted goals and performance metrics. For example, the District has adopted a goal of no water quality-related violations, and has

[18] Interview with Jim Fiedler, SCVWD COO, April 29, 2011.

[19] SCVWD, *Comprehensive Annual Financial Report FY 09-10*, 2010, p. 13.

been successful at meeting this goal since 1987.[20] Other outcome measures that are tracked and evaluated include response time for inquiries, amount of sediment removed, amount of graffiti removed, and tons of garbage cleared. Performance and progress on budgeted milestones are also reviewed by the Board on a quarterly basis.

The District does some capital benchmarking and attempts to compare itself to other wholesalers; however, the District reported that every system is different and a detailed comparison is hard to make. Two other agencies that SCVWD considers comparable for benchmarking purposes are SFPUC and Zone 7 in Alameda County.[21]

To improve its operational efficiency the District performs multiple audits of its systems and programs. It conducts matrix audits of maintenance programs and procurement practices. The Environmental Management System is audited externally every six months to ensure that it is up to standards. Additionally, the District has the Process Improvement Program in place to give staff and constituents the opportunity to identify program deficiencies and suggest corrective action online.[22] The Water Utility Enterprise also uses cost centers for legal and accounting reporting.

In 2003, the District implemented the SMART Business Program, an organizational improvement initiative. The program focused on customer service, employee involvement, performance, quality, and business results. The Program no longer exists (it ended in 2005), but evolved into other organizational improvement efforts. Its accomplishments included completion of the needs assessment for achieving ISO 9001/14001 certification; completion of the District Green Business assessment process; and implementation of the District SMART Ideas program. The SMART Ideas Program also no longer exists. The accepted ideas, however, were incorporated into various strategic initiatives. The entire District achieved ISO 9001/14001 in 2007 and is still a certified Green Business. Part of the District's ISO 9001/14001 implementation and registration includes an ongoing corrective and preventative action program. This enables continual improvement by creating a method for people at any level of the organization to submit requests for corrective or preventive actions (CPAR) when a process or instruction is unclear, inadequate or is not in compliance with the ISO standards.

The District's financial planning efforts include an annually adopted budget and comprehensive annual financial reports. SCVWD adopts a capital improvement plan (CIP) with a five-year planning horizon. The latest CIP was completed for FYs 12-16. Other

[20] Interview with Jim Fiedler, SCVWD COO, April 29, 2011.

[21] Interview with Jim Fiedler, SCVWD COO, April 29, 2011.

[22] Interview with Jim Fiedler, SCVWD COO, April 29, 2011.

significant planning documents include the Urban Water Management Plan (UWMP), watershed plans, various water strategic, maintenance and water system plans.

Some of the District's planning and operational efforts have received outside recognition in the form of awards. The District was awarded recognition for Excellence in Financial Reporting for its comprehensive annual financial report for FY 08-09 by the Governmental Finance Officers Association of the United States and Canada (GFOA). In 2009, two district projects (the Lenihan Dam Outlet Modifications Project and the Pajaro Basin Freshwater Wetland Project) received Project of the Year awards from the American Society of Civil Engineers. The District was awarded Best Overall in the 6th Annual Flex Your Power Awards in 2008 for water and energy conservation. The California Sustainability Alliance selected SCVWD for its 2010 Sustainability Showcase Award.

POPULATION AND PROJECTED GROWTH

SCVWD is a countywide agency, therefore the population for the District is equivalent to the population of Santa Clara County. According to the 2010 Census, the District serves 1,781,642 residents within its boundaries. The average number of persons per household is about 2.9 people and is expected to continue to be higher than the historical average.[23]

ABAG projects that the population of Santa Clara County will grow by 33 percent by 2035, with an average annual growth rate of 1.2 percent countywide. ABAG's population projections for 2010 were slightly higher than the actual population reported in the 2010 Census. Population projections have been adjusted assuming ABAG's projected rate of growth from the 2010 Census population. In 2035, it is projected that the District will serve an estimated population of 2,369,584 residents. The 2009 ABAG projections for population and growth rates, including unincorporated areas within each city's sphere of influence, 2010 Census population and adjusted population projections are shown in Figure 3-4.

[23] SCVWD, *UWMP Draft*, 2010, Chapter 2.0, p. 1.

Figure 3-4: 2009 ABAG Population Projections[24]

Area	ABAG 2010	ABAG 2035	Growth Rate	Census 2010	Adjusted 2035
Countywide	1,822,000	2,431,400	1.2	1,781,642	2,369,584
North and Central County					
Campbel	40,500	47,200	0.6%	39,349	46,038
Cupertino	55,200	57,600	0.2%	58,302	60,634
Los Altos	28,400	30,400	0.3%	28,976	31,004
Los Altos Hills	8,800	9,100	0.1%	7,922	8,160
Los Gatos	29,600	30,200	0.1%	29,413	30,001
Milpitas	69,000	106,000	1.7%	66,790	102,857
Monte Sereno	3,400	3,600	0.2%	3,341	3,541
Mountain View	72,100	90,600	0.9%	74,066	93,323
Palo Alto	61,600	84,000	1.2%	64,403	87,588
San Jose	981,000	1,380,900	1.4%	945,942	1,333,778
Santa Clara	114,700	157,200	1.3%	116,468	159,561
Saratoga	31,400	31,400	0.0%	29,926	29,926
Sunnyvale	135,200	163,300	0.8%	140,081	169,498
South County					
Gilroy	49,800	69,600	1.3%	48,821	68,349
Morgan Hill	38,200	47,900	0.9%	37,882	47,353
Unincorporated Area	103,100	122,400	0.7%	89,960	107,052

The potential for future development and population growth varies across the County. Similar to the estimates presented in the 2005 service review, the highest growth rates are projected for Milpitas, San Jose, Santa Clara and Gilroy. This has bearing on the water service provided by the SCVWD as growth drives water demand and development patterns determine the type and capacity of future system infrastructure needs. The northern portion of the County uses treated surface water deliveries as well as groundwater while the southern portion is entirely dependent on groundwater. Local surface water and imported surface water are recharged in both areas through District groundwater management programs, supplementing the natural groundwater supply.

The District reported that it observed a decrease in water usage in the last few years due to conservation, cool springs and the recent economic recession. SCVWD uses the ABAG projections and addresses the population growth and related increase in water demand in its 2010 Urban Water Management Plan.

[24] Author's estimates based on 2010 Census population and ABAG projected growth rates.

FINANCING

Financial Adequacy

SCVWD reported that the current level of financing is generally adequate to provide services. Water charges are based on operating plans and capital needs identified in the five-year CIP, and are therefore established in order to sufficiently cover those costs. However, similar to other municipal agencies, the District has experienced a decline in revenues, due to 1) reduced income from property taxes, 2) a decrease in investment earnings, and 3) successful water conservation efforts, along with economic recession and cooler weather patterns, that have resulted in reduced water sales. As a result of these revenue reductions, the District has made cost reduction efforts. Despite these challenges, SCVWD has assembled a balanced budget and maintains sufficient reserves.

The recent recession has led to reduced ad valorem property tax revenues for two reasons—a decline in the assessed value of property and a tax shift by the State. In FY 09-10, income from property taxes decreased by $6.3 million, or 11 percent, due to a decrease in the assessed value of some real properties. The net assessed value of all real and business property in Santa Clara County declined by 2.4 percent in FY 09-10, which will result in a further reduction in property tax income of approximately 1.2 percent in FY 10-11.[25] Property tax revenue is anticipated to further decline, and the District has budgeted FY 11-12 property taxes to be 5.2 percent, or $3.9 million, less than the FY 10-11 budget.[26]

Additionally, due to the State budget crisis, in July 2009, the State legislature voted to suspend Proposition 1A, which ensures local property tax and sales tax revenues remain with the counties, cities and special districts. Consequently, all local agencies were required to loan eight percent of apportioned property tax revenues to the State with repayment plus interest by June 30, 2013. This resulted in the loss of $4.8 million in property tax revenue to SCVWD in FY 09-10. To mitigate the impact of the loss of revenues on the local agencies, the Proposition 1A Securitization Program enables local agencies to sell their Proposition 1A Receivables for cash proceeds to be paid in two installments in January and May 2010. SCVWD decided not to participate in the securitization program. The District anticipates receiving its money back by 2013.

Historically, SCVWD has made between four and nine percent of total annual revenues from interest on investments. Due to the recession, these interest earnings have significantly declined. In FY 09-10, interest earnings decreased by $5.8 million for

[25] SCVWD, Audited Financial Statement FY 09-10, p. 4.

[26] SCVWD, FY 11-12 Budget, p. 4-3.

government activities and $4.5 million for enterprise activities; interest earnings for governmental and enterprise functions combined declined by 49 percent.

During the drought in 2007 to 2009, water agencies implemented mandatory water conservation efforts. Specifically, in March 2009, SCVWD adopted a resolution calling for a mandatory 15 percent water conservation. Users exceeded this requirement by achieving 17 percent water conservation. Decreased use led to a reduction in water revenue of $16.1 million or 11.8 percent, in FY 09-10 compared to FY 08-09.[27] Although drought conditions are no longer a concern, SCVWD continued voluntary water conservation efforts with a target of 10 percent in FY 10–11. The District plans to continue conservation efforts in FY 11-12 by continuing to offer water conservation rebates and services to county residents and businesses. The District has projected that as a result of reduced use and sales, revenues will be below budget by $9.1 to 11.9 million in FY 10-11.[28] The District projects that this trend will stabilize and start to recover in FY 11-12 with up to a 2.5 percent increase in water use compared to FY 09-10.[29]

As a result of the decline in revenues, SCVWD has implemented several cost reduction strategies. In the District's FY 11-12 budget, plans to minimize expenditures include:

- Over the last three fiscal years (FYs 09, 10, 11), district personnel have been reduced by 82 positions. In FY 11-12, the District plans to eliminate an additional 10 positions.
- The District has budgeted for a reduction of 16.2 percent in overtime expenditures, saving $224,000 in FY 11-12.
- Expenses for consultant services have been reduced by 1.7 percent or $0.5 million.
- Funding for non-mandatory training was decreased by 34 percent or $93,000.
- Expenditures on travel for training will be reduced by 18.4 percent, saving $76,000.
- The District stopped use of rental properties, saving $0.5 million.

[27] SCVWD, FY 11-12 Budget, p. 24.

[28] SCVWD, Audited Financial Statement FY 09-10, p. 4.

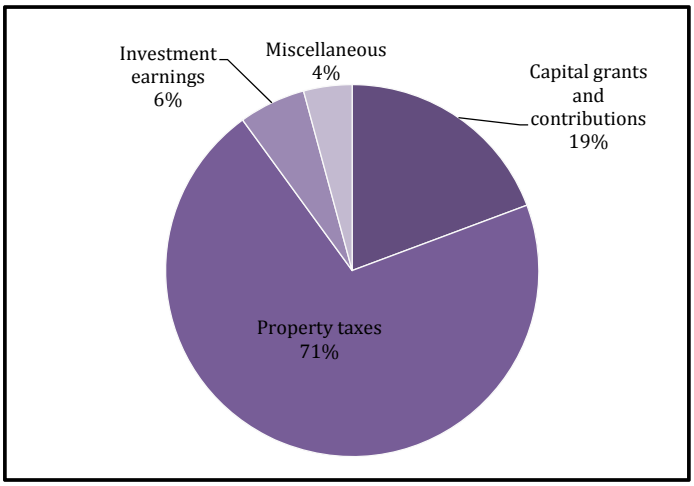
[29] SCVWD, FY 11-12 Budget, p. 4-91.

Revenue Sources

The SCVWD uses both governmental and proprietary funds to account for its operations. The proprietary funds include the Water Enterprise, Equipment and Risk Insurance Funds. Governmental funds include the District's General Fund as well as special revenue funds for five geographic watershed areas, the Clean, Safe Creeks & Natural Flood Protection program, and the Watershed and Stream Stewardship Fund and the COP debt service and construction funds.

The District receives funding from a variety of sources, including treated water, surface/recycled water and groundwater production charges; proceeds from ad valorem property taxes; Clean, Safe Creeks and Natural Flood Protection special parcel tax; benefit assessments that support financing for flood protection projects; interest earnings, cost-sharing agreements and grants. Revenue sources vary by fund. For the purpose of this report revenues have been grouped by governmental activities—general administration, flood protection, and watershed stewardship—and enterprise activities, including water retail, and groundwater management. District revenue sources are shown in Figure 3-5.

Figure 3-5: Governmental Revenue Sources (FY 09-10)

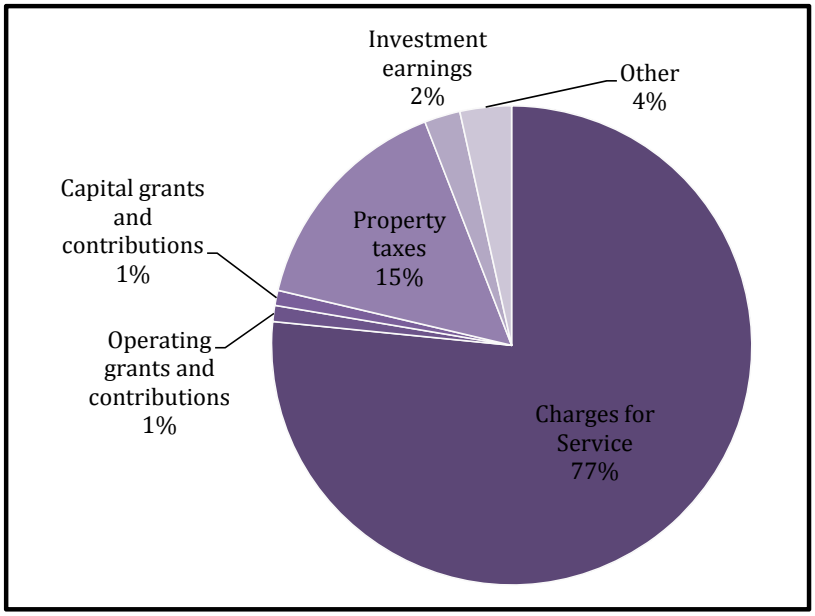


The primary revenue source for governmental functions, including flood protection and watershed stewardship services, is property taxes, special parcel taxes and benefit assessments on properties. Property taxes and other levies on property constituted of 71 percent of revenues dedicated to governmental functions in FY 09-10, as shown in Figure 3-5. As described in Figure 3-6, SCVWD has several property levies in addition to the ad valorem property tax, including two benefit assessments, a special parcel tax, and a direct property tax for debt service obligations.

Figure 3-6: Revenue Sources and Uses (FY 09-10)

Revenue Type	Description	Fund Type	Uses	FY 09-10	%
Property taxes	Santa Clara County allocates property tax revenue to the District from ad valorem taxes levied on land within the County based on assessed property value.	Governmental and Proprietary	General, stewardship, flood protection, water enterprise	$ 53,760,000	20%
Special parcel tax	In 2000, voters approved a 15-year special parcel tax to fund the countywide Clean, Safe Creeks and Natural Flood Protection Program. The levy is based on the proportionate storm water runoff for each property.	Governmental	Flood protection and stream stewardship	$ 32,920,000	12%
Property tax (Voter approved indebtedness)	The District also directly levies taxes to meet debt service obligations in the Water Enterprise Fund; this property tax is calculated based on principal and interest payments related to water utility debt service. Voter approved levy to service the 1963 water general obligation bonds and voter approved levy to repay capital and operating costs related to State Water Projects.	Proprietary	Water enterprise	$ 19,933,000	7%
Benefit assessment	Benefit assessments were approved by voters in 1986 and 1990 to fund debt service related to flood control.	Governmental	Flood protection	$ 19,226,000	7%
Use of money and property	This revenue source consists of interest earned on investment of cash not required for current expenditures, as well as income from property lease or rental.	Governmental and Proprietary	All funds	$ 11,802,000	4%
Reimbursement of capital costs	The District derives revenues from reimbursements of capital costs from the City of San Jose, San Benito County Water District, DWR, SWRCB, and USDA.	Governmental and Proprietary	All funds	$ 6,082,000	2%
Groundwater charges	The District charges a groundwater pumping fee on the 7,500 wells in the County for groundwater management.	Proprietary	Groundwater management	$ 55,189,000	20%
Treated water charges	Charges for water that is processed through District treatment plants and sold to 10 retailers in the County.	Proprietary	Water enterprise	$ 64,157,000	23%
Surface and recycled water charges	The District charges rates for untreated surface water and recycled water for irrigation uses.	Proprietary	Water enterprise	$ 918,000	0%
Operating grants	Grants from local, state and federal agencies for various operating programs.	Proprietary	Water enterprise	$ 1,696,000	1%
Other	Revenue form other sources such as sale of equipment, vehicles, computers, and surplus.	Governmental and Proprietary	All funds	$ 9,240,000	3%
TOTAL				$ 274,923,000	

Figure 3-7: Business-type Revenue Sources (FY 09-10)



Revenues for water enterprise activities were primarily comprised of charges for services (77 percent) and property taxes (15 percent) in FY 09-10, as shown in Figure 3-7. Charges for services include rates for treated and untreated surface water to purveyors, groundwater production charges, and provision of recycled water for irrigation.

Water Charges

Water charges for FY 10-11 are shown in Figure 3-8. Charges shown are in dollars per acre foot of water provided or produced.

Figure 3-8: Water Charges per Acre Foot (FY 10-11)

Groundwater		
Zone W-2		
Agriculture	$	16.50
Non-Ag	$	520.00
Zone W-5		
Agriculture	$	16.50
Non-Ag	$	275.00
Treated Water		
Contract	$	620.00
Non-Contract	$	570.00
Surface Water		
Zone W-2		
Agriculture	$	28.25
Non-Ag	$	531.75
Zone W-5		
Agriculture	$	28.25
Non-Ag	$	286.75
Recycled Water		
Agriculture	$	41.50
Non-Ag	$	275.00

The District uses two water utility charge zones (Zones W-2 and W-5) to account for operations within its water utility enterprise. The North County Zone, or Zone W-2, comprises more than 80 percent of the total water used in the County.

Water charges are evaluated annually, but the District has not increased water charges over the last three fiscal years (FYs 09, 10, 11). The District reported that in FY 11-12, water charges were adopted in May 2011 and became effective July 1, 2011. Groundwater production charges for non-agricultural uses increased by 9.4 percent in Zone W-2, and by 3.6 percent in Zone W-5. The groundwater production charge for agricultural uses increased by 3.6 percent for both zones.

District Resolution 99-21 guides staff in the development of the pricing structure to charge recipients for the various direct and indirect

benefits received. The pricing policy calls for managing water supplies through pricing to obtain the effective utilization of the water resources of the District.

Prior to 1991, it was the Board's practice to establish the agricultural (Ag) groundwater charge at 25 percent of the municipal and industrial (M&I) charge per the limit set by the District Act. In 1991, the Board recognized that continuing the policy of pricing Ag groundwater production charges at 25 percent of M&I would threaten the viability of agriculture in the county. Instead, the Board established an open space credit to set agricultural groundwater production charges at 10 percent, or less, of the M&I charge. This practice became policy in 1999 with the adoption of Resolution 99-21. Section 3 of Resolution 99-21 lays out the underlying framework for the Open Space Credit as follows:

"Water charges if any, shall be recommended by staff each year at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors."

Concerns have been raised as to how collected revenues are benefitting South County residents through service improvements and if SCVWD groundwater charges are subject to Proposition 218 requirements. Great Oaks Water Company claimed that SCVWD improperly charged them during FY 05-06 in violation of Proposition 218 and the District Act. The court ruled that the District's groundwater production charges are subject to Proposition 218, which governs the imposition of certain "property-related" charges, and concluded that these charges must receive voter approval. The court also ruled that SCVWD was operating inconsistent with its enabling statute (§26.3) by unlawfully commingling groundwater revenue with other funds. SCVWD is appealing the judgments of this case.

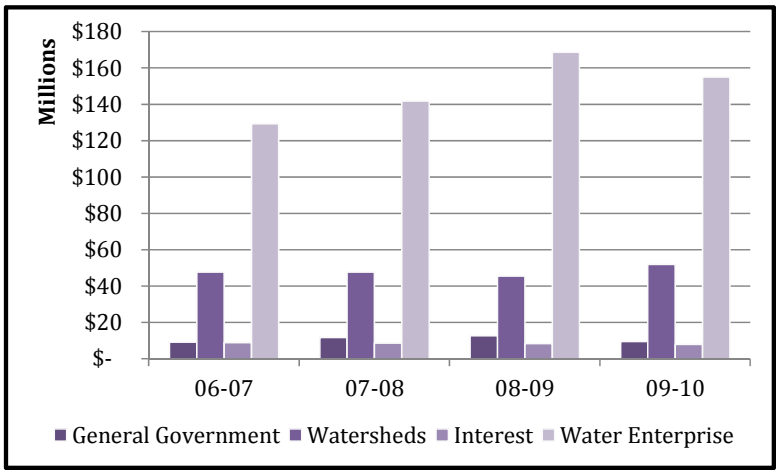
Each spring, the District holds a public hearing on multiple dates to receive comments from citizens and interest groups on the water charges proposed for the next fiscal year.

Expenditures

Water enterprise activities make up a majority of SCVWD's expenditures in any given year. In FY 09-10, water enterprise expenditures were $155 million or 69 percent of SCVWD's total expenditures. Other expenditures in FY 09-10 included watershed stewardship and flood protection services (23 percent), interest on loans (four percent), and general support services (four percent). The four percent is the net of intra-district

payments that are made by the Water Utility and Watersheds divisions to fund administrative support services provided to those operations.

Figure 3-9: Expenditures by Function (FYs 07-10)



District expenditures over the last four fiscal years are shown in Figure 3-9. Water enterprise expenditures peaked in FY 08-09, and then decreased by eight percent in FY 09-10. Watershed stewardship and flood protection is the only district service that had increased expenditures between FY 08-09 and FY 09-10.

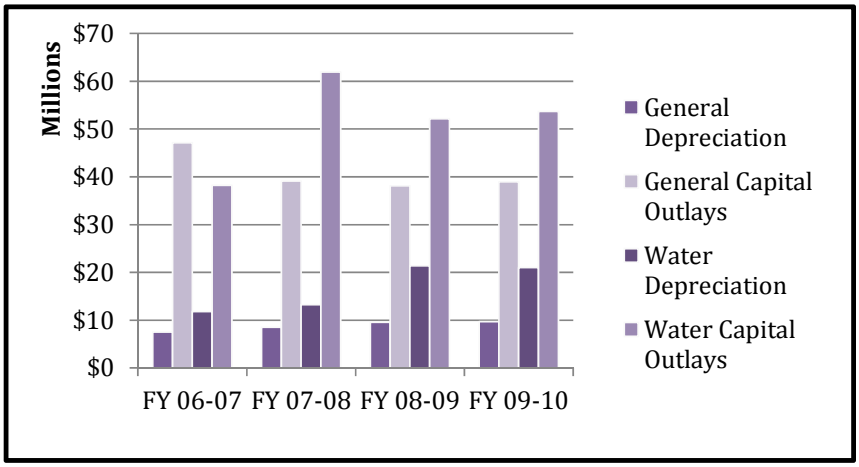
Capital Outlays

Capital improvements are planned for the District's five-year capital improvement plan. The plan for FYs 12–16 includes a total of 90 capital projects with an estimated cost of $2,072 billion,[30] some of which is funded by district partners. SCVWD finances major capital projects by issuing revenue bonds, short-term debt or Certificates of Participation.

The water district was upgraded to a rating of Aa2 from Moody's in September 2007 while the Standard & Poor's rating was maintained at AA. These ratings reflect the water district's strong financial position and the highly rated creditworthiness of water district issued securities.

[30] SCVWD, *2012-2016 5-Year Capital Improvement Plan*, p. II-7.

Figure 3-10: Capital Outlays and Depreciation (FYs 07-10)



The District's annual capital outlays significantly exceed annual depreciation of district owned assets. During FY 09-10, the total increase in the District's investment in capital assets for the current year was four percent (a 3.2 percent increase for governmental activities and a 4.1 percent increase for business-type activities).[31] Consequently, the District spent more on capital investments than they consumed due to regular wear and tear, indicating an adequate level of capital reinvestment to cover depreciation.

Long-term Debt

The District has restricted long-term borrowing to the funding of capital improvement projects and equipment. SCVWD had a total of $175 million in long-term debt and non-current liabilities related to the District's governmental activities, and $240 million related to enterprise activities, as of June 30, 2010. The District issued three certificates of participation in 2003, 2004, and 2007 to finance flood control improvements. The remaining principal balance on the certificates at the end of FY 09-10 was $152 million, which is planned to be paid off with interest by 2030. Long-term debt for water enterprise activities include 1) bonds issued in 1963 for a comprehensive treatment and distribution system, 2) revenue bonds issued in 2006 to refinance bonds from 2000 and to repay indebtedness, 3) 2007 certificates of participation to finance capital improvements in the water utility enterprise, 4) future payments for water banking provided by the Semitropic Water Storage District, 5) a loan from DWR to finance improvements to the Santa Teresa Water Treatment Plant. The remaining principal on all water enterprise bonds and loans was $227 million at the end of FY 09-10, which is planned to be paid off by 2037. The District's long-term debt is summarized in Figure 3-11.

[31] SCVWD, *Audited Financial Statement FY 09-10*, p. 29.

Figure 3-11: SCVWD Long-term Debt (as of June 30, 2010) in thousands

Type of indebtedness	Maturity	Interest Rates	Authorized and Issued	June 30, 2010	Due Within One Year
General long-term obligations					
Certificates of participation					
2003A Certificates of participation	2024	2 - 4.625%	85,715	$ 62,215	$ 4,755
2004A Certificates of participation	2024	2.5 - 5%	32,965	17,875	2,290
2007 Certificates of participation	2030	4% - 5%	78,780	72,350	2,235
Compensated absences				12,137	1,751
Claims payable				7,606	476
Other post employment benefits				3,781	-
Deferred amount on refunding				(7,451)	(482)
Premium on refunded debt				6,305	383
Total general long-term obligations				$ 174,818	$ 11,408
Enterprise Fund Debt					
1963 Water utility bonds - general obligation					
Series D	2012	2.25 - 7%	$ 8,850	$ 910	$ 505
2006A Water revenue bond	2035	3.5% - 5%	74,265	67,535	1,900
2006B Water revenue bond	2035	5.15%-5.31%	25,570	23,905	515
2007A Water revenue COP bond	2037	4% - 5.0%	77,270	75,960	1,375
2007B Water revenue COP bond	2037	5.50%-floating	53,730	52,800	970
Bond discount				(906)	(38)
Deferred amount on refunding				(2,564)	(123)
Deferrend interest rate swap				(7,570)	(281)
Premium on debt issuance				2,861	106
Compensated absences				7,679	1,127
Other post employment benefits				2,389	-
Semitropic water banking agreement	2035		46,900	5,311	-
State revolving fund loan	2027		6,350	5,971	260
Litigation claim				6,090	-
Total enterprise fund debt				$ 240,371	$ 6,316

Reserves

There are two categories of reserves—restricted and unrestricted. The use of restricted reserves is constrained by externally imposed obligations or legal requirements. Unrestricted reserves may be used at the discretion of the Board. The SCVWD Board has chosen to designate uses for the unrestricted reserves. Unrestricted reserve balances are indicative of an agency's ability to weather fiscal and infrastructure emergencies.

The District has established a reserve policy that includes prescribed levels for Operating Reserves, Capital Reserves and Reserves for Funded and Contingent Liabilities. The unrestricted reserve funds and the respective balances are shown in Figure 3-12. The District has an operating and capital reserve of $140.5 million, comprised of $115.8 million for government and $24.7 million for business type activities. This reserve fund is "to ensure adequate working capital for cash flow needs, to provide funding for operating and capital needs that arise during the year, and in the case of the water utility, to protect against revenue shortage caused by unusually wet years."[32] These funds would provide financing for 20 months of operating expenditures for governmental functions and two months for water utility functions. The District reported that the operating and capital reserve for government activities will be used for future capital spending and is projected to be spent down to minimum reserve levels over the next few years.

Figure 3-12: Unrestricted Reserve Balances (FY 09-10)

Unrestricted Reserves	General	Business-type	Total
Debt Proceeds	3,336,000	0	3,336,000
Encumbrances	45,270,000	44,904,000	90,174,000
Market Valuation	2,995,000	1,374,000	4,369,000
Floating Rate Debt Payment Stabilization		605,000	605,000
Operating & Capital Reserve	115,791,000	24,741,000	140,532,000
Supplemental Water Supply	0	8,840,000	8,840,000
Clean Safe Creeks - Maintenance	3,861,000	0	3,861,000
Clean Safe Creeks - Other	4,207,000	0	4,207,000
Clean Safe Creeks - Environmental Enhancement	12,302,000	0	12,302,000
Clean Safe Creeks - Open Space	5,698,000	0	5,698,000
Currently Authorized Projects Reserve	93,564,000	22,182,000	115,746,000
Liability/Workers' Compensation Self-insurance	0	4,780,000	4,780,000
Total	$287,024,000	$107,426,000	$394,450,000

[32] SCVWD, *Draft Operating and Capital Budget FY 11-12*, p. 4-48.

WATER SUPPLY

The District relies on a diverse portfolio of water supplies including local surface supplies and groundwater, SWP and CVP imported water contracts, banking operations, and recycled water. In addition, the District continues to explore local options, such as expanded conservation, groundwater recharge, expanded groundwater emergency pumping, water recycling, desalination, and local and regional storage to promote greater resource diversity and reliability. Pursuing supply diversity is important in maintaining a robust water supply that will help see the County through periods of constrained water supply.

Local Surface Water

The District has numerous water rights to divert and store water from local creeks and streams. These water rights are specified in Figure 3-13.

Local runoff is captured in local reservoirs for recharge into the groundwater basin or treatment at the District's water treatment plants. The total storage capacity of the District reservoirs is about 170,000 AF (without Department of Safety of Dams (DSOD) restrictions). Water stored in District reservoirs provides up to 25 percent of Santa Clara County's water supply. Figure 3-14 shows the District's reservoirs and their existing capacities, restricted capacities, and intended uses.

Figure 3-13: SCVWD Water Rights

Permit No.	Waterbody of Diversion	Permitted Quantity (AFA)
3009	Guadalupe Creek	3,302
3010	Los Gatos Creek	9,090
5061	Coyote River	24,560
4916	Almaden Creek	2,500
4917	Guadalupe Creek	3,500
4918	Stevens Creek	4,000
4919	Calero Creek	3,500
4920	Almaden Creek	6,000
4921	Los Gatos Creek	1,684
5062	Coyote River	5,000
5428	Guadalupe Creek	323[1]
6565	Penitencia Creek	3,500
7689	Los Gatos Creek	30,000
8494	Coyote River	71,100
8488	Llagas Creek	7,500
10000	Uvas Creek	10,000[2]
12933	Llagas Creek	7,200
14707	Coyote Creek	20,180
Total		**212,939**

Source: SWRCB Division of Water Rights

Notes:

Licenses not shown.

Permitted quantities are annual maximums - typically confined to the winter-spring months (e.g., October 1 to May 1). Allowable diversion seasons do vary.

[1]Permitted diversion is 0.77 cfs

[2]Permitted surface storage is shown. Also allows for 14,400 underground (groundwater) storage

Figure 3-14: District Reservoirs

Reservoir	Year Completed	Reservoir Capacity (acre-feet)[1]	Restricted Capacity (acre-feet)	Use
Almaden[2]	1935	1,586	1,260	Recharge & treated
Anderson[2]	1950	90,373	61,810	Recharge & treated
Calero[2]	1935	9,934	5,671	Recharge & treated
Chesbro	1955	7,945	7,945	Recharge
Coyote[2]	1936	23,244	12,382	Recharge & treated
Guadalupe[2]	1935	3,415	2,738	Recharge
Lexington	1952	19,044	19,044	Recharge
Stevens Creek	1935	3,138	3,138	Recharge
Uvas	1957	9,835	9,835	Recharge
Vasona	1935	495	495	Recharge
Total		**169,009**	**124,318**	

Source: From SCVWD Urban Water Management Plan 2010 - Table 3-2, District Reservoirs
Notes:
[1] Reservoir capacities based on most recent surveys and storage at spillway.
[2] Restricted capacity per Department of Safety of Dames interim operating restrictions.

Most of the local reservoirs were sized for annual operations, storing water in winter for release to groundwater recharge in summer and fall. The exception is the Anderson-Coyote reservoir system, which provides valuable carryover storage from year to year and can serve as a backup supply source to the District's water treatment plants when imported water deliveries are curtailed. Due to stability risks because of the age of many of these dams, the Department of Safety of Dams (DSOD) has imposed interim operating restrictions on Anderson, Coyote, Almaden, Calero and Guadalupe reservoirs which has resulted in a loss of storage capacity and water supply yield. In total, capacity restrictions due to dam safety issues has reduced operative capacity by about 45,000 AF.

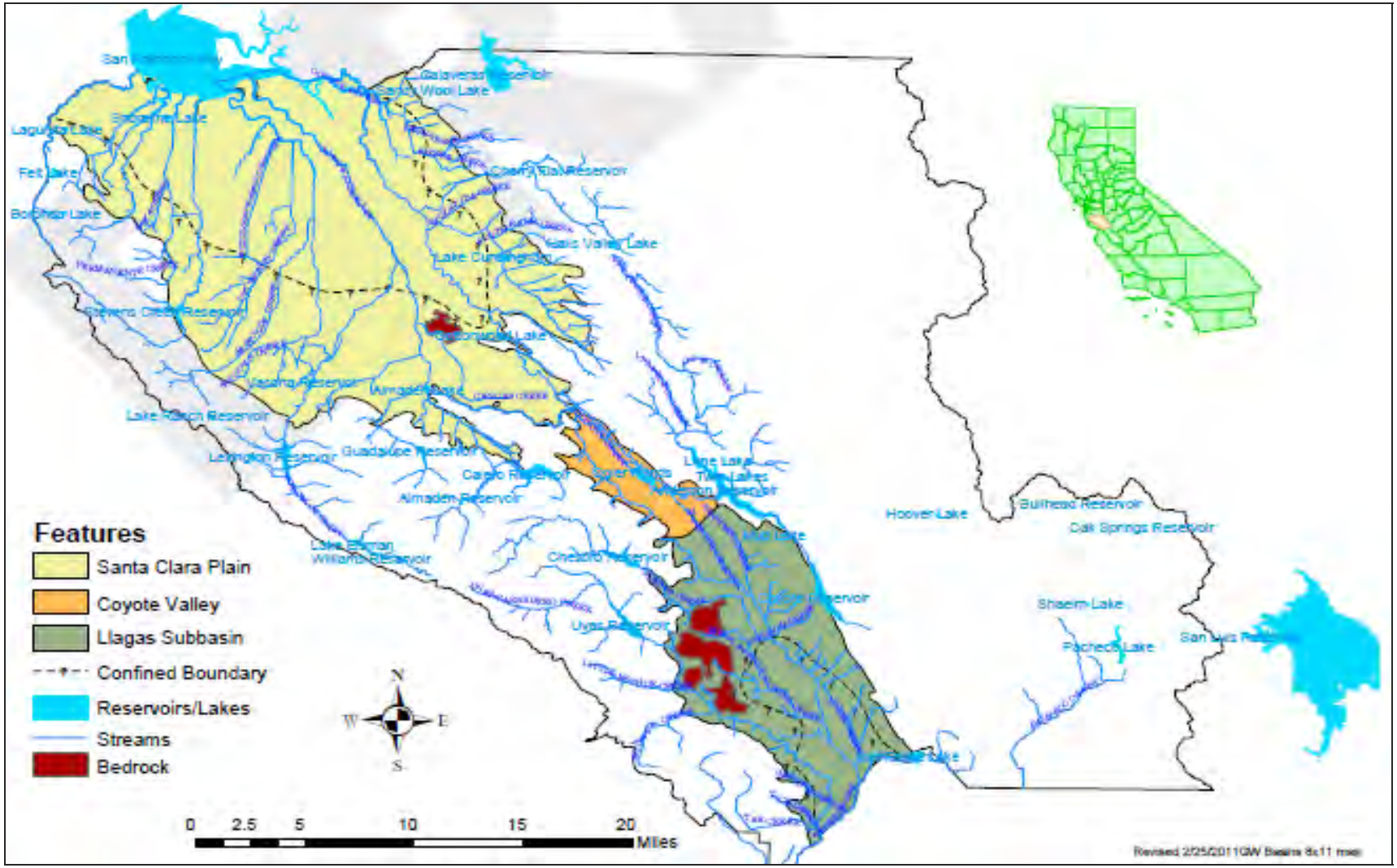
The management of stored water in these reservoirs is adjusted as seasonal conditions change. Most stored water is released in the spring after the rainy season where it recharges local underground aquifers, or it is sent to District treatment plants. Reservoirs typically fall to their lowest levels in the late fall, but rarely are empty (dead pool). To protect existing fish habitat, minimum water levels have been established. Several factors affect the District's reservoir operations and its use of surface water rights including maintaining storage levels for environmental or recreational purposes, dam safety requirements, and managing total District supplies for reliability. Existing recharge capability can also be a limiting factor in the District's ability to fully utilize its surface water supplies.

Groundwater Resources

Local groundwater resources make up the foundation of District water supply. Groundwater pumping provides up to half of the County's water supply during normal years. In the South County, groundwater pumping provides more than 95 percent of the supply for all beneficial uses and 100 percent of the drinking water supply. While reservoirs are a visible indicator of the District's local water supply, the majority of local and imported water reserves are stored in the groundwater aquifers that underlie Santa Clara County. These groundwater basins perform multiple functions including transmission, filtration, and storage. Eventually, groundwater reaches pumping zones, where it is extracted for municipal, industrial, and agricultural uses. Groundwater is replenished naturally from rainfall and augmented by the District-operated recharge program utilizing both local and imported water.

The District does not currently operate groundwater wells and is not able to directly substitute groundwater for surface water, due to a lack of District-owned water supply wells and related infrastructure. The District reported that replacing local and imported surface water with groundwater was not a viable option as the groundwater basin could not sustain this use for a long period. The District is currently pursuing well fields that will tie directly to the treated water distribution system for increased operational flexibility and system reliability. A pilot facility, the San Tomas Well Field, is currently being developed in Campbell.

Figure 3-15: Groundwater Sub-basin Study Areas in Santa Clara County



Within Santa Clara County, the District manages two groundwater subbasins that transmit, filter, and store water: the Santa Clara Subbasin (DWR Subbasin 2-9.02) and the Llagas Subbasin (DWR Subbasin 3.301). The rights to pump groundwater from the basin has not been adjudicated nor has DWR identified the basin as overdraft or projected that the basin will become overdraft. In its water supply planning, the District frequently splits the Santa Clara Subbasin into two subareas, the Santa Clara Plain and the Coyote Valley. Although part of the same subbasin, these two subareas have different groundwater management challenges and opportunities from each other and are in different groundwater charge zones. The subbasin study areas are shown in Figure 3-15.

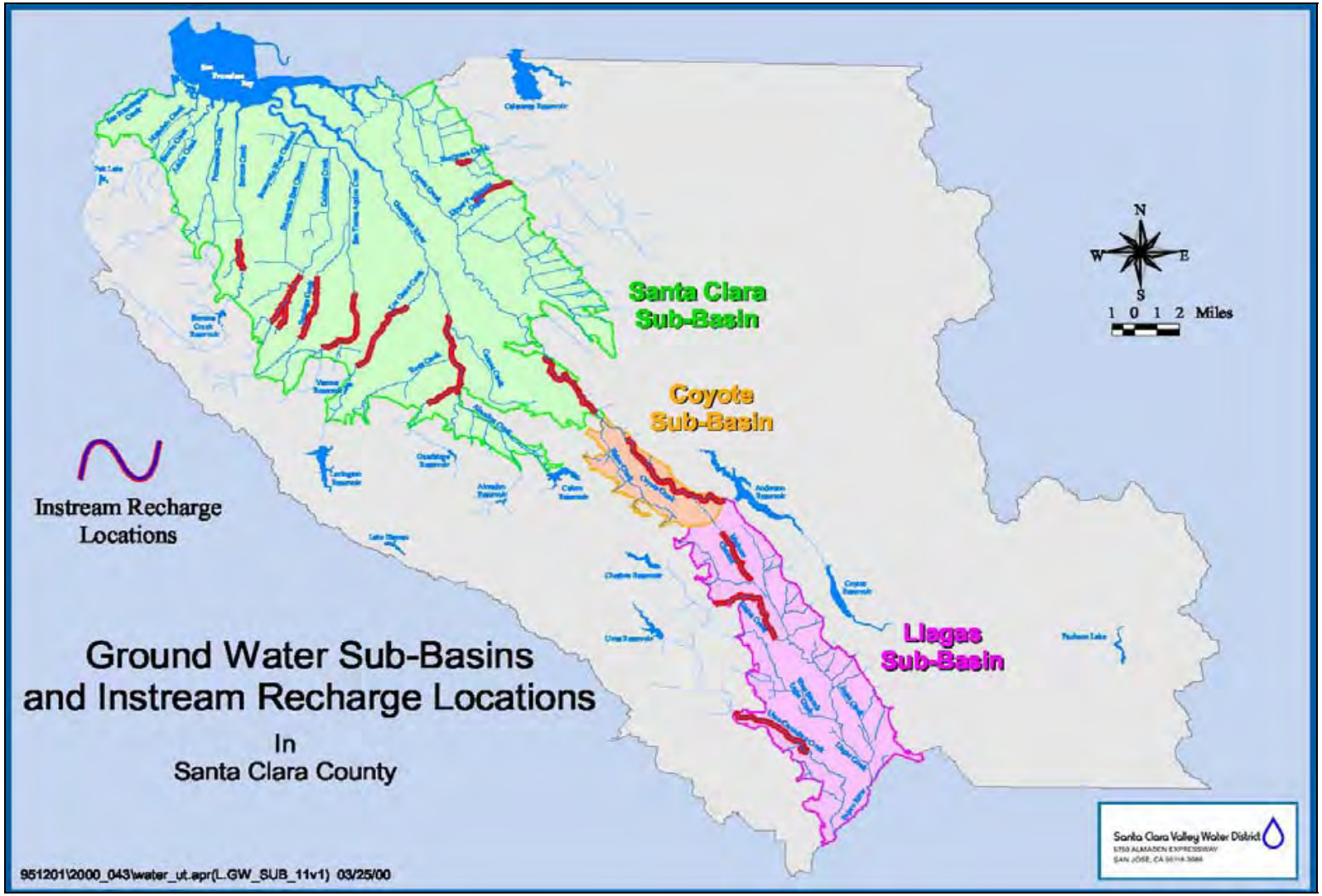
The District estimates the long-term operational storage capacity of the Santa Clara Plain to be 350,000 AF. In any given year, the amount of groundwater that can be withdrawn depends on current groundwater and hydrologic conditions, as well as availability of imported water for managed an in-lieu recharge. The District defines operational storage capacity as the volume of groundwater that can be stored in a basin or subbasin as a result of the District's management measures. Operational storage capacity is generally less than total storage capacity as it accounts for the available pumping capacity and the avoidance of both land subsidence and high groundwater conditions.

The Coyote Valley portion of the Santa Clara Subbasin is an alluvial filled basin hydraulically connected to the Santa Clara Plain to the north. The Subbasin is approximately seven miles long and ranges in width from a half mile to three miles, with a surface area of approximately 15 square miles. The District estimates the operational storage capacity of the Coyote Valley Subbasin to be between 23,000 and 33,000 AF.

The Llagas Subbasin extends from the groundwater divide at Cochrane Road, near Morgan Hill, to the Pajaro River (the Santa Clara San Benito County line) and is bounded by the Diablo and Coast Ranges. The Llagas Subbasin is approximately 15 miles long, three miles wide along its northern boundary, and six miles wide along the Pajaro River. The depth of alluvial fill and the underlying Santa Clara Formation varies from about 500 feet at the northern divide to greater than 1,000 feet at its south end. The District estimates the operational storage capacity of the Llagas Subbasin to be between 150,000 and 165,000 AF.

Recharge to the groundwater basin consists of both natural groundwater recharge and artificial recharge of local surface water and imported water. Natural groundwater recharge includes recharge from rainfall, net leakage from pipelines, seepage from the surrounding hills, seepage into and out of the groundwater basin, and net irrigation return flows to the basin. Figure 3-16 shows the locations of the instream recharge areas, relative to each of the Subbasins.

Figure 3-16: Groundwater Subbasins and Instream Recharge Locations



Effective natural groundwater recharge is that portion of natural groundwater recharge that contributes to usable water supply. Estimates of the effective natural groundwater recharge (based upon groundwater basin modeling) for the three groundwater study areas are shown in Figure 3-17.

Figure 3-17: Effective Natural Groundwater Recharge (AFY)

Hydrologic Condition	Santa Clara Plain	Coyote Valley	Llagas Subbasin	Total
Average	35,100	2,200	23,000	60,300
Wet (1983)	56,300	5,300	33,500	95,100
Single Dry (1977)	26,900	1,300	19,700	47,900
Multiple Dry-Year Average (1987-1992)	27,400	2,000	21,000	50,400

Source: From SCVWD Urban Water Management Plan 2010 - Table 3-4, Effective Natural Groundwater Recharge (acre-feet per year)

As effective natural recharge is not sufficient to replenish the amount of groundwater withdrawn annually, the District conducts an active managed recharge program. The District operates and maintains 18 major recharge systems, including over 70 off-stream ponds with a combined surface area of more than 320 acres, and over 30 local creeks. Runoff is captured in the District's reservoirs and released into both in-stream and off-stream recharge ponds for percolation into the groundwater basin. In addition, imported water is delivered by the raw water conveyance system to streams and ponds.

Imported Water Supplies

District imported water is conveyed through the Sacramento-San Joaquin Delta and then pumped and delivered to the County through three main pipelines: the South Bay Aqueduct, which typically carries water from the State Water Project (SWP), and the Santa Clara Conduit and Pacheco Conduit, both of which typically bring water from the federal Central Valley Project (CVP) via San Luis Reservoir,part of the San Luis Unit of the West San Joaquin Division of the CVP.

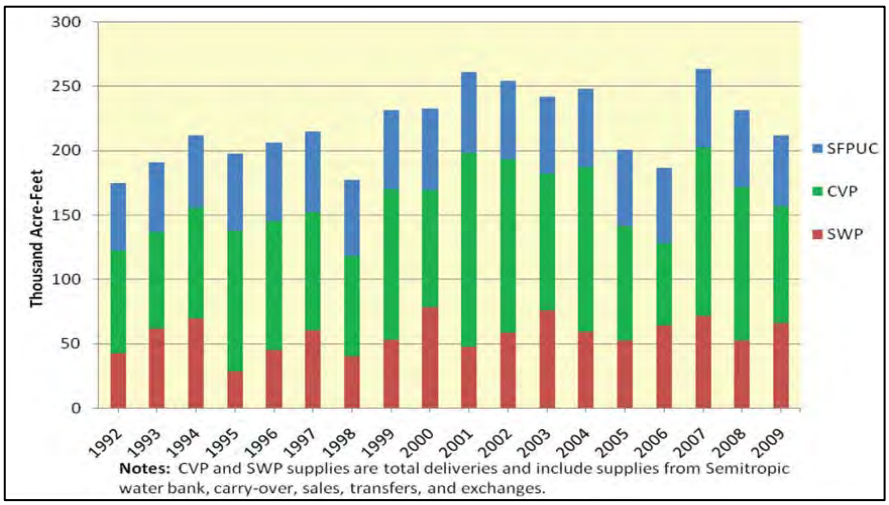
The District has a contract for 100,000 AFY from the SWP and a 152,500 AFY contract from the CVP. While almost the entire SWP contract is used for M&I purposes, about 83 percent of the CVP allocation is delivered for M&I use with the remaining 17 percent used for irrigation purposes. The actual amount of water delivered is typically less than these contractual amounts and depends on hydrology, conveyance limitations, and environmental regulations. Accordingly, the District routinely acquires supplemental imported water to meet the County's needs from the water transfer market, water exchanges, and groundwater banking activities. Water imported from the CVP and SWP provides, on average, 40 percent of the supplies used annually in the county and the District works to safeguard its access to these supplies. Historical imported deliveries to Santa Clara County from SWP, CVP, and the SFPUC system are shown in Figure 3-18. In addition to these amounts delivered to Santa Clara County, since 1996 the District has

delivered part of its SWP and CVP allocations in wet years to a groundwater bank in Kern County, the Semitropic Water Bank. The District has also used part of its imported water supplies to generate revenue through sales in the water transfer market. These banking and water transfer activities are more fully described in later sections.

In addition to the District's contracted supplies from the SWP and CVP, eight retail agencies and NASA-AMES in Santa Clara County contract with the City and County of San Francisco to receive water imported from the Tuolumne River watershed as well as watersheds around the Bay Area. The eight agencies are: cities of Palo Alto, Mountain View, Sunnyvale, Santa Clara, San Jose and Milpitas, Purissima Hills Water District and Stanford University. NASA-AMES is considered a retail customer of San Francisco. This imported water is conveyed through the regional water system owned and operated by the San Francisco Public Utilities Commission (SFPUC). The District does not control or administer SFPUC supplies delivered to the county; however, this supply reduces the demands on District-supplied water.

For the District, its entire imported surface water supply is conveyed through the Sacramento-San Joaquin River Delta (or Delta) from upper source area watersheds off the Sacramento and San Joaquin rivers and tributaries.

Figure 3-18: Santa Clara County Imported Water Supplies (1992-2009)



The importance (and sensitivity) of the Delta in providing long-term, reliable, and adequate water supply on demand is well known to the District and indeed, all exporters. The ongoing institutional, regulatory, legal, and environmental issues associated with the Delta represent one of the most vital challenges facing the District regarding its imported surface water supplies. These constraints have been fully described elsewhere and are not repeated here.

Figure 3-19 summarizes the District's CVP/SWP contract amounts, as well as its imported allocations under normal year, multiple dry-year and single dry year supplies. Also shown are the SFPUC supplies even though the District has no control over these imported supplies. SWP and CVP imported supplies are based on the "State Water Project

Delivery Reliability Report 2009" and associated CALSIM II modeling results for hydrologic years 1922 - 2003 with 2029 demands and level of development including climate change.

Figure 3-19: Santa Clara County Imported Water Supplies

Source	Contract Amount (AFY)	Normal Year (2000) (AFY)	Multiple Dry-Year Average (1987-1992) (AFY)	Single Dry-Year (1977) (AFY)
SWP[1]	100,000	64,000	31,830	11,000
CVP[1]	152,500	108,120	80,270	69,180
SFPUC supplies through 2018[2]		65,500	50,150 [3]	52,600 [3]
SFPUC supplies after 2018[4]		63,850	48,500[3, 5]	50,950[3,5]

Source: From SCVWD Urban Water Management Plan 2010 - Table 3-6, Santa Clara County Imported Water Supplies (AFY)

Notes:

[1] SWP and CVP values are based on DWR 2009 Reliability Study and CALSIM II modeling results for future 20290 conditions with climate change and include both M&I and Ag

[2] Based on Interim Supply Allocations adopted by SFPUC in December 2010

[3] Based on "Procedures for Pro-Rata Reduction of Wholesale Customers' Individual Supply Guarantees" under 2010 demand conditions and Tier Two Allocations calculation spreadsheet provided by BAWSCA

[4] Based on SFPUC Individual Supply Guarantees (ISGs)

[5] For planning purposes, BAWSCA has recommended that all its agencies use the values associated with the Tier Two Drought Allocation Plan for all years out to 2035. San Jose and Santa Clara have temporary/interruptible contracts with the SFPUC. If a drought were to occur at such time that the SFPUC has terminated or reduced either or both of these cities' individual contracts, their drought allocations would be diminished or eliminated.

DWR's 2009 SWP Delivery Reliability Report demonstrates that the projected long-term average delivery amounts of contractual SWP supplies (referred to as "Table A" for SWP contracting purposes) have decreased in comparison to previous estimates. However, the projections developed by DWR are predicated on conservative assumptions, which make the projections useful from a long range urban water supply planning perspective. Even under normal years (e.g., 2000), significant curtailments to imported federal/State water supplies are anticipated. Multiple dry-year projections (e.g., 1987-1992 period) demonstrate further diminishment of contract allocations from the CVP/SWP with significant decreases (over 50 percent) in contractual SWP Table A allocations. Under a worst-case, single dry-year (i.e., 1977) scenario, both CVP/SWP allocations are further depleted; so much so in fact that SWP allocations are about 10 percent of the contract quantity. These represent significant reductions to the District's contracted federal/State water supplies. In contrast to these shortage years, the SWP and CVP can also deliver 100 percent of contract quantities, which the projects did as recently as 2006. Depending on hydrology, the projects may also deliver surplus water temporarily available in the Delta known as "Article 21" water, if delivered by the SWP, or "Section 215," if delivered by the CVP, in addition to allocations based on contract quantities.

Water Transfers and Exchanges

The highly variable nature of annual imported supplies compels the District to look at a variety of supplemental supply options. Transfers, exchanges, and a water banking

program help the District manage uncertainty and variability in supply as each water year develops. In addition, spot market transfers, dry year options transfers, and drought response actions can effectively supplement supply. Under certain water supply conditions, the District may also use the water transfer market to generate revenue to offset fixed costs or support funding of other Water Utility programs. The District considers and evaluates transfer opportunities as they become available.

Short-term, or spot-market, water transfers usually involve an agreement to purchase water within a one- to two-year period. The District routinely uses short-term water transfers to increase water supplies in times of shortage. In 2009, for example, the District purchased water from the State Drought Water Bank. In other dry years, SWP and CVP contractor groups (the State Water Contractors and San Luis and Delta-Mendota Water Authority) have developed collective water purchase programs. In these programs and in the State Drought Water Bank, the District's access to transfer water is limited to its pro-rated share, which is typically based on its SWP or CVP contract amount. Therefore, the District also carries out transactions independently with sellers in the market, including other water contractors and water rights holders. For example, in the recent dry years of 2007-2009, the District made annual purchases of 3,100 AF from Browns Valley Irrigation District in the Yuba River watershed (a tributary of the Feather River in the Sacramento Valley).

Supply acquisition through transfers is typically straightforward, although seasonal Delta pumping restrictions (typically April through June) can be a challenge for transfers that must be conveyed from areas upstream of the Delta, such as the Sacramento Valley, to areas south of the Delta. However, in very dry years, when transfers are most needed, the capacity for "north-south" transfer water at the SWP and CVP Delta pumping plants is not likely to be a constraint because there is less project water to be delivered in a low allocation year. In addition, in all year types, a transfer market exists among various water users south of the Delta which is not subject to the Delta pumping constraints applied to transfer water from areas upstream of the Delta.

Water transfers also involve a dynamic institutional process. Finding willing sellers and completing agreements requires substantial staff time, and it is usually necessary to make purchase commitments relatively early in the year, before the District's overall water supply situation is fully known. The price of short-term transfers increases as the outlook for the year's hydrology becomes critically dry, and/or as regulatory restrictions limit pumping of imported water from the Delta. There is a risk that the supply available in the market will be insufficient to meet the District's needs. There is also a risk that the District may commit to buy water and find out later in the spring that the short-term transfer is not needed. To manage such changing conditions, the District has occasionally both bought and sold short-term water transfers within the same year.

Long term transfers refer to transfer agreements that provide terms and conditions for the transfer of water over multiple years. At present, the District has two agreements that

are classified as long-term transfers. In 1998, the District and two other agencies (Pajaro Valley Water Management Agency and Westlands Water District) jointly participated in the permanent assignment of 6,260 AF from Mercy Springs Water District, an agricultural CVP contractor. Under the agreement, the District has an option for dry-year supplies totaling at least 20,000 AF over a 20-year period. The dry-year option may continue for subsequent terms depending on the future plans of Pajaro Valley Water Management Agency. In 2010, the District entered into a four-year agreement with Patterson Irrigation District, a contractor in the San Joaquin Valley with a reliable CVP supply based on their San Joaquin River water rights. The total amount that will be transferred over the term of the agreement is 13,350 AF, with flexible annual deliveries of at least 4,000 AF.

Exchanges involve one party providing water to another in one year, in return for a like amount of water in a future year. If the exchange agreement provides for return of water in future dry years, the exchange ratio may be higher than one-to-one. The SWP allows contractors to exchange water using ratios up to two-to-one, that is, for every two acre-feet provided to the exchange partner, one acre-foot is returned in a future dry year. These transactions can improve water supply reliability from year to year, and have other financial or operational benefits. The District has previously carried out annual exchanges with San Benito County Water District and also works with other CVP contractors in the San Joaquin Valley as exchange partners.

Groundwater Banking

The District initiated its groundwater banking strategy in 1996 when it approved an agreement with Semitropic Water Storage District (Semitropic) to store 45,000 AF of SWP water in Semitropic's groundwater basin on behalf of the District. In 1997, the District approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in ten years since 1997, and withdrawn water in four years. The agreement allows the District to maximize the economic value of its imported water contracts by fully utilizing water that might otherwise have to be turned back to the SWP or CVP. For example, in 2006, a very wet year, the District was able to store nearly 58,000 AF of imported water for use in future dry years. The total storage capacity available to the District in the Semitropic Water Bank is 350,000 AF, and the current storage balance (January 2011) is 264,837 AF.

The Semitropic Water Bank is an "in lieu" storage program, meaning that Semitropic's farmers use surface water delivered on behalf of the District and other banking partners to irrigate their crops, rather than pump groundwater, which effectively increases groundwater storage. The District does not retrieve its stored water directly from the groundwater basin at Semitropic. Rather, the District retrieves its water by taking SWP water pumped from the Delta at Banks Pumping Plant, in exchange for Semitropic pumping groundwater to meet SWP water needs within its own district, or pumping groundwater into the California Aqueduct to meet the needs of other SWP contractors downstream.

Since the groundwater delivered to the California Aqueduct is exchanged with overall SWP supplies, this component of the District's Semitropic Water Bank retrieval (up to 31,500 AF) is usually not limited by annual SWP contract allocations. The District's ability to take additional water from the Semitropic Water Bank (up to 78,000 AF total) is proportional to SWP allocations, because this component of the exchange is limited to Semitropic's own SWP contract supply. During drought years, therefore, the amount of water bank balance that the District can withdraw beyond the 31,500 AF groundwater exchange portion may be limited. The quality of water delivered to the District is the same as the District's SWP contract water conveyed through the Delta and the South Bay Aqueduct.

Recycled Water

In Santa Clara County, recycled water is developed by the county's four wastewater treatment plants, owned and operated by local cities within the county. Recycled water is treated municipal wastewater treated to a level that makes it appropriate for various non-drinking water purposes (non-potable uses). The District works with these four wastewater entities on partnerships to promote water recycling for irrigation and industrial uses through agreements, collaborative projects, financial incentives and technical assistance. In FY 09/10 approximately 14,500 AF of recycled water was used in the county, thereby preserving an equal volume of drinking water supplies. The four wastewater facilities located within the county are as follows:

- San José/Santa Clara Water Pollution Control Plant (SJ/SC WPCP)
- South County Regional Wastewater Authority (SCRWA)
- Sunnyvale Water Pollution Control Plant (SWPCP)
- Palo Alto Regional Water Quality Control Plant (PARWQCP)

The District has been working with the City of San José on recycled water programs since 1994, providing financial and technical support for system expansion. In early 2010, after many years of collaborative discussions and negotiations, the District Board of Directors and the San José City Council executed a 40-year long-term agreement with the City of San José on the ownership of an advanced recycled water treatment facility, operation and maintenance of recycled water facilities; decisions on export of recycled water outside the county, future expansion that most effectively meets the needs of the community, joint technical studies on recycled water issues, and coordinated recycled water outreach.

Under an original 1999, recycled water partnership agreement between SCRWA, SCVWD and the cities of Gilroy and Morgan Hill, SCVWD delivered approximately 2,000 AF of recycled water to irrigators in the Gilroy area in FY 09-10. A number of near-term

capital improvement projects are expected to increase recycled water delivery by an additional 800 AFA.

Desalination

The District is evaluating whether desalinated water could meet local water supply needs. The District has collaborated with the San Francisco Bay Area's four other water agencies that collectively serve 5.4 million people. The five agencies working on the Bay Area Regional Desalination Project (BARDP) are: Contra Costa Water District, East Bay Municipal Utility District, San Francisco Public Utilities Commission, Zone 7 Water Agency, and Santa Clara Valley Water District. The benefits these five agencies bring, is the desire to leverage existing pipelines and interties and to share a regional facility that minimize costs and environmental impacts.

The BARDP includes the following objectives:

- Increase supply reliability by providing a water supply when needed from a regional facility;
- Provide additional source of water during emergencies such as earthquakes or levee failures;
- Provide a supplemental water supply source during extended droughts; and,
- Allow other major facilities, such as treatment plants, water pipelines, and pump stations, to be taken out of service for maintenance or repairs.

Emergency Preparedness

Water Supply Hazards

As infrastructure ages, both the SWP and CVP systems become increasingly vulnerable to natural disasters. The SWP's South Bay Aqueduct overlies the Hayward Fault, and the CVP's Santa Clara Conduit overlies the Calaveras Fault.

An earthquake that affects the Sacramento-San Joaquin Delta could reduce the District's ability to take its imported water supplies from both the CVP and SWP, either from failure of the District's conveyance system, failure of State or federal conveyance infrastructure, or saltwater intrusion due to Delta island levee failure. In addition to disrupting contract supply deliveries, outages to the conveyance system would also impact the District's ability to put water into or take water from the Semitropic Water Bank, or to take delivery of water transfers from north-of-Delta sources.

The Delta has more than 1,000 miles of levees that are vital to flood protection for islands that are, in some cases, more than 20 feet below sea level. Many of the levees are also vital for protecting the quality of SWP and CVP water conveyed through the Delta. Yet many of these levees were constructed in the early 1900's without proper engineering and the integrity of the Delta levee system has declined to a dangerous level. An earthquake that causes the flooding of one or more Delta islands could result in saltwater intrusion that seriously degrades imported water quality. In June 2004, a levee in the Jones Tract failed, resulting in total inundation of the island and impacts to SWP and CVP water quality for several months.

Emergency Water Supply

In 2003, the District initiated the Water Utility Infrastructure Reliability Project (IRP) to determine the current reliability of its water supply infrastructure (pipes, pump stations, treatment plants) and to appropriately balance level of service with cost. The project measured the baseline performance of critical district facilities in emergency events and identified system vulnerabilities. The study concluded that the District's water supply system could suffer up to a 60-day outage if a major event, such as a 7.9 magnitude earthquake on the San Andreas Fault, were to occur. Less severe hazards, such as other earthquakes, flooding and regional power outages had less of an impact on the District, with outage times ranging from one to 45 days.[33]

[33] SCVWD, Draft UWMP, 2011, p. 9-7.

The District does not currently operate groundwater wells and is not able to directly substitute groundwater for surface water due to a lack of District-owned water supply wells and related infrastructure. However, the District is currently pursuing well fields that will tie directly to the treated water distribution system for increased operational flexibility and system reliability. A pilot facility, the San Tomas Well Field, is currently being developed in Campbell.

Interties and Back-up Supply

In order to enhance reliability in case of transmission system disruptions or shut downs, the water district can transfer up to 40 mgd of treated water to or from the San Francisco Public Utilities Commission (SFPUC) through an intertie located in Milpitas during planned or unplanned system outages. The District and SFPUC jointly own the common intertie facilities, and has signed a long-term agreement that specified responsibilities for operation, maintenance and payment of costs.

Existing water supply wells owned and operated by retailers will be able to provide emergency backup to treated water supplies when sufficient groundwater is available. The District will continue to explore opportunities to re-operate the water supply system to improve the integration of surface water and groundwater resources. The District intends to work with local retailers to ensure that backup groundwater supplies are ready and available from retailers' wells when needed to supplement treated surface water supplies.

WATER DEMAND

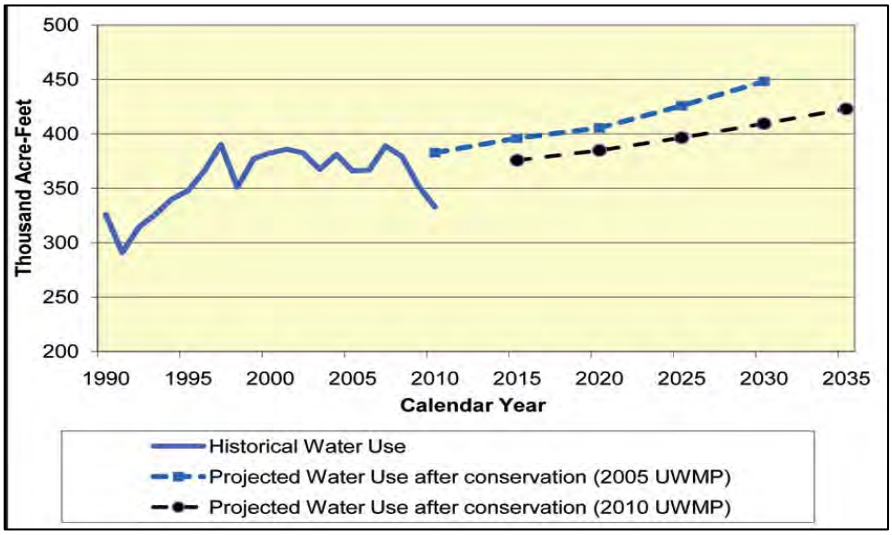
As the principal water wholesaler in Santa Clara County, the District is responsible for planning the water supply of the county with the SFPUC and local retailers to ensure adequate water supplies that can meet both current and future demands. The District strives to meet the water demands of its retail customers under all variable hydrologic conditions, including meeting the treated water contract requirements to its retail water suppliers. As the groundwater management entity for the county, the District's actively manages the various groundwater subbasins through coordinated natural and artificial recharge efforts (see the Groundwater Resources section of this chapter).

Water use within the District service area has increased since 1990. Figure 3-20 illustrates the historical water use changes since 1990 and two projected demand forecasts based on the 2005 and 2010 Urban Water Management Plans (UWMPs). The dip in 1991 is reflective of the prolonged drought between 1987 and 1992 and results of water use reduction measures.

Based on ABAG projections from 2009, adjusted from the 2010 Census population, the population of Santa Clara County would increase to 2,369,584 persons by the year 2035, representing an almost 33 percent increase over 2010. This increasing population along with the anticipated significant job growth that would go along with it would notably

increase the demand for water throughout the county. The District estimates that overall, countywide water demand will increase by approximately 70,000 acre-feet per year or, by 18 percent, over the next 25 years. The 2005 UWMP showed that the 2035 projected water use, after water conservation, was about 450,000 AFY. At the time, the planned water conservation efforts through 2030 was anticipated to offset over half of the additional water supplies needed to meet these expected increases in water demand.

Figure 3-20: District Historical and Projected Water Demand



Since 2005, however, significant curtailment of imported water supplies through the Delta have occurred (see the Regulatory Updates and Challenges chapter). As discussed in the Imported Water Supply section of this Chapter, DWR's 2009 SWP Delivery Reliability Report describes reductions in SWP allocations greater than those assumed in earlier 2005 and 2007 DWR delivery reliability reports. Today, the average annual SWP delivery is a little over 60 percent for both current and projected future conditions. Over multiple dry-year periods, this average is reduced to about 32 percent. Moreover, in addition to these direct allocation reductions, overall normal and wet-year allocations may be reduced such that SCVWD would face cumulative adverse effects in their ability to fully capitalize on wet-year supplies for local storage and out-of-county banking.

Driven by water use reductions in recent years and the 20 percent per capita use reduction by 2020 mandated by SB7-7 on retail agencies, the 2010 UWMP downgraded its 2030 water use forecast to about 410,000 AFY and a 2035 anticipated water use of about 423,000 AFY. Figure 3-21 shows the anticipated future demands of the District's retail customers through 2035.

Figure 3-21: District Retailer Demand Projections after Conservation Savings (AF)

Source	Demand Year				
	2015	2020	2025	2030	2035
Normal Year 2002					
SWP[1,3]	64,000	64,000	64,000	64,000	64,000
CVP[1,3]	108,100	108,100	108,100	108,100	108,100
Local Supplies[4]	145,020	145,020	153,800	153,800	153,800
Recycled Water[5]	18,680	22,280	25,780	28,180	29,380
SFPUC[6]	61,000	63,700	63,850	63,850	63,850
New Supplies/Conservation per Water Master Plan	0	0	0	0	3,790
Total Supplies	**396,800**	**403,100**	**415,530**	**417,930**	**422,920**
Demand before Conservation Savings (1992 base year)	438,820	460,910	483,120	507,870	521,420
Demand After Consrvation Savings[8]	**375,720**	**384,810**	**396,420**	**409,370**	**422,920**
Single Dry Year 1977					
SWP[2,3]	42,500	42,500	42,500	42,500	42,500
CVP[2,3]	69,200	69,200	69,200	69,200	69,200
Local Supplies[4]	63,600	63,600	63,600	63,600	63,600
Recycled Water[5]	18,680	22,280	25,780	29,180	29,380
SFPUC[7]	52,600	50,950	50,950	50,950	50,950
Groundwater Reserves and Surface Carryover Supplies	129,140	136,280	144,390	153,940	167,290
Total Supplies	**375,720**	**384,810**	**396,420**	**409,370**	**422,920**
Demand before Conservation Savings (1992 base year)	438,820	460,910	483,120	507,870	521,420
Demand After Consrvation Savings[8]	**375,720**	**384,810**	**396,420**	**409,370**	**422,920**
Middle Dry Year Average 1987-1992					
SWP & Semitropic[1,3]	60,500	60,500	60,500	60,500	60,500
CVP[1,3]	80,270	80,270	80,270	80,270	80,270
Local Supplies[4]	102,300	102,300	102,300	102,300	102,300
Recycled Water[5]	18,680	22,280	25,780	29,180	29,380
SFPUC[7]	50,150	48,500	48,500	48,500	48,500
Groundwater Reserves and Surface Carryover Supplies	51,300	51,750	50,250	68,150	66,750
Total Supplies	**363,200**	**365,600**	**367,600**	**388,900**	**387,700**
Demand before Conservation Savings (1992 base year)	438,820	460,910	483,120	507,870	521,420
Demand after Long-term Conservation Savings[8]	375,720	384,810	396,420	409,370	422,920
Demand After Short-term Consrvation Savings[9]	**363,200**	**365,600**	**376,600**	**388,900**	**387,700**

Notes:
1) SWP and SVP supplies based on State Water Project Delivery Reliability Report 2009 and associated CALSIM II Modeling Results under 2029 demand conditions with climate change.
2) SWP and SVP supplies based on State Water Project Delivery Reliability Report 2009 and associated CALSIM II Modeling Results under 2029 demand conditions with climate change. 31,500 AF comes from Semitropic.
3) Assumes no additional imported supplies and secured through transfer, spot market and options.
4) Includes Department of Safety of Dams interim reservoir operations restrictions for Almaden, Anderson, Calero, Coyote and Guadelupe. Assumes repairs to Anderson will be completed and reservoir may be operated at full capacity starting in 2005.
5) Recycled water projections based on estimates provided by county recycled water producers and retailers. See Chapter 7 for more information.
6) SFPUC supplies based on Interim Supply Allocations adopted by SFPUC in December 2010 through 2018 and SFPUC Individual supply guarantees (ISGs) after 2018. Projected use in 2015 and 2020 does not reach available supply limit.
7) SFPUC supplies based on Interim Supply Allocations adopted by SFPUC in December 2010 through 2018 and SFPUC Individual supply guarantees (ISGs) after 2018. Procedure for Pro-Rata Reduction of Wholesale Customers' Individual Supply Guarantees under 2010 demand conditions, and Tier Two Allocations calculations spreadsheet provided by BAWSCA.
8) Demands after conservation savings are based on projections from water retailers and include water conservation program water savings goal for both urban and agricultural conservation. See Chapter 4 and Chapter 5 for more information on demand projections and the water conservation program, respectively.
9) Includes individual year demand reductions as summarized in Table 10-5. See additional table following the UWMP Checklist in Appendix D for intermediate calculations and for further clarification.

Figure 3-22 illustrates the magnitude in overall water supply availability, based on the projected supplies and demands for years 2015 through 2035 under the year types of: normal, single dry year and multiple dry years. Water years 2007-2009 were the 13th driest consecutive 3-year period out of the 87-year record (e.g., it tied with water years 1976-1978). In fact, such significant shortfalls in system wide carryover storage and the ongoing restrictive export pumping allowances resulted in a historic low initial allocation of five percent of contracted water deliveries from the SWP for the year 2010. The projected deficiencies in federal and State water contract allocations is clearly visible when taking into account dry years and multiple dry year sequences.

Figure 3-22: District Water Needs based on Available Supplies and Future Demands (AF)

Retailer	2015	2020	2025	2030	2035
Cal. Water Service Co.	14,060	12,710	12,920	13,120	13,330
Gilroy, City of	8,070	7,760	8,450	9,190	9,940 [2]
Great Oaks Water Co.[3]	13,260	13,420	13,830	14,250	14,660
Milpitas, City of[4]	15,280	16,240	17,220	18,240	19,320
Morgan Hill, City of	8,970	8,520	8,990	9,580	10,160
Mountain View, City of[4]	14,280	14,860	15,430	16,000	16,750
Palo Alto, City of	14,190	14,460	14,690	15,500	16,310 [2]
Purissma Hills Water District[4]	3,130	3,320	3,490	3,660	3,830
San Jose Municipal Water[5]	32,140	35,230	38,460	42,120	45,780
San Jose Water Co.	143,790	147,860	150,930	154,080	157,290
Santa Clara, City of	31,260	33,050	34,610	36,070	37,430
Stanford University	5,100	5,740	6,250	6,860	7,470 [2]
Sunnyvale, City of[4]	27,480	27,900	28,390	28,920	29,800
Independent Groundwater Pumping[6]	15,600	15,600	15,600	15,600	15,600
Agriculture[7]	29,110	28,140	27,160	26,180	25,250
Total	**375,720**	**384,810**	**396,420**	**409,370**	**422,920**

Source: SCVWD Urban Water Management Plan, 2010, Table 4-1, Retailer Demand Projections after Conservation Savings

Notes:

[1] Includes conservation savings goal for both urban and agricultural conservation. See UWMP 2010, Table 5-1 for total District water conservation program water savings goal with 1992 base year.

[2] 2035 value extrapolated from retailer provided data.

[3] From District developed demand projections based on ABAG Projections 2009 calibrated with actual use data.

[4] Projections are based on Table A-2 of the BAWSCA Lojng-Term Reliable Water Supply Strategy Phase I Scoping Report (May 2010) with adjustments for active conservation.

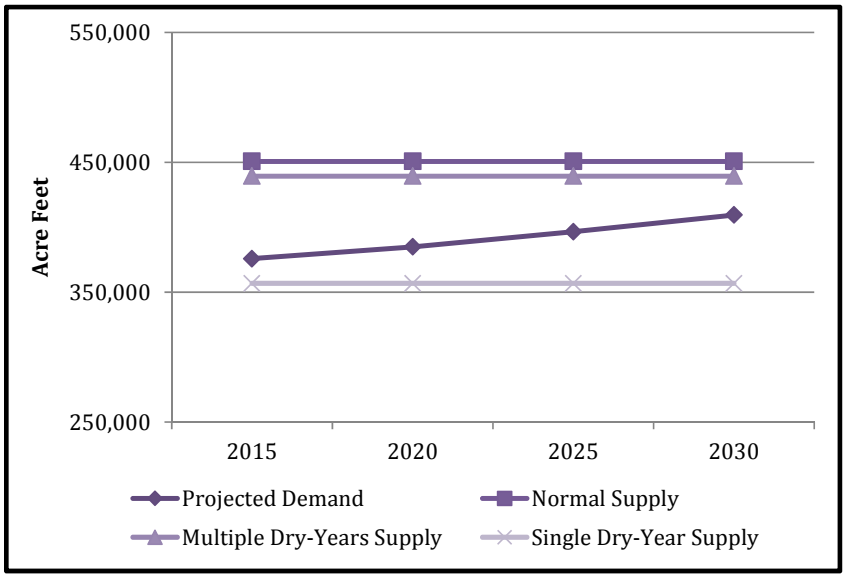
[5] Projections are consistent with City of San Jose Envision 2040 Draft General Plan Update Preferred Alternative. Includes all of San Jose Municipal's service areas and portions of Coyote Valley where the actual retailer to serve this area has not yet been identified.

[6] Demands for independent groundwater pumpers were assumed to continue at the same average level observed in the historical pumping record (2000-2009).

[7] Calculated from estimates of projected total agricultural acreage and a water use factor (1.7 AF/acre).

The groundwater storage availability component was highly variable; Figure 3-22 included both actual year 2000 pumping (to reflect actual withdrawals) as well as the estimated potential storage within the three subbasin aquifers after three years of drought. This comparison did not include the time-stepped recharge from reservoir releases.

Figure 3-23: District Water Supplies and Future Demands (2015-2030)



Using these approximations, projections in water need were developed for each 5-year increment through 2030 using the three water year type scenarios. Deficits were shown for the single dry year category in each of the five-year thresholds starting in 2015, as shown in Figure 3-23. The likely ability to meet future water use demands is shown to depend significantly on groundwater storage and expanded supplemental water supplies such as transfers, exchanges, in-lieu supplies from groundwater banking, and both recycled and potential desalination. Under existing conditions, wide ranging safety margins do not exist when anticipated decreases in natural hydrology are shown to constrain overall system yield.

WATER INFRASTRUCTURE AND FACILITIES

The District provides water storage, conveyance, treatment and distribution, groundwater recharge, watershed stewardship and flood management with a large and diverse portfolio of infrastructure and facilities. The District's water supply system is comprised of storage, conveyance, recharge, treatment and distribution facilities that include local reservoirs, the groundwater basin, groundwater recharge facilities, treatment plants, pump stations, and raw and treated water conveyance facilities. The District owns and/or operates 10 reservoirs, three treatment plants, one recycled water facility, 393 acres of recharge ponds, 142 miles of pipe, 17.3 miles of canals, 8.4 miles of tunnels. This includes the federal CVP facilities known as the San Felipe Division, that extend from Pacheco Pumping Plant at San Luis Reservoir to Coyote Pumping Plant near Anderson Dam that the District operates under agreement with the Bureau of Reclamation to serve CVP water to Santa Clara and San Benito Counties. Each of the District's major facilities, including the capacity and condition are described in Figure 3-24.

Figure 3-24: SCVWD Infrastructure and Facilities

Infrastructure and Facilities					
Facility	Type	Capacity	Capacity Restricted Capacity[1]	Condition[2]	Date Built
Almaden	Dam & Reservoir	1,586 AF	1,260 AF	Fair. Dam operates near design level with current restriction. Seismic stability evaluation is ongoing with completion scheduled in March,2012. Also, intake structure requires seismic modification. A seismic retrofit project for the outlet is included in the current CIP.	1935
Anderson	Dam & Reservoir	90,373 AF	61,810 AF	Fair. Major seismic retrofit of embankment, and most likely outlet, required to restore restricted capacity. A project to rehabilitate the embankment is included in the current CIP.	1950
Calero	Dam & Reservoir	9,934 AF	5,671 AF	Fair. Dam operates near design level with current restriction. Seismic stability evaluation is ongoing with completion scheduled in March, 2012. Limited preliminary results of seismic evaluation indicate a retrofit may be required. If so, a project will be added to the CIP.	1935
Chesbro	Dam & Reservoir	7,945 AF	7,945 AF	Good. Dam asset is more than 10 years old. An updated seismic evaluation is planned to begin in FY12.	1955
Coyote	Dam & Reservoir	23,244 AF	12,382 AF	Good. Dam asset is more than 10 years old. An operating restriction has been in place since 1992 recognizing location of Calaveras Fault under the dam. Rating based on restricted level as the baseline. The outlet was replaced in 1992 to address proximity of the fault.	1936
Guadalupe	Dam & Reservoir	3,415 AF	2,738 AF	Fair. Dam operates near design level with current restriction. Seismic stability evaluation is ongoing with completion scheduled in March, 2012. An upstream berm was constructed in 1972 to address seismic issues.	1935
Lenihan Dam/Lexington	Dam & Reservoir	19,044 AF	19,044 AF	Good. Dam asset is more than 10 years old and is currently being evaluated for seismic safety. A major upgrade of the outlet was completed in 2009 to address structural issues with the original outlet.	1952
Stevens Creek	Dam & Reservoir	3,138 AF	3,138 AF	Good. Dam asset is more than 10 year old and is currently being evaluated for seismic safety. Upstream and downstream buttresses were completed in 1986 to stabilize the dam and meet earthquake safety requirements.	1935
Uvas	Dam & Reservoir	9,835 AF	9,835 AF	Good. Dam asset is more than 10 years old. An updated seismic evaluation is planned to begin in FY12.	1957
Vasona	Dam & Reservoir	495 AF	495 AF	Good. Dam asset is more than 10 years old.	1935
Rinconada Plant	WTP	80 MGD		Fair. Significant recent investment has been made in existing infrastructure. Currently in planning for treatment process improvement and capacity expansion.	1967
Santa Teresa Plant	WTP	100 MGD		Good	1988
Penitencia Plant	WTP	40 MGD		Good	1974
South Bay Advanced Treatment Facility	Recycled WTP	8 MGD			Under construction. Scheduled to be completed by June 2012.

Other Infrastructure			
Pipe Miles	142	Canals	17.3 miles
Reservoirs	10	Tunnels	8.4 miles
Pump Stations	3	Total Water Storage Volume	169,415 AF
Potable Treatment Plants	3	Recycled Water Treatment Plants	1
Clearwells or Storage Tanks	8	In-stream Groundwater Recharge	76 miles
Production Wells	0	Groundwater Recharge Ponds	393 Acres

Notes:

1) Restricted capacity per Department of Water Resources, Division of Safety of Dams interim operating restrictions.

2) As reported by agency. Facility condition definitions: Excellent—relatively new (less than 10 years old) and requires minimal maintenance. Good—provides reliable operation in accordance with design parameters and requires only routine maintenance. Fair—operating at or near design levels; however, non-routine renovation, upgrading and repairs are needed to ensure continued reliable operation. Poor—cannot be operated within design parameters; major renovations are required to restore the facility and ensure reliable operation.

In order to maintain these facilities and minimize the risks of unplanned service disruption, the District has initiated an asset management program to schedule preventative maintenance and plan the timing and financing for repairs or replacement of equipment for all the District's water supply, flood protection and environmental stewardship work. The program is being improved to help the District maintain a high level of service and meet both regulatory requirements and customer needs.[34] The District aims to accomplish at least 80 percent of planned maintenance each year.

The District annually adopts a five-year capital improvement plan to maintain, improve and expand existing facilities and construct additional facilities. The most recently adopted CIP is for FY 12-16 and includes 90 projects that are planned to cost approximately $2.072 billion over the five-year period. The majority of water utility capital projects included in the 5-Year CIP are related to asset management which replaces aging equipment and facilities, or infrastructure reliability, which protects the county's baseline water supply. With a significant portion of the water supply infrastructure approaching forty to fifty years of age, maintaining and upgrading the existing infrastructure to ensure each facility functions as intended for its useful life became the focus of the water supply capital improvements in recent years, as shown in the CIP. Significant capital improvement plans are discussed in the following sections based on infrastructure category.

Water Storage Facilities: Reservoirs

The SCVWD has ten major dams and local reservoirs located throughout the County. These reservoirs are filled by stream flows and water that flows overland and is collected in the reservoirs. The reservoirs provide water conservation, flood management, recreation, and environmental flow benefits. Stored water is used for groundwater recharge, via creeks or off stream facilities, or to supply water to SCVWD's water treatment plants.

The largest dam operated by the SCVWD is the Anderson Reservoir located on Coyote Creek about two miles east of Morgan Hill. The reservoir includes a 240-foot high compacted earth dam. Power is generated through the Anderson Hydroelectric Facility at the reservoir outlet.

Infrastructure Needs

The District's primary infrastructure need with regard to the reservoirs is review of seismic stability of each of the dams and corresponding corrective measures. There is a secondary need to address the San Luis Reservoir (an upstream reservoir that is managed

[34] SCVWD, FY 11-12 Budget Outlook, p. 8.

by the U.S. Bureau of Reclamation) low point problem, in order to provide a reliable supply of healthy clean water.

The California Department of Water Resources performs regular inspections of the District's dams for general condition as well as structural integrity. In addition, the SCVWD has a dam safety program to proactively address any issues.

Knowledge of seismic stability design and construction was very rudimentary during the design and construction of district dams in the 1930's and 50's. Several of the District reservoirs have operating restrictions imposed by the Department of Dam Safety (DSOD) while an engineering analysis of how the District's dams would perform under a major seismic event is completed.[35]

Seismic safety studies of the aging dams are currently underway at six of 10 reservoirs that SCVWD operates. These include Anderson, Calero, Guadalupe, Lenihan, Stevens Creek, and Almaden. These aging structures may need upgrades to protect against earthquakes with total costs of the upgrades exceeding $150 million. Until the future of these dams is decided, five of the ten dams are operating under reduced storage so as to minimize the risks of potential dam failure.

Anderson Dam requires a seismic retrofit and the operating restriction is 25.5 feet below the spillway until that can be completed.

Additionally, new engineering tests indicate that storage in Calero Reservoir in South San Jose will have to be decreased. Test drilling beneath the 98-foot earthen dam at Calero Reservoir, built in 1935, revealed sand and gravel under a portion of the base of the dam, which engineers worry could shift like quicksand in a major earthquake, possibly causing the dam to slump. Based on recommendations from its engineering consultants, SCVWD has committed to filling Calero Reservoir to no more than 57 percent of capacity; the reservoir is already under an order from the State Division of Safety of Dams to be filled to no more than 80 percent. Adding the latest restrictions on Calero Reservoir, the 10 reservoirs now are limited to store no more than 124,300 acre-feet (AF) of water, or just 74 percent of the 169,000 AF total capacity. This has obvious water supply implications today and, more significantly, in the future depending on water year type.

SCVWD is committed to capture as much of the precipitation runoff as possible; to do this, it has been transferring water from smaller to larger reservoirs, moving some to treatment plants, and recharging it into groundwater basins, as ways to maximize conjunctive use of local and imported supplies and mitigate for reduced imported water supplies from the Delta. With such required storage limitations, even with the significant

[35] SCVWD, *Capital Improvement Plan FY 12-16*, 2011, p. III-1.

rains so far this year, the reservoirs will be hampered in their ability to capture and store as much as possible.

Each year, water from the Delta is delivered to San Luis Reservoir via the California Aqueduct and Delta-Mendota Canal for temporary storage during the winter or rainy season. A significant proportion of the water supply conveyed to Santa Clara County, as well as San Benito County, is at risk if water levels in San Luis Reservoir reach very low levels during late summer and early fall months. The high temperatures combined with declining water levels foster growth of an algae layer, sometimes as much as 35 feet thick, on the reservoir's surface. As the water levels lower, algae is captured by the Upper Pacheco Intake that delivers water to the San Felipe Division. The water quality within the algal blooms can cause taste and odor problems in treated drinking water, and create operational problems with filtration at the treatment plants. It can also clog drip irrigation systems, creating problems for agricultural water users. The presence of algae in the District's CVP water can be a significant challenge during the peak summer demand season, affecting SCVWD's ability to provide reliable supply of healthy, clean drinking water. The San Luis Reservoir Low-Point Improvement Project was established to study ways that allow San Luis Reservoir to be fully utilized without interrupting water deliveries or adversely affecting water quality to water contractors who depend on San Luis Reservoir. To address the problem associated with the San Luis Reservoir "low point", options include lowering the Pacheco Intake, expanding Pacheco Reservoir, upgrading treatment processes at Santa Teresa and Rinconada treatment plants and a combination alternative that includes re-operating Anderson Reservoir, conveying a portion of the District's CVP supplies through the South Bay Aqueduct and constructing new groundwater wells and recharge facilities.

Capital Improvement Plans

The District has included a number of reservoir-related projects in its Capital Improvement Plan totaling $319.4 million over the five-year period. Significant projects include:

- Dam Safety Program Seismic Stability ($10.2 million) - conduct preliminary planning (seismic stability evaluation) for seven dams.

- Pacheco Pumping Plant ASD Replacement ($19.4 million)- plan, design, and construct improvements to replace the existing adjustable speed drives and ancillary equipment to improve plant operation and reliability and reduce operation and maintenance costs

- Almaden Dam Outlet Works Improvement ($17.2 million) - plan, design, and construct improvements to the Almaden Dam Outlet Works to modify or construct a new intake structure, capable of releasing 246 cfs of water without

flushing of sediments and correct existing problems with the outlet energy dissipation structure, piping and valves.

- Anderson Dam Seismic Retrofit ($126 million) - plan, design and construct seismic retrofit or replacement of outlet works at Anderson Dam. Resolve seismic stability deficiencies to ensure public safety. Restore lost reservoir storage capacity and resolve operational restriction issues from Division of Safety of Dams and Federal Energy Regulatory Commission.

Water Storage Facilities: Groundwater Storage and Recharge

Within Santa Clara County, the District manages two groundwater subbasins that transmit, filter, and store water: the Santa Clara Subbasin and the Llagas Subbasin. For a more detailed description of the groundwater basins managed by SCVWD, refer to the description of groundwater resources in the Water Supply section of this chapter.

Land subsidence due to groundwater overpumping has been an issue for Santa Clara County as well as a number of other counties in California that are highly dependent on groundwater sources. SCVWD is monitoring groundwater levels and land surface levels in subsidence areas; through proactive management and the appropriate use of water supply sources, the District is working to ensure that land subsidence will not re-initiate.

Beginning in the 1930s, reservoirs and recharge ponds were built to augment natural groundwater recharge in an attempt to restore groundwater levels and to halt land subsidence. The groundwater basins are recharged through both natural and artificial means. The District operates and maintains artificial recharge facilities at 18 major recharge pond systems and 30 local creeks. Runoff is captured in the District's reservoirs and released into the recharge facilities for percolation. In addition, raw imported water is used for direct recharge and for in-lieu recharge through the provision of treated surface water.

The District does not presently draw water from the groundwater basin, however, the District is currently pursuing well fields that will tie directly to the treated water distribution system for increased operational flexibility and system reliability. A pilot facility, the San Tomas Well Field, is currently being developed in Campbell and is nearing completion.

Infrastructure Needs

As identified in the 2005 service review, perchlorate contamination of groundwater in the Llagas subbasin is still an issue of concern for some groundwater users. Olin Corporation's (Olin) signal flare manufacturing plant in southern Morgan Hill, closed since

1997, released perchlorate that affected many wells in the South County area. Perchlorate contamination at the site occurred primarily from an unlined evaporation pond that received wastes from the cleaning of the ignition material mixing bowls, on-site incineration of manufacturing wastes, and accidental spills. The perchlorate leached through the soil into the groundwater, creating a 9.5-mile perchlorate plume in the South County area. Perchlorate is a chemical that affects the normal function of the thyroid gland if consumed by humans at sufficiently high doses. Water containing more than 6 parts per billion (ppb) perchlorate is considered unsafe to drink and to cook with by the California Department of Public Health, which has set the Maximum Contaminant Level (MCL) for perchlorate at 6 ppb. When the extent of perchlorate contamination in the Llagas subbasin was first delineated, perchlorate detections above the 4 ppb action level in effect at that time were found in hundreds of wells. Some of the wells in South County initially contaminated with perchlorate were found to have concentrations of perchlorate up to 50 ppb. Presently, only eight private wells in the County exceed California's 6 ppb MCL.

The Central Coast Regional Water Quality Control Board (Regional Board) has regulatory oversight over the cleanup of the groundwater plume. At the urging of the District and the community, the Regional Board has taken action to ensure the timely restoration of contaminated groundwater. The Olin Corporation began soil remediation and groundwater treatment on the Tennant Avenue site in 2004. Since that time, the Regional Board has directed Olin to perform groundwater extraction and treatment to address the off-site perchlorate plume. Construction of the off-site groundwater extraction system is scheduled to begin in July 2011. Perchlorate levels have decreased significantly and the size of the plume is decreasing; however, some wells still contain perchlorate above the MCL and remediation is ongoing. Olin continues a comprehensive well-sampling program to monitor the perchlorate plume. The District tracks the cleanup progress by reviewing the monitoring and remediation plans and reports submitted to the Regional Board.

Capital Improvement Plans

At present, there are no plans to address the perchlorate contamination through additional capital investments. The plume has started to recede and the water is being diluted for consumption.

Water Storage Facilities: Treated Water Storage

The District maintains six storage tanks and reservoirs at the WTPs with a combined storage capacity of approximately 30 million gallons.

Infrastructure Needs

During the DPH most recent inspection of the SCVWD treatment facilities, it was found that the clearwell at Penitencia WTP needs improvements to address numerous areas on the interior floor with blisters, interior roof and rafter with areas of active corrosion, fractured lining and evident metal loss, and the failing roof plate coating.

Capital Improvement Plans

In the current CIP, the District has budgeted $4.3 million to plan, design, and construct corrosion repairs to the existing clearwell at Penitencia WTP to extend the life of the clearwell by removing as much corrosion as possible and recoating surfaces as necessary.

Water Treatment Facilities

The District operates three water treatment plants, all in the central and northern portions of Santa Clara County. These are the Rinconada plant in Los Gatos, the Santa Teresa plant in the Almaden Valley, and the Penitencia plant in the foothills of east San Jose.

In the early 1990s, the District began a series of capital improvements to upgrade its three drinking water treatment plants in order to meet new Environmental Protection Agency rules for improved water quality required by 1996 amendments to the Safe Drinking Water Act. Fifteen years of effort and capital funding have brought the upgrades at Penitencia and Santa Teresa Water Treatment Plants to completion. Delivery of ozonated water produced at these two treatment plants began in 2006.[36] Water delivered from the Rinconada plant continues to meet the stricter water quality standards even though the plant was built in the 1960's and is showing its age.

According to the Department of Public Health (DPH), "the Rinconada WTP and Penitencia WTP are in very good condition and are operated by conscientious staff." DPH reported that the District consistently strives to produce high quality water that meets or exceeds all Federal and State drinking water standards.[37] Similarly, DPH found the Santa Teresa WTP "to be in very good condition with no significant deficiencies" and operated by knowledgeable and conscientious staff.[38]

In 2003, the District initiated the Water Utility Infrastructure Reliability Project (IRP) to determine the current reliability of its water supply infrastructure (pipes, pump stations,

[36] SCVWD, *Capital Improvement Plan*, 2011, p. III-1.

[37] CDPH, Letter to SCVWD Re: 2009 Inspection Findings for Rinconada and Penitencia WTP, April 1, 2009.

[38] CDPH, Letter to SCVWD Re: 2009 Inspection Findings for Santa Teresa WTP, July 31, 2009.

treatment plants) and to appropriately balance level of service with cost. The project measured the baseline performance of critical District facilities in emergency events and identified system vulnerabilities. The study concluded that the District's water supply system could suffer up to a 60-day outage if a major event, such as a 7.9 magnitude earthquake on the San Andreas Fault, were to occur. Less severe hazards, such as other earthquakes, flooding and regional power outages had less of an impact on the District, with outage times ranging from one to 45 days.[39]

The flows to each plant and percent of capacity in use during maximum day demand are shown in Figure 3-25.

Figure 3-25: Average and Maximum Day Demand (2010)

Treatment Plant	Average Day MG	Maximum Day MG	Plant Capacity MG	% Capacity in Use on Max Day
Penitencia WTP	18.9	34.2	40	86%
Rinconada WTP	44.1	78.5	80	98%
Santa Teresa WTP	40.1	69.3	100	69%

Infrastructure Needs

During the DPH most recent inspection of the SCVWD treatment facilities, the following needs or deficiencies were identified:

- At Rinconada WTP and Penitencia WTP, the current backwash water return system needs to be modified to reduce the recycled water turbidity to levels to meet the goal of DPH's Cryptosporidium Action Plan.
- At Penitencia WTP, the on-line turbidimeters need to be verified for accuracy.
- The chain and flight system for one of the east treatment train's sedimentation basins was not functioning, but the basin was still in service at the Santa Teresa WTP.

Capital Improvement Plans

- Water Infrastructure Reliability Plan Phase 2 Seismic Study and Retrofit of Water Treatment Plants and Operations Buildings ($16 million) - plans, designs, and constructs improvements, including possible seismic retrofitting of two water treatment plant operations buildings and two buildings at the Vasona Pump Station.

[39] SCVWD Draft UWMP, 2011, p.

- Water Infrastructure Reliability Plan Phase 2 ($77.8 million) - plan, design, and construct approximately 20 new wells, with an anticipated capacity of 1500 gpm each, near District transmission mains and retailer turnouts on the east and west sides of the District's distribution system.

- Rinconada Water Treatment Plant Facility Renewal Program ($152 million) - The facility renewal program for Rinconada WTP that was started in FY 08-09 is continuing with four individual capital projects and $2.1 million planned expenditures in FY 11-12.

- Rinconada WTP Reliability Improvement ($104 million) - Improve service factors by increasing clarification and filtration capacity. Provide for taste and odor control improvement, reduction of filter loading by addition or modification of filters, and washwater clarification.

Recycled Water Treatment Facilities

In Santa Clara County, recycled water is developed by four wastewater treatment plants, owned and operated by local cities within the County. Recycled water is treated municipal wastewater treated to a level that makes it appropriate for various non-drinking water purposes (non-potable uses). The District works with these four wastewater entities on partnerships to promote water recycling for irrigation and industrial uses through agreements, collaborative projects, financial incentives and technical assistance.

The four wastewater facilities located within the county are as follows:

- San José/Santa Clara Water Pollution Control Plant (SJ/SC WPCP)
- South County Regional Wastewater Authority (SCRWA)
- Sunnyvale Water Pollution Control Plant (SWPCP)
- Palo Alto Regional Water Quality Control Plant (PARWQCP)

These facilities are discussed in more detail in their respective sections.

Capital Improvement Plans

The District is in the process of constructing a new advanced recycled water treatment facility which will be owned by SCVWD in collaboration with the City of San Jose. The City and the District will jointly make decisions on expansions of the recycled water system, collaborate on studies and outreach, and have the ability to leverage each other's infrastructure.

The District will begin using new treatment methods and build an entirely new facility to bring South Bay residents, businesses and agencies recycled water with less salinity. The new advanced water treatment facility will produce highly purified recycled water and strengthen the integrated management of recycled water. The facility will be built next to the recycled water Transmission Pump Station north of state Route 237 near the bay lands.

The new facility will divert a portion of treated wastewater from the SJ/SC WPCP and use advanced treatment methods to produce up to eight mgd of highly purified water. This new purified water will have a near-distilled quality, which will be blended into existing recycled water flows to provide for more uses. The blended recycled water will be used to irrigate a wider variety of landscapes, like those with poorly draining soils and sensitive plant species.

Construction for this facility began in October 2010 and is planned to be completed by the summer of 2012. This project was awarded $8.25 million from the Federal Stimulus grant funds and approximately $3 million from a State grant, and will receive $11 million from the City of San José, because it will contribute to system reliability and provide a filtration benefit and enhance recycled water quality. The City has also leased the land for this new facility to the District at a nominal cost.[40]

Conveyance and Distribution Facilities

The SCVWD transmission and distribution system includes three pumping stations, 142 miles of pipeline and 8.4 miles of tunnel.

Raw Water

District imported water is conveyed through the Sacramento-San Joaquin Delta and then pumped and delivered to the county through three main pipelines: the South Bay Aqueduct, which typically carries water from the State Water Project (SWP), and the Santa Clara Conduit and Pacheco Conduit, both of which typically convey water from the federal Central Valley Project (CVP). Under some circumstances, the District may schedule and convey other types of water in each system in order to implement water transfers, exchanges or other operational objectives. The raw water is used for surface deliveries to some agricultural users, groundwater recharge or treated at one of the District's three water treatment plants.

The South Bay Aqueduct is owned and operated by the State Department of Water Resources. Water deliveries to Santa Clara County began in 1965. The Aqueduct terminates at the Penitencia Water Treatment Plant in east San Jose.

[40] SCVWD, *Draft UWMP*, 2011, p. 7-9.

Water from the CVP is delivered through the federal San Felipe Division, which extends from the Pacheco Pumping Plant at the San Luis Reservoir through the Pacheco Tunnel and Conduit, and then through the Santa Clara Tunnel and Conduit to the Coyote Pumping Plant just west of Anderson Dam. The District has operated and maintained the San Felipe Division facilities that serve Santa Clara County since CVP water was first delivered in 1987.

After imported water is conveyed to Santa Clara County, it may be combined with raw water from local sources (Anderson-Coyote watershed and Almaden-Calero watershed) for distribution to the District's groundwater recharge operations and three water treatment plants. The local transmission and distribution system for raw water includes the Cross Valley Pipeline, Almaden Valley Pipeline, Central Pipeline, and Stevens Creek Pipeline. The District's Vasona Pumping Plant helps regulate the raw water distribution system.

Treated Water

The East, Snell, and West pipelines distribute treated water from one or more of the District's three treatment plants to turnouts that supply the District's water retailers.

The East Pipeline is 6.4 miles of steel pipeline that distributes treated water from the Penitencia WTP to nine turnouts and to supply three retailers: the City of San Jose, the San Jose Water Company, and the City of Milpitas. The East Pipeline can also distribute treated water from the Santa Teresa WTP.

The Snell Pipeline is 9.7 miles of pressed concrete pipeline that distributes treated water from the Santa Teresa WTP to six turnouts to supply two water retailers: the City of San Jose and San Jose Water Company.

The West Pipeline is a nine-mile steel pipeline that includes three branches to distribute treated water from the Rinconada WTP to 15 turnouts to supply six retailers: the California Water Services, the City of Cupertino, the City of Santa Clara, the City of Sunnyvale, the City of Mountain View, and the San Jose Water Company.

The distribution system's integrity is indicated by the District's rate of distribution loss and number of breaks and leaks in 2010. The District estimates that there is less than one percent unaccounted for distribution loss from the point of treatment to the delivery point to each of the retailers. There were two main breaks or leaks in 2010.

Infrastructure Needs

The District's asset management program consists of planned inspection, routine maintenance, rehabilitation and seismic upgrade of pipelines. This program has not revealed any particular or significant issues with the raw water and treated water conveyance pipelines. The program next step is to complete the condition assessment of

these underground assets. The retail water agencies are responsible for distribution of treated water beyond the District's turnouts.

Capital Improvement Plans

In the current CIP, the District has budgeted $100 million on 15 improvements to transmission infrastructure. Significant improvements of notes are:

- Almaden-Calero Canal Rehabilitation ($9.8 million) – to restore the canal to its baseline capacity of 120 cfs, while maintaining adequate freeboard, improve maintenance access, mitigate for local landslides, and repair leakage and improve drainage at the flume.

- Main and Madrone Avenue Pipelines Restoration ($7 million) – improvements and rehabilitation of the pipelines to allow for greater flows to the Main Avenue Ponds and Madrone Channel and provide the means to utilize another reliable water source to supply water to these areas.

- Stevens Creek-Vasona Raw Water Distribution ($31.9 million) – construct a bidirectional raw water pipeline to connect the Stevens Creek Reservoir to the Stevens Creek Pipeline.

- Water Infrastructure Reliability Plan Phase 2 Additional Line Valves ($8.4 million) – to allow the District to isolate sections of the treated water pipeline to prevent water from bleeding out damaged sections following a major seismic event.

Flood Control Infrastructure

The District manages approximately 800 miles of creeks in Santa Clara County. The 800 miles of creeks are located in five watersheds; Lower Peninsula, West Valley, Guadalupe, Coyote, and Uvas/Llagas. The District administers an asset management program for its flood protection infrastructure. The program includes a schedule for maintenance and rehabilitation to ensure that each facility functions as intended over its useful life

Infrastructure Needs

A key performance indicator for flood protection capital improvements is the number of parcels protected from 1-percent flooding. A one-percent flood is a flood that has a one-percent chance of occurring in any given year. It is also referred to as a 100-year flood, but it should not be interpreted to mean that a flood of this magnitude only occurs every 100 years.

By 2016, the district's current natural flood protection program, combined with all other flood protection projects of previous years, will protect approximately 140,000

parcels from flooding. Approximately 55,000 parcels will continue to be at risk from 1-percent flooding. One-percent flooding will occur along Alamias, Bodfish, Center, Church, Corralitos, Crews, Day, Edmundson, Foothill, Hayes, Jones, Lions, Little Arthur, Live Oak, Maple, New, Pacheco, Panther, Rucker, San Martin, San Ysidro, Skillet, Tennant, and West Branch Llagas creeks. The main areas of concern after 2016 will be flooding from Alamias, Jones, and West Branch Llagas creeks.[41]

Capital Improvement Plans

In the current CIP, the District has budgeted $704.5 million, over the five-year period on 17 improvements to flood control infrastructure. Significant improvements of notes are:

- Permanente Creek from S.F. Bay to Foothill Expressway (Clean Safe Creeks project) ($54.1 million)
- Sunnyvale East and West Channels (Clean Safe Creeks project) ($100.2 million)
- Guadalupe River–Upper, Interstate 280 to Blossom Hill Road (Clean Safe Creeks project) ($121 million)
- Berryessa Creek from Lower Penitencia Creek to Calaveras Boulevard ($51.7 million)
- Coyote Creek Montague Expressway to Interstate 280 (Clean Safe Creeks project) ($35.1 million)
- Lower Silver Creek from Interstate 680 to Lake Cunningham (Reaches 4-6) ($66.7 million)
- Llagas Creek–Upper, Buena Vista Road to Wright Avenue (Clean Safe Creeks project) ($33.9 million)

Watershed Stewardship Infrastructure

In 1999, the water district's Board of Directors adopted a mission and policies that added a focus on environmental stewardship.

In 2001, the California legislature added environmental stewardship to SCVWD's purpose. Specifically, the District's environmental stewardship activities focus on these three areas: 1) healthy creek and bay ecosystems, 2) clean, safe water in creeks and the

[41] SCVWD, *Flood Protection and Stream Stewardship Master Plan*, 2010, p. 10.

bay, and 3) improved quality of life through trails, open space and water resources management. These outcomes were a key component of the Clean Safe Creeks and Natural Flood Protection Plan that Santa Clara County voters approved in 2000.

While the District does not own facilities with regard to watershed stewardship, it is charged with stewardship of the five watersheds in Santa Clara County; Lower Peninsula, West Valley, Guadalupe, Coyote, and Uvas/Llagas.

Projects that the District has completed since inception of the environmental stewardship program 10 years ago include improving fish habitats, creating a freshwater wetland, controlling invasive plant and animal species, removing mercury from Jacques Gulch, responding to HAZMAT emergencies, removing trash and litter, installation of trails, and education programs.

Infrastructure Needs

Water bodies in Santa Clara County that are significantly affected by pollutants and classified as impaired include Alamitos Creek, Calero Reservoir, Coyote Creek, and Guadalupe Creek, Reservoir, River. The priority level of the impaired water body is shown in Figure 3-26 as determined by the San Francisco Bay Regional Water Quality Control Board. Primary pollutants that affect the County's water bodies are mercury and diazinon.

Figure 3-26: Santa Clara County Impaired Water Bodies

Water Body	Pollutant	Priority
Alamitos Creek	Mercury	Medium
Calero Reservoir	Mercury	Medium
Coyote Creek	Diazinon	High
Guadalupe Creek	Mercury	Medium
Guadalupe Reservoir	Mercury	Medium
Guadalupe River	Diazinon/Mercury	High/Medium

Source: 2002 CWA Section 303(d) List of Water Qulity Limited Segments

Capital Improvement Plans

In the current CIP, the District has budgeted $83.1 million, over the five-year period on 12 improvements to flood control infrastructure. Significant improvements of notes are:

- FAHCE Stevens Creek Fish Passage Enhancement ($12.9 million)
- Stream Maintenance Program Mitigation, Laguna Seca Freshwater Wetland ($17.6 million)
- Stream Maintenance Program Mitigation, Stream and Watershed Land Preservation ($8.6 million)

- Alviso Slough Restoration ($14.4 million)
- Ogier Ponds Separation from Coyote Creek ($12.5 million)

Additionally, the District is initiating an Ecological Monitoring and Assessment Program (EMAP), which is a data management system, that standardized monitoring protocols, and provides a framework for watershed management decision-making. Originally, monitoring of the water district's ecological assets was mandated by regulatory agencies on a project-by-project basis, producing a piecemeal understanding of the condition of these assets. When fully launched in 2012, EMAP will establish baseline conditions for each watershed, determine how to best maintain or improve those conditions through time, and develop plans for doing so. The results will be systematic, informed decision-making and long range planning regarding ecological assets that provides excellent value for reasonable cost.

Shared Facilities

SCVWD practices extensive facility sharing and regional collaboration. It jointly developed and shares infrastructure with the SFPUC through the emergency intertie in Milpitas. As a State Water Project contractor, it collaborates with South Bay Aqueduct and other SWP contractors to support the reliable operation and maintenance of imported water facilities by the Department of Water Resources. As a Central Valley Project contractor, it self-funds and provides operation and maintenance of the federal San Felipe Division facilities that serve Santa Clara and San Benito Counties under an agreement with the US Bureau of Reclamation. The District also collaborates with CVP contractors in the San Luis and Delta-Mendota Water Authority and other areas to support the reliable operation and maintenance of the CVP. To better manage its imported water supplies, the District partnered with the Semitropic Water Storage District and other water contractors to develop and share the Semitropic Groundwater Banking Program, which is expected to provide long-term benefits for the County.

The District is a signatory to a number of Joint Powers Agreements to further its water management interests. Its participation in the San Luis and Delta-Mendota Water Authority, the State Water Project Contractors Authority, and the State and Federal Contractors Water Agency helps ensure delivery of the District's imported water supplies. Its participation in the San Francisquito Creek Joint Powers Authority and the Pajaro River Flood Protection Authority helps support the District's watershed protection mission. In the South County, the District has partnered with the South County Regional Wastewater Authority and the Cities of Gilroy and Morgan Hill to implement the South County Water Recycling Program, and serves as the recycled water wholesaler in South County. The District is also providing leadership in the Perchlorate Working Group to help ensure that perchlorate contamination issues are addressed.

WATER QUALITY

Source Water

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the county deliver high quality water to consumers, almost always without the need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominantly in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to DPH's Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the District's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreational activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

According to the EPA Safe Drinking Water Information System, SCVWD has had no health or monitoring violations within the last 10 years with regard to its treatment systems.

At the District's three WTPs, SCVWD was not out of compliance with Primary Drinking Water Regulations throughout 2010.

With the exception of the infrastructure deficiencies outlined under the Treatment Facilities section of this chapter, DPH did not identify any management or health related concerns. In fact, all three facilities were found to be conscientiously operated and well managed.

Overall, SCVWD strives to exceed legal requirements and has been successful at providing high quality treated water to its customers.

SANTA CLARA VALLEY WATER DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- As of 2010, Santa Clara Valley Water District (SCVWD) served an estimated 1,781,642 residents within its boundaries.
- ABAG projects that the District's population will reach 2,369,584 in 2035 with an average annual growth rate of 1.2 percent.
- The potential for future development and population growth varies across the County. The highest growth rates are projected for Milpitas, San Jose, Santa Clara and Gilroy. This has bearing on the water service provided by the SCVWD as growth drives water demand and development patterns determine the type and capacity of future system infrastructure needs.
- There has been a decline in water usage in the last few years due to a successful water conservation campaign, cool springs and the recent recession.
- Population growth combined with anticipated significant job growth would notably increase the demand for water throughout the County. SCVWD estimates that overall, countywide water demand will increase by approximately 70,000 acre-feet per year, or by 18 percent over the next 25 years.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- SCVWD appears to generally have sufficient water supply during normal supply scenarios; however, there are projected deficits during a single and multiple dry year event as early as 2015, which would require the District to capitalize on its groundwater reserves and surface carryover supplies. A multiple dry-year event would also require enhanced short-term conservation efforts.
- SCVWD's ability to meet future water use demands will depend significantly on groundwater storage and expanded supplemental water supplies such as transfers, exchanges, in-lieu supplies from groundwater banking, and both recycled water and potential desalination.
- There is a significant reliance on groundwater (all three subbasins) to cover any projected shortfall in surface water supplies.

- The new SFPUC turnout will provide uninterruptible flow of the District's water primary supply.

- Federal and State contracts are shorted based on inter-annual availability constraints, which are unpredictable. This is the primary limitation to SCVWD's water supply.

- The District's facilities and infrastructure appear to generally have the capacity to serve existing and any short-term growth in demand; however, the Rinconada water treatment plant is approaching capacity during maximum day demand.

- SCVWD's primary infrastructure needs include review and corrective measures to the District's dams to enhance seismic stability, a means to ensure water quality from the San Luis Reservoir during low levels, repairs to clearwells at the Penitencia water treatment plant, enhanced flood protection along the Alamias, Jones, and West Branch Llagas Creeks, and remediation of six impaired water bodies.

- The District is in the process of constructing a new recycled water plant that will provide an additional drought proof water supply source. The District is also pursuing well fields that will tie directly to the treated water distribution system for increased operational flexibility and system reliability.

- SCVWD provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough district response to California Department of Public Health infrastructure concerns. Overall, SCVWD strives to exceed legal requirements and has been successful at providing high quality treated water to its customers.

- District management methods appear to generally meet accepted best management practices. The District prepares a budget before the beginning of the fiscal year, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and district workload, and has an established process to address complaints. The District also models several additional best management practices for other agencies, including establishing long-term goals, steps to achieve those goals, and indicators by which to determine successful completion, as well as regular evaluations of the District's performance.

Financial Ability of Agency to Provide Services

- SCVWD's current level of financing appears sufficient to provide an adequate level of service, despite declining revenues over the last three fiscal years. The District has been forced to make cost reduction efforts, but has been able to assemble a balanced

budget and maintain sufficient reserves to cover contingencies. Rates are evaluated annually and increased as needed to cover operating and capital expenditures.

- SCVWD maintains significantly more reserves for governmental purposes compared to other large professionally run water agencies in the County.

- The District has experienced a decline in revenues, due to 1) reduced income from property taxes, 2) a decrease in investment earnings, and 3) successful water conservation efforts, along with economic recession and cooler weather patterns, that have resulted in reduced water sales. .

- The District faces legal challenges regarding its service charges. The District completed a Proposition 218 process during the most recent rate update per a court ruling; however, the District is planning to appeal the court's decision.

- The District appropriately plans for capital needs in a multi-year capital improvement plan and regularly spends more on capital investments than they consume due to regular wear and tear, indicating a more than sufficient level of capital reinvestment to cover depreciation. In fact, SCVWD capital expenditures greatly exceed depreciation for all District-owned assets, indicating substantial investment in new infrastructure.

Status and Opportunities for Shared Facilities

- SCVWD practices extensive facility sharing and regional collaboration through 1) its involvement in the State Water and Central Valley Projects, 2) an intertie with SFPUC, 3) the partnership with the Semitropic Groundwater Banking Program, and 4) as a member agency in several joint powers agreements and collaborative planning groups.

- The District is in the process of planning and constructing a recycled water facility in collaboration with the City of San Jose.

- No further facility sharing opportunities were identified.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. SCVWD demonstrated accountability with respect to all of these factors.

Governance Structure Alternatives

Two governance structure options have been identified with relation to SCVWD: 1) reorganization of the functions of either or both Loma Prieta RCD and Guadalupe-Coyote RCD with SCVWD and 2) reorganization of the Pacheco Pass Water District with SCVWD. Refer to these respective district chapters for a more in depth discussion of these options.

Reorganization of Conservation Services

Both Loma Prieta RCD and Guadalupe-Coyote RCD overlap with SCVWD, which provides similar resource conservation services. As the RCDs and SCVWD are empowered to provide the same general category of water conservation services, there is the potential for duplication of services. The RCDs are empowered to provide both watershed stewardship and land management services to control runoff, prevent and control soil erosion, protect water quality, develop and distribute water, improve land capabilities, and facilitate coordinated resource management efforts for watershed restoration and enhancement.[42] Similarly, SCVWD is empowered to provide comprehensive water management for all beneficial uses and protection from flooding within Santa Clara County.[43] Given the possibility for duplication of services provided by the RCDs and SCVWD, there is the potential to dissolve one or both of the RCDs and name SCVWD as the successor agency to carry on the functions of the RCDs to the extent it is authorized in its enabling act or to consolidate one or both of the RCDs into a single agency designated as SCVWD with the same enabling act. Each of these options are discussed in more detail in the LPRCD and GCRCD chapters.

Reorganization with Pacheco Pass Water District

Pacheco Pass Water District (PPWD) consists of territory in both Santa Clara and San Benito Counties, and water districts completely overlap PPWD in each of these counties—SCVWD in Santa Clara and SBCWD in San Benito. Both SCVWD and SBCWD are responsible for groundwater management, including groundwater recharge, in their respective counties, which duplicates the services offered by PPWD; however, neither district provides groundwater recharge services within the PPWD boundaries. Additionally, PPWD faces the challenge of minimal property tax revenues combined with significant capital needs at the North Fork Dam. PPWD has indicated an interest in reorganizing with a larger more established agency with greater financial resources that could fund the necessary capital improvements and continue the groundwater recharge services currently provided. Both SCVWD and SBCWD have indicated interest in some kind of collaborative solution to this issue. The continued operation of the North Fork Dam and groundwater recharge into the Pacheco Subbasin is in the interest of both agencies. Options for reorganization include

[42] Public Resources Code §9001.

[43] Santa Clara Valley Water District Act, §4.

1) consolidation of PPWD's Santa Clara territory and operations into SCVWD and SCVWD providing out of district service in San Benito County, 2) consolidation of PPWD's entire territory into the San Benito County Water District (SBCWD) with SBCWD continuing the operations of PPWD, 3) consolidation of PPWD's territory in each of the counties consolidated into their respective water district, or 4) retaining the current governance structure with a collaborative solution between the three agencies for the continued maintenance and operation of the PPWD dams. Each of these options are discussed in more detail in the PPWD chapter.

- Two governance structure options have been identified with relation to SCVWD: 1) reorganization of the functions of either or both Loma Prieta RCD and Guadalupe-Coyote RCD with SCVWD and 2) reorganization of the Pacheco Pass Water District with SCVWD.

SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The Sphere of Influence (SOI) for SCVWD is coterminous with its boundary and the County's boundary. The SOI for the Santa Clara Valley Water District was last reviewed in 2007 and no changes were made at that time.

Recommended Sphere of Influence Boundary

It is recommended that the District's existing coterminous SOI be retained, as the District's boundary is legally defined as the Santa Clara County boundary

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

Given that the District is countywide, it encompasses all land use designations, including all types of urban uses as well as large areas of hillside, open space, and agricultural uses. Land uses within the District boundaries are under the jurisdiction of the County and cities, and policies for Urban Service Areas and Urban Growth Boundaries apply.

Present and probable need for public facilities and services in the area

There is a clear and present need for SCVWD's services as demonstrated by demand for wholesale water, groundwater management, watershed protection and flood control services. The District boundaries contain urbanized and rural areas that are dependent upon comprehensive water resource management to ensure adequate water supplies, water quality and flood protection. The District is the primary wholesale water supplier for Santa Clara County and is responsible for groundwater management as well as flood control. No other agencies were identified that could provide these services on a county-wide basis.

Need and demand for SCVWD services varies depending on the land use type, water supply source and water body needs. The northern portion of the County uses treated surface water deliveries as well as groundwater while the southern portion is entirely dependent on groundwater. Local surface water and imported surface water are recharged in both areas through District groundwater management programs, supplementing the natural groundwater supply.

Demand for these services is anticipated to continue into the future. The potential for future development and population growth varies across the County. Similar to the estimates presented in the 2005 service review, the highest growth rates are projected for Milpitas, San Jose, Santa Clara and Gilroy. This has bearing on the water service provided by the SCVWD as growth drives water demand and development patterns determine the type and capacity of future system infrastructure needs.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

The District is authorized to provide comprehensive water management for all beneficial uses and protection from flooding within Santa Clara County. The District sells treated water and manages the groundwater subbasins supplying major public and private water purveyors and private well owners; and also provides water directly to agricultural users. In addition to its wholesale water operations and groundwater management, the District is the lead agency in the county charged with providing watershed stewardship programs and services.

With regard to wholesale capacity, SCVWD appears to generally have sufficient water supply during normal supply scenarios; however, there are projected deficits during a single and multiple dry year event as early as 2015, which would require the District to capitalize on its groundwater reserves and surface carryover supplies. A multiple dry-year event would also require enhanced short-term conservation efforts.

The District's facilities and infrastructure appear to generally have the capacity to serve existing and any short-term growth in demand; however, the Rinconada water treatment plant is approaching capacity during maximum day demand.

Capacity to provide watershed stewardship and flood control protection is challenging to define; however, given the breadth and quality of services provided and professional management practices, the District appears to have capacity to serve existing demand for these services and the services provided seem to be adequate overall.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

The District's service boundary encompasses all of the communities within Santa Clara County. There are no divided communities. The District receives revenue from property taxes, a special parcel tax, benefit assessments, and water charges, among others.

The nature, location, extent, functions, and classes of services provided

SCVWD is a countywide district and its boundaries are the same as Santa Clara County boundaries. The District owns and manages 10 local surface reservoirs and associated

creeks and recharge facilities, manages the County's groundwater basins and 3 water treatment plants, imports water from the Central Valley Project and the State Water Project, and delivers recycled water to parts of the County. The District is also responsible for flood protection within the County. Its stewardship responsibilities include creek restoration and wildlife habitat projects, pollution prevention efforts and a commitment to natural flood protection.

The District is authorized to provide comprehensive water management for all beneficial uses and protection from flooding within Santa Clara County. This includes, but is not limited to, conjunctive management of surface and groundwater resources; imported water acquisitions; coordination with local, state, and federal water interests; water treatment and delivery; new water resources development; groundwater basin protection; and flood protection.

4. ALDERCROFT HEIGHTS COUNTY WATER DISTRICT

AGENCY OVERVIEW

The Aldercroft Heights County Water District (AHCWD) was formed in 1958 as an independent special district. It provides retail water services to residents of a rural unincorporated area within the Santa Cruz Mountains. A water service review for the District was last conducted in 2005.

The principal act that governs the District is the County Water District Law.[44] The principal act empowers the District to "store water for the benefit of the district, conserve water for future use, and appropriate, acquire, and conserve water and water rights for any useful purpose."[45] Districts must apply and obtain LAFCO approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.[46]

Type and Extent of Services

Services Provided

AHCWD provides retail water services to its residents. The District's service area is entirely residential, although some property owners have micro-vineyards and other large landscape areas on their properties. The District does not have a water conservation program, as customers reportedly minimize water use, due to the relatively high water rates.

The District relies on local surface water for its supply. It pumps water directly from Los Gatos Creek under an agreement to purchase water from the San Jose Water Company (SJWC), which holds pre-1914 water rights to the creek.

[44] California Water Code §30000-33901.

[45] California Water Code §31021.

[46] Government Code §56824.10.

Service Area

The District serves the entirety of the area within its bounds with the exception of five lots with private wells and two undeveloped lots.

The District reports that it is serving one connection outside of its bounds located at 20900 Panorama Heights Road. Following the Loma Prieta earthquake, the District needed additional land to replace a storage tank that had been destroyed. The District reported that the owner of this property at the time traded the District land for the tank in exchange for a residential connection to the District's system. The connection was added sometime in 1991, prior to 1994, when State law first required LAFCO approval to extend services outside of bounds. The property was later sold and the lot lines adjusted. The property receiving water, as redrawn, is adjacent to but just outside the District's boundaries. Water service to the property continued with the agreement that the property owner would annex into the District at some point. The property has not yet been annexed into the District. The District is not presently receiving property tax revenue from this parcel.

Services to Other Agencies

The District does not provide services to other agencies by contract.

Contracts for Water Services

The District does not receive any water services from other agencies via contract; however, three contract employees manage the operation and administration of AHCWD.

Collaboration

AHCWD participates in the Santa Clara County Fire Safe Council. The District's role is to assist with the chipping program.

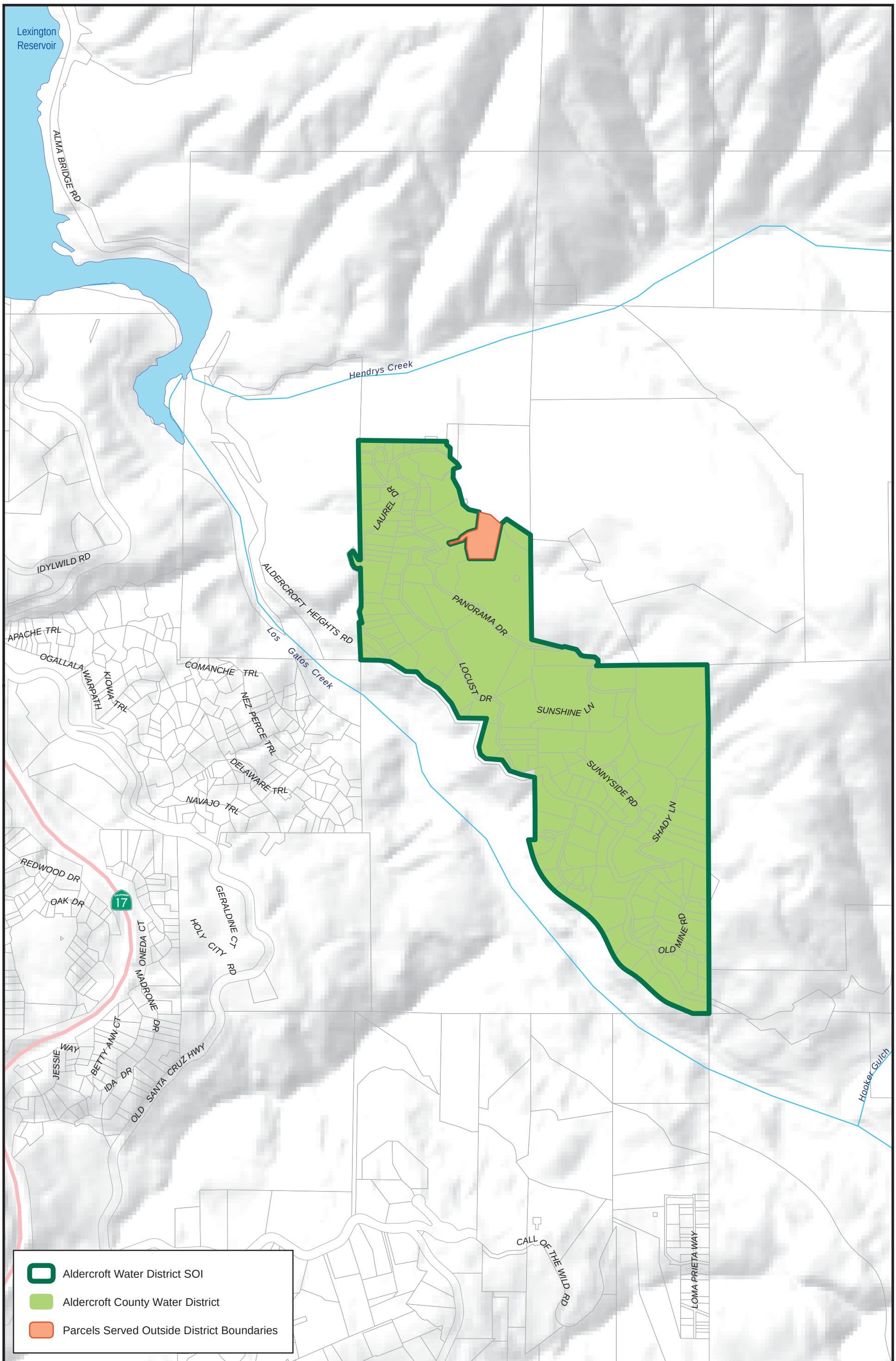
Boundaries

The District's boundary is entirely within Santa Clara County. The present bounds encompass approximately 2.5 square miles on the western edge of Santa Clara County in the vicinity of the Lexington Reservoir. This area is within the Guadalupe Watershed Area as defined by SCVWD.

Sphere of Influence

The District's SOI is coterminous with its boundaries and was last updated in 2007.

Figure 4-1



Aldercroft County Water District

September 2011

0 250 500 750 1,000
Feet

This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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LAFCO
Local Agency Formation Commission of Santa Clara County

ACCOUNTABILITY AND GOVERNANCE

AHCWD is governed by a five-member Board of Directors. The board members serve four- or two-year terms. There are currently five board members, all of which were elected. The board members do not receive any compensation. There have been no contested elections in recent years. Current board member names, positions, and term expiration dates are shown in Figure 4-2.

The Board meets on the first Thursday of every month at Lexington School at 6:30 in the evening. Agendas are posted on the bulletin board at the storage tank and on a telephone pole within the District's boundaries. Minutes are available upon request and are emailed to a distribution list.

Figure 4-2: AHCWD Governing Body

Aldercroft Heights County Water District				
District Contact Information				
Contact:	Kim Gardner, Business Manager			
Address:	20895 Panorama Drive, Los Gatos, CA 95033			
Telephone:	408-353-4395			
Email/website:	aldercroft_hcwd@yahoo.com			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Deirdre Daur	President	December-11	Elected	4 years
Victoria Pearce	Director	December-11	Elected	4 years
Melissa Zender	Director	December-11	Elected	4 years
Celia Francis	Director	December-13	Elected	4 years
Tracy Avent	Director	December-13	Elected	4 years
Meetings				
Date:	First Thursday of every month at 6:30pm.			
Location:	Lexinton School at 19700 Old Santa Cruz, Los Gatos, CA 95033			
Agenda Distribution:	Posted on bulletin board at the tank and on telephone pole.			
Minutes Distribution:	Available upon request and emailed to the distribution list.			

In addition to the legally required agendas and minutes, the District periodically provides information to its constituents in monthly bills. Through its participation in the Fire Safe Council, AHCWD promotes the chipping program by placing promotional signs around the community. When changing connections and pipes in certain sections, the District informs all constituents who are directly impacted by these activities. The District does not maintain a website where information is made available to the public.

If a customer is dissatisfied with the District's services, that customer may write a letter to the Board of Directors, raise the issue at a board meeting, call the office, or email the business manager. The business manager is responsible for addressing complaints; they

are also discussed at board meetings. The District reported that there were no complaints filed in calendar year 2010.

AHCWD demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

Daily operations of the District are managed by the business manager. In addition, there are two other employees—a water operator and legal counsel. All three employees are contractors. The District has a total of one full-time equivalent (FTE) staff, of which half of an FTE is dedicated to water treatment and distribution services.

The District does not perform formal evaluations of its employees. Contractors are usually informed during the budget process that they may submit any requests for changes in their contracts at that time. The agency tracks the employees' workload through work logs. The water operator keeps an activity log; and the business manager keeps mail and phone logs. The District reported that keeping these logs and monitoring staff activities help the District address issues promptly when they arise.

The District's operations and productivity are evaluated informally during the annual budget review process and following the annual audit. Any necessary changes are made and financial audit recommendations are implemented at that time.

To improve the District's operational efficiency, a water main replacement program was implemented. Prior to this program, AHCWD had a water loss rate of 30 to 40 percent, which is significantly higher than industry standards. The District replaced mains over a year and a half period, installed additional meters and replaced about 80 percent of the existing ones. The water main replacement program resulted in a decrease of water loss to about 10 to 20 percent.

The District's financial planning efforts include an annually adopted budget. Financial statements are typically audited on an annual basis; however, recently the audits have been bi-annual, as the District is in the process of transitioning to another auditor. The District does not adopt other planning documents, such as a capital improvement or master plan.

County water districts are required to complete annual audits per the district enabling act.[47] Additionally, all special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of Supervisors has

[47] California Water Code §30540.

approved a biennial or five-year schedule.[48] In the case of AHCWD, the District must submit audits annually. The District has failed to submit its audit to the County for FY 09-10 within the required 12 month period.

POPULATION AND PROJECTED GROWTH

The District has a system that serves 117 connections. Based on an average household size throughout the County of 2.98 people,[49] the estimated population of AHCWD is 349.

The District reported that it had observed little change in the level of service demand in the last few years. In fact, due to mild weather, demand has slightly decreased in recent years.

The population within the service area is stable and the District anticipates little or no growth in population and similarly in service demand within the District's bounds in the next few years; however, no formal population projections have been made by the District. Additionally, SJWC, on which the District is dependent for its water supply, does not request projections from AHCWD. The District reported that it does not anticipate any constraints in water supply to serve existing and near-term demand, as the only limit to the water available to the District is the capacity constraints of the system itself.

There are currently only two undeveloped lots left within the District's boundary. Another previously vacant lot has recently been developed with a private well. The topography of the District is almost entirely hillsides; and the steepness naturally limits the number of parcels that are developable.

Geographically, the only potential to expand the District's services outside of its boundary is to start serving the Lupin Naturalist Club. It is located in the District's vicinity, but is not adjacent to the District's bounds. Currently the Club, that was originally formed as a campground, but now has some full-time residents, provides its own water. However, the District reports that it is not looking to expand at the moment.

[48] Government Code §26909.

[49] U.S. Census Bureau, American Community Survey, 2009.

FINANCING

Financial Adequacy

The District reported that the current financing level is generally sufficient to provide an adequate level of service. Rates are evaluated annually and increased as needed by the Board. The District reported an increase in late payments and 10-day turn off notices, as a result of the recession; however, revenue has remained relatively stable. Also as a result of the recent recession, a private company was renting property from the District, but has returned it, resulting in a slight decrease in revenue sources. Although the District has experienced relatively little impact from the recession, the District has made efforts to minimize costs and maximize efficiency by lowering energy costs, through time-of-use meters and maximizing use of the water system during non-peak hours, and switching to a risk pool to reduce insurance costs.

Revenue Sources

The District maintains three accounts to track revenues and expenditures. Two of the accounts are for operating expenses and the third account is a capital reserve savings account.

In FY 09-10, the District received a total of $179,274 in revenue. The AHCWD's primary source of revenue is water sales ($170,220 in FY 09-10); it also receives a small portion of revenue from interest on investments ($190 in FY 09-10). Additionally, the District receives a small portion of its revenue from property tax. The District generally elects to leave this revenue with the County until the balance is high enough to warrant transferring it into a money market fund. In FY 09-10, the District received $8,865 in revenue from property taxes (less the eight percent that was borrowed by the State).

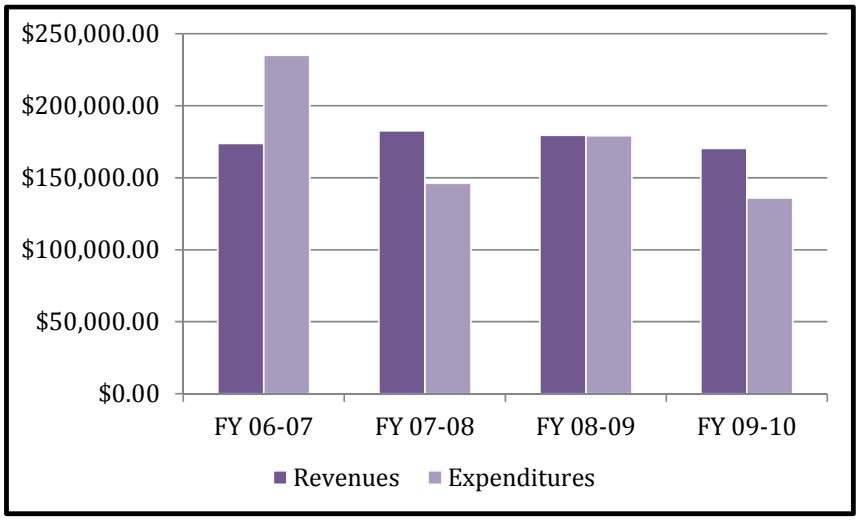
The District charges rates for water services provided. Rates were last updated in 2007 and are evaluated annually. Rates are structured to cover all anticipated operating and capital costs. Currently, the District charges $100 per month for the first 400 cubic feet of water. Seniors are charged $80 per month for the first 400 cubic feet of water. For every 100 cubic feet in excess of the first 400 cubic feet, customers are charged $14 per 100 cubic feet.

Expenditures

In FY 09-10, the District spent a total of $135,882. Primary expenses in FY 09-10 were contract payments to the operator (21 percent), billing (19 percent), debt repayment (17 percent), purchased water (13 percent), and capital expenditures (eight percent).

The District purchases water from the San Jose Water Company. AHCWD is currently paying a rate of $2.3933 per 100 cubic feet (CCF) plus a $180.52 monthly meter charge.

Figure 4-3: Expenditures and Revenues (FYs 07-10)

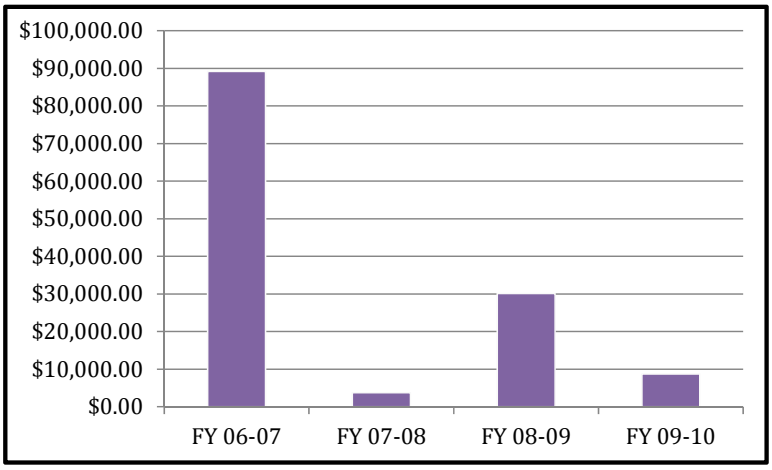


District expenditures and revenues over the last four fiscal years are shown in Figure 4-3. Revenues peaked in FY 07-08, and have slightly declined since then. With the exception of FY 06-07, revenues have exceeded district expenditures.

Capital Outlays

The District does not plan for capital improvement needs through a formal multi-year capital improvement plan, but plans annually during the budget process. The District uses a "pay as you go" approach, financing the majority of infrastructure projects out of reserves. The District has also taken out a loan to finance previous capital improvement projects.

Figure 4-4: Capital Outlays and Depreciation (FYs 07-10)



The District does not estimate annual depreciation. Once an audited financial statement is completed by the District, a comparison of the District's capital expenditures to the depreciation on the District's assets can be evaluated. In lieu of depreciation, only the District's capital expenditures over the last four fiscal years are shown in Figure 4-4. The District appears to invest in its water system as needs and funding are identified.

Long-term Debt

The District currently has long-term debt in the form of a loan that was used to finance a new tank. The District's annual payments are $28,571. The loan is anticipated to be paid off by 2021.

Reserves

The District maintains three separate reserve accounts—one for capital needs and two as emergency and operating reserves. AHCWD has an informal practice of putting aside $10 per account per month for capital improvement purposes. At the end of FY 09-10, the District had a balance of $114,657 in its capital improvement reserve account. Operating and emergency reserves totaled $66,727, at the end of FY 09-10, which equates to approximately six months of operating expenditures.

WATER SUPPLY

AHCWD relies on local surface water supplies obtained from Los Gatos Creek through an agreement with the San Jose Water Company, who holds the pre-1914 water rights to this supply. The District's purchased water supplies are shown in Figure 4-5. Raw water supplies purchased from San Jose Water Company are not fixed in agreement, but the purchased quantities have been consistent from year to year. The maximum water supply available to AHCWD in any given year is determined by the maximum flow of the two meter connections at the creek, which have a combined capacity of 320 gallons per minute (gpm) or 460,800 gallons per day(gpd).[50]

Figure 4-5: AHCWD Water Supplies

Supply Source	Total Water Supplies (AF)
Surface Water from Los Gatos Creek	516

The District also has two springs (County Road Spring and Road 2A Spring) that act as standby water sources. The springs are considered groundwater under the influence of surface water. There has never been analysis to determine the firm yield of the springs; however, the District reported that as the flow from the springs is minimal, and they are most likely not practicably useable as a regular water source. The Board has chosen to maintain the springs as a backup water supply for emergency situations.

[50] Correspondence with Tom Victorine, SJWC Director of Operations, August 1, 2011.

Emergency Preparedness

Water Supply Hazards

The District experienced substantial infrastructure issues following the 1989 Loma Prieta earthquake. The District is making efforts to ensure that the water system is seismically sound, by replacing water storage tanks as necessary.

Emergency Water Supply

Emergency backup supply is provided by above-ground water storage tanks. The District's current storage capacity is equal to more than 14 days of maximum day demand, which is considered more than adequate.

Interties and Back-up Supply

The District does not have an intertie with other water systems. The District does have two springs which are on standby and could be used as a back-up water supply; although there is presently no connection to the springs and the flow from the springs is minimal.

WATER DEMAND

The District's current and projected annual water demands to buildout are not expected to change. The District purchases quantities that meet their annual demands. Seasonal variability, however, is high with average day demand of 14,000 gpd throughout the year and max day demand of 25,000 gpd in the summer. With 117 residential connections serving approximately 349 residents as of 2011, the water demands of the District are modest and are not expected to increase in the future.

WATER INFRASTRUCTURE AND FACILITIES

The District owns and operates one treatment facility, five storage tanks, and 3.6 miles of distribution system. Water is pumped from the Los Gatos Creek up to the treatment facility, and then stored at one of the five storage tanks. The system is primarily gravity fed. Pump stations are located on the Los Gatos Creek and Aldercroft Heights Road to pump raw water into two storage tanks and the treated water into three storage tanks.

Since 2005, the District has completed significant infrastructure improvements to the system, including replacement of the largest storage tank, installation of additional pipeline to complete a "fire ring" and refurbishment of the water treatment facility.

Water Treatment Facilities

The treatment facility was built in 1992 and is located on Panorama Heights Drive in Los Gatos. The treatment plant consists of a clarifier and a sand and anthrocyte charcoal filter. During DPH's most recent inspection of the system in 2008, the inside walls of the treatment system were found to be extremely rusted and the inside and outside of the neighboring tank was corroded. The District subsequently completed a refurbishment of the facility in 2009, which included replacing the control boards of the computer system, replacing the media material for the clarifier and filter, and recoating the storage tank adjacent to the facility. The treatment facility was identified by the District as being in excellent condition.

The treatment facility has a permitted capacity of 50,000 gpd. Based on the District's average daily demand of 14,000 gpd, approximately 28 percent of the facility's capacity is in use. During periods of maximum day demand (25,000 gpd), the District uses 50 percent of the facility's capacity.

Water Storage Facilities

The District has five storage tanks with a combined capacity of 362,000 gallons. The Pollard tank was constructed in 2006 and has a capacity of 212,000 gallons. The tank is considered to be in excellent condition. The 100,000-gallon Rothchild tank was constructed in the late 1990s and is reportedly in good condition. The Y tank is approximately 60 years old, but was refurbished in 2005. It is a 30,000-gallon in-ground tank with a liner and a roof, and is reportedly in good condition. There are two 10,000-gallon County Road tanks, which were both acquired in 1992 and are considered to be in good condition. The County Road tanks store raw water, while the other tanks store treated water.

Conveyance and Distribution Facilities

The total distribution system is composed of 3.6 miles of PVC pipelines. There are two pump stations and three pressure zones. All connections are metered.

Approximately, 85 percent of the pipelines were replaced following the 1989 earthquake. The District has also undertaken capital improvement projects in the past few years to improve system pressure and reliability for fire flow. The District's engineer recommended completing a "fire ring", so that all pipes in the system could be connected together to provide sufficient pressure for fire flow. The District completed the fire ring as recommended by the engineer in 2007 by installing additional pipeline. The system is now considered to be in good condition. As the system is relatively new, the District has not implemented a routine replacement schedule.

The distribution system's integrity is indicated by the District's rate of distribution loss and number of breaks and leaks in 2010. The District estimates that there is between 10 and 20 percent unaccounted for distribution loss from the point of treatment to the delivery point to each of the connections. There were no main breaks or leaks in 2010.

Infrastructure Needs

The District reported that it had made significant improvements to the water system over the last five years, and therefore, there are no further infrastructure needs or deficiencies that need to be addressed in the short-term. The District does anticipate that the Rothchild tank will eventually need to be replaced as it is aging and may be more susceptible to earthquakes than the other tanks. The tank is still operational, and replacement is not presently a priority.

Additionally, the most recent DPH inspection from 2008 found that the intake pump casings were in poor condition, and that the Y Tank hypalon liners were detaching from the tank walls. The casings are rusted and chipped, exposing the raw water supply to possible sanitary hazards. The screens on the pump house are missing or torn. There was also evidence of animal visits within the pump house and next to the casings. DPH stated that the screens must be replaced immediately to prevent sanitary hazards from reaching the raw water supply.

The location and long-term viability of the Y tank is a concern to DPH. The Y tank is partially buried and located within a depression along-side the road. During a heavy storm event, sanitary hazards from the nearby road can potentially flow down toward the tank and pond around the tank sides. The only protective barrier between the contaminant and the finished water supply is the concrete wall and hypalon liners. The hypalon liners are detaching from the tank walls, and may fall off completely. DPH ordered that immediate action be taken to secure the liners to the tank walls to prevent contaminants from reaching the water supply. AHCWD was also required to apply weather stripping or other protective barriers to the tank hatches to prevent the entrance of insects, bugs and debris. AHCWD reportedly completed these projects.

Capital Improvement Plans

The District is in the midst of completing 200 feet of pipeline, which is to be completed by the fall of 2011. This project is anticipated to cost approximately $16,000 upon completion.

The District reported that there were no planned but unfunded capital improvement projects in the near future. AHCWD has sufficient storage and fire flow, and the plant was recently refurbished.

Shared Facilities

The AHCWD is geographically isolated from other water agencies and opportunities to share facilities are limited.

The District previously leased property to Matrix Cable Vision, but the property was returned to the District. The District makes use of the elementary school for its board meetings and SJWC facilities control the flow of the creek.

The District does not see further opportunities for facility sharing. However, in order to minimize costs, the District's general approach has been to rent equipment when necessary, as it is rarely needed.

WATER QUALITY

Source Water

The Los Gatos Creek is considered to be a relatively pristine raw water source that still requires treatment. The creek is reportedly not subject to industrial pollution or particular contaminants.

According to DPH's Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the District's surface source waters are susceptible to potential contamination from septic tanks and transportation corridors.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

According to the EPA Safe Drinking Water Information System, AHCWD has had no health or monitoring violations within the last 10 years with regard to its water treatment system.

AHCWD was not out of compliance with Primary Drinking Water Regulations throughout 2010.

Overall, in 2008, DPH found that the system was generally in good condition and operated by conscientious staff. In addition to the infrastructure deficiencies outlined under the Infrastructure section of this chapter, DPH identified several operational

concerns regarding the District's system and operating plans. The District reported that it had completed or initiated these changes required by DPH. DPH made the following requirements:

- As the District's annual test for TTHM and HAA5 was overdue, the District was required to collect and analyze a TTHM and HAA5 sample by September 30, 2008.
- AHCWD must measure the flow rates through the raw and finished water turbidimeters, at a minimum of once per quarter and report the flow rates to the Department.
- AHCWD must document all turbidity validation test dates and results within a log
- AHCWD must immediately work with the manufacturer on determining the appropriate backwash flow rate and duration that will ensure optimal removal of particles from the filter media but at the same time not agitate the media bed so much that the media itself will be removed along with the backwash water.
- AHCWD needs to incorporate into its Operations Plan, a filter surveillance program.
- The District must initiate a cross connection control program.
- AHCWD must develop and submit to the Department a water main flushing and valve maintenance plan.
- AHCWD must accurately record all activities related to the operation of the Trimite WTP and AHCWD distribution system. The records should provide the operators as well as others a running account of operations.

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ALDERCROFT HEIGHTS COUNTY WATER DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The estimated population of AHCWD is 349.
- No or minimal future growth is anticipated within the District, as there are only two vacant developable lots left within the District's boundary. The topography of the District is almost entirely hillsides; and the steepness naturally limits the number of parcels that are developable. Additionally, there is little potential for growth through expansion of the District.
- Similar to other providers, the District has experienced a slight decrease in water use due to mild weather.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- The District appears to have more than adequate water supply to serve existing and near-term demand, as the limit to the water available to the District is the capacity constraints of the system infrastructure itself.
- The District has sufficient system capacity. On average, approximately 28 percent of the District's treatment capacity is in use and 50 percent during maximum day demand.
- The District has significant water storage to weather a short-term water outage, but no feasible back up water supply or interties with other purveyors for extended water interruption.
- The primary infrastructure need related to the AHCWD is the replacement of a storage tank to enhance seismic safety. As this tank is still functional, the District identified this as a long term replacement goal.
- California Department of Public Health identified several infrastructure deficiencies and operational issues during its most recent inspection. The District has addressed these concerns.
- AHCWD provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely

thorough district response to California Department of Public Health infrastructure and operational concerns.

- District management methods appear to generally meet accepted best management practices, although there are areas where improvements could be made. The District prepares a budget before the beginning of the fiscal year, regularly evaluates rates and fees, tracks employee and district workload, and has an established process to address complaints. District audits have been sporadic. The District could improve upon completing regular audits in a timely fashion. District financial records are not comprehensive. The District could enhance transparency, by ensuring that all revenue sources are shown on statements.

- The District has failed to submit its annual audit to the County for FY 09-10 within the required 12 month period. AHCWD could improve upon transparency and accountability by submitting annual audits within the legally required time frame.

Financial Ability of Agency to Provide Services

- AHCWD has experienced a slight decline in revenues over the last few years as a result of late payments and loss of property rental income; however, current financing levels are generally considered adequate to provide services. Rates are evaluated annually and increased as needed to cover operating and capital expenditures. The District maintains sufficient reserves to cover contingencies.

- The District appears to invest in its water system as needs and funding are identified. The District does not produce or adopt a capital improvement plan, which may be used to identify timing and funding for the projects. It is recommended that all water agencies have a multi-year capital improvement program.

- Although the District has experienced relatively little impact from the recession, the District has made efforts to minimize costs and maximize efficiency by lowering energy costs, through time-of-use meters and maximizing use of the water system during non-peak hours, and switching to a risk pool to reduce insurance costs.

Status and Opportunities for Shared Facilities

- The Aldercroft Heights County Water District is geographically isolated from other water agencies and opportunities to share facilities are limited. Present facility sharing practices consist of using the elementary school for board meetings and SJWC facilities that deliver water to the District.

- The District does not see further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. AHCWD appears to generally be accountable to the public based on these indicators; however there have been no recent contested elections indicating a lack of constituent interest in district activities.

- It is recommended that AHCWD, as a public agency, maintain a website where information can be made available to the public.

- A governance structure option is for AHCWD to annex the parcel that it is presently serving outside of its boundaries, which would promote logical boundaries.

ALDERCROFT HEIGHTS COUNTY WATER DISTRICT SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The District's SOI is coterminous with its boundaries. The SOI was last updated in 2007.

Recommended Sphere of Influence Boundary

AHCWD is presently providing services to a single residential connection outside of its boundaries located at 20900 Panorama Heights Road (APN 558-22-019). The connection was added in 1991 under the agreement that the property would eventually annex into the District. The District is not presently receiving property tax revenue from this parcel.

It is recommended that the District's Sphere of Influence be expanded to include this single parcel. This Sphere of Influence would promote logical boundaries. There are no other areas where the District plans or intends to provide services outside of its bounds.

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

The District's service area is entirely residential, located in a rural, unincorporated area within the Santa Cruz Mountains. No land use changes are anticipated.

There are currently only two undeveloped lots left within the District's boundary. Another previously vacant lot has recently been developed with a private well. The topography of the District is almost entirely hillsides; and the steepness naturally limits the number of parcels that are developable.

Present and probable need for public facilities and services in the area

There is a clear and present need for AHCWD domestic water services within the existing service area, as shown by demand for water services. The District serves a developed area, and water services are needed to serve the existing 117 residential connections. The District serves the entirety of the area within its bounds with the exception of five lots with private wells and two undeveloped lots. The present need for water service in the community is currently being met solely by the District.

There is a probable need for continued AHCWD domestic water services within the existing bounds at a level similar to existing demand. No or minimal population growth is

anticipated within the District's bounds over the long-term, as the community is largely built out. There is little potential for growth through expansion of the District as well, as topography limits developable lots.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

The District appears to have more than adequate water supply from San Jose Water Company to serve existing and near-term demand, as the limit to the water available to the District is the capacity constraints of the system infrastructure itself. The District has sufficient system capacity, as only 50 percent of the treatment capacity is in use during maximum day demand. The District has sufficient water storage to supply 14 days of water during maximum usage periods, which is considered more than adequate.

Water facilities and services appear to be adequate based on State inspection reports, recent regulatory compliance, and management methods. The primary infrastructure need related to the AHCWD water system is the replacement of the Rothchild Tank to enhance seismic safety and emergency preparedness. It is recommended that the District initiate formal capital planning and enhance transparency by making available comprehensive financial information and regular timely audits.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

The residents and landowners within the Aldercroft Heights community have an economic interest in the services provided by the District as the District is funded through a portion of the one-percent property tax and water rates. The SOl update will not affect the existence of any social or economic communities of interest in the area that are relevant to the District.

The nature, location, extent, functions, and classes of services provided

The present AHCWD bounds encompass approximately 2.5 square miles on the western edge of Santa Clara County in the vicinity of the Lexington Reservoir. AHCWD provides retail water services to its residents. The District's service area is entirely residential, although some property owners have micro-vineyards and other large landscape areas on their properties. The District does not have a water conservation program, as customers reportedly minimize water use, due to the relatively high water rates.

5. PURISSIMA HILLS WATER DISTRICT

AGENCY OVERVIEW

The Purissima Hills Water District (PHWD) was formed in 1955 as an independent special district. It provides water services in the northern portion of Santa Clara County. The District was originally formed as Purissima Hills County Water District, but formally dropped the word "County" from its name in 1981.[51] A water service review for the District was last conducted in 2005.

The principal act that governs the District is the County Water District Law.[52] The principal act empowers the District to "store water for the benefit of the district, conserve water for future use, and appropriate, acquire, and conserve water and water rights for any useful purpose."[53] Districts must apply and obtain LAFCO approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.[54]

Type and Extent of Services

Services Provided

PHWD provides domestic water services to its residents in the form of distribution to its customers. The District does not provide treatment, as all water is pre-treated by the San Francisco Public Utilities Commission (SFPUC) and delivered through SFPUC's Hetch Hetchy Water System. The District relies solely on SFPUC's surface water. The District has a water conservation program in conjunction with SCVWD, which is coordinated by a part-time employee. Recycled water is not available within the District's bounds.

[51] PHWD Resolution 1981-6.

[52] California Water Code §30000-33901.

[53] California Water Code §31021.

[54] Government Code §56824.10.

Service Area

The District's service area is primarily low-density residential, characterized by estate homes on minimum one-acre lots. There are also some institutional uses, including Foothill College. The District's infrastructure is extended to all developed lots within its bounds. There are approximately three parcels that are operating off of private wells, where the landowners have chosen not to connect to the system; however, the District reported that these properties could easily connect to the system if they desired. There are also approximately 300 private wells scattered throughout the District that are used to supplement each property's water supply.

In the 2005 water service review, it was identified that the District served two parcels outside of its bounds. These parcels have been annexed. Three additional extraterritorial parcels were identified during the 2007 SOI update; however, it has been determined that these parcels are in PHWD's bounds. PHWD does not provide services outside of bounds.

Services to Other Agencies

The District does not provide services to other agencies under contract.

Contracts for Water Services

The District receives treated water through an agreement with SFPUC. All district operations are provided directly by district staff.

Collaboration

PHWD is a member of the Bay Area Water Supply & Conservation Agency (BAWSCA), utilizing the functions of that agency to represent the District's interests with SFPUC.

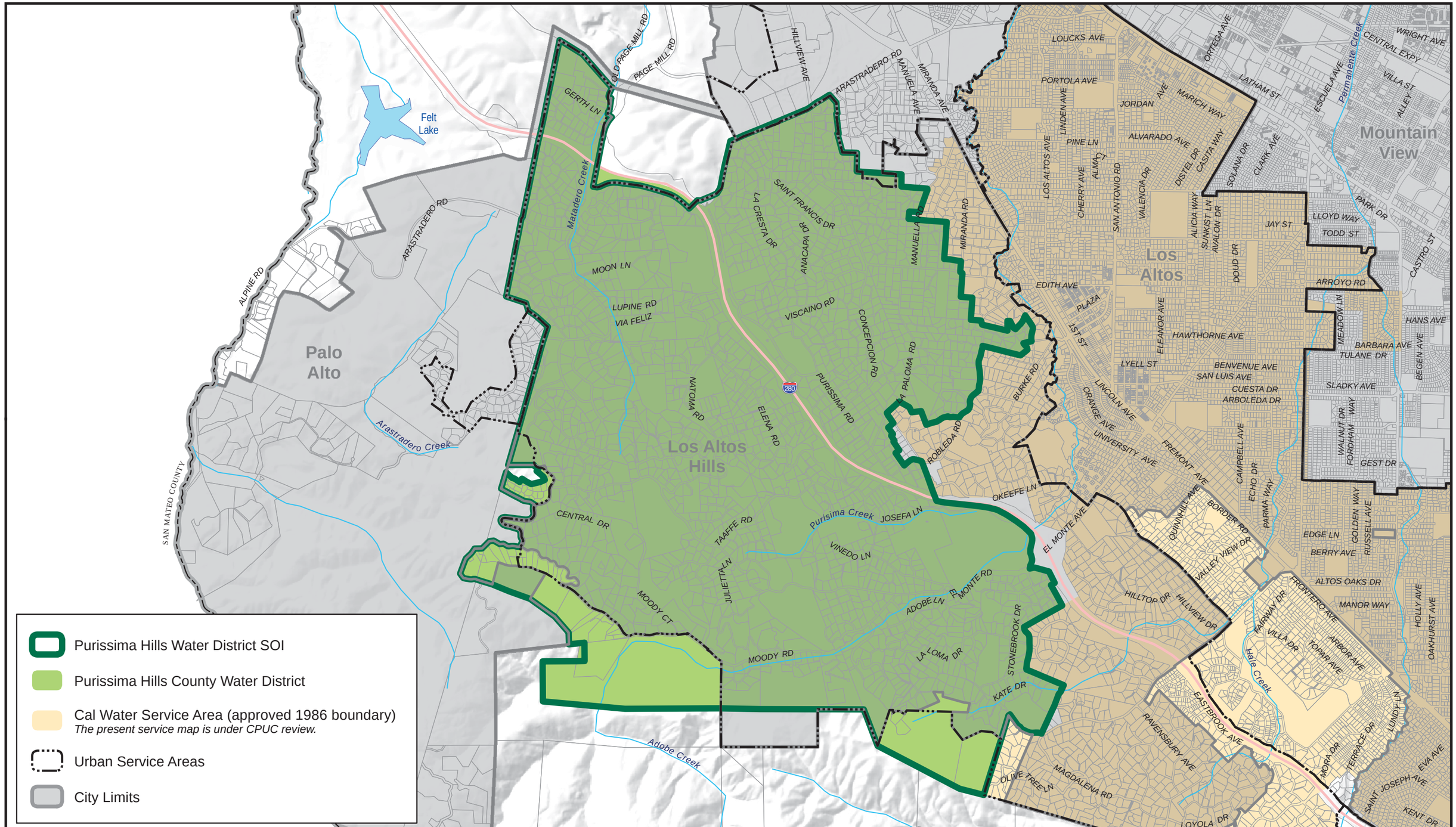
Boundaries

The District's boundary is entirely within Santa Clara County. The present bounds encompass approximately 13.4 square miles. The District's bounds encompass about two-thirds of the town of Los Altos Hills and an unincorporated area to the south. The California Water Service Company (Cal Water) serves the remaining eastern and southeastern portions of Los Altos Hills. The District abuts the City of Palo Alto to the north and west and the Cal Water service area to the east. The area to the south is designated as hillside and other public open lands per the County Land Use Plan (2005) and is undeveloped.

Sphere of Influence

The District's SOI is coterminous with its boundaries. The SOI was last updated in 2007.

Figure 5-1



Purissima Hills County Water District

September 2011

ACCOUNTABILITY AND GOVERNANCE

Purissima Hills County Water District is governed by a five-member Board of Directors, elected at large to serve staggered four-year terms. There are currently five board members, all of whom were elected. Each board member is compensated $100 per meeting attended. Current board member names, positions, and term expiration dates are shown in Figure 5-2. The District conducts Brown Act training immediately after new members get elected to the Board of Directors.

Board meetings are held at the district office at 6:30 in the evening on the second Wednesday of every month. Agendas are posted at the office on Fridays before meetings and on the district website. Upon request, the District provides written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Minutes are available on the District's website or by request.

Figure 5-2: PHWD Governing Body

Purissima Hills County Water District				
District Contact Information				
Contact:	Patrick Walter, General Manager			
Address:	26375 Fremont Road, Los Altos Hills, CA			
Telephone:	650-948-1217			
Fax:	650-948-0961			
Email/website:	http://www.purissimawater.org/home.html, pwalter@purissimawater.org			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Robert N. Anderson	President	December 2014	Elected	4 years
Brian Holtz	Vice-President	December 2012	Elected	4 years
Stephen A. Jordan	Director	December 2012	Appointed	4 years
Ernest Solomon	Director	December 2012	Elected	4 years
Gary Kremen	Director	December 2014	Elected	4 years
Meetings				
Date:	Second Wednesday of every month at 6:30pm.			
Location:	District Office at 26375 Fremond Road, Los Altos Hills, CA			
Agenda Distribution:	Posted at the office and on the website.			
Minutes Distribution:	Available on the website.			

In addition to the legally required agendas and minutes, the District attempts to reach its constituents through its website and newsletters. The District's newsletter is typically published monthly. The District also maintains a thorough website where documents and information are made available to the public.

If a customer is dissatisfied with the District's services, that customer may write a letter or call the District office. The district secretary is responsible for handling operational and general complaints, and the billing manager handles complaints regarding accounts. The District reported that there were 48 complaints in CY 2010. Two were regarding odor or taste, 13 about leaks, 16 about pressure and 17 regarding turbidity.

Purissima Hills County Water District demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

The District has 10 staff members. A general manager oversees district operations performed by two office staff, a part-time conservation coordinator, and a five-person field crew. In addition, there is an intern who works on GIS. There are a total of nine FTEs, five of whom are directly employed in water distribution services. In addition, the District contracts with Pakpour Consulting Group for engineering services. The contractor is accountable to the general manager.

District staff are evaluated annually. The foreman is evaluated by the general manger. All other staff are evaluated by the foreman. The general manager reports the Board of Directors at monthly meetings.

Currently, the District uses timesheets to track its employees' workload, but reported that it does not find it informative or useful in evaluating efficiency or demand. Consequently, the District is in the process of setting up a more sophisticated system to better track projects and workload efficiencies. Elements Software will be implemented to manage inventory, work orders, workload and assets, etc. The system set up is scheduled to be completed by the end of summer 2011.

District-wide performance is evaluated during the general manager's evaluation, as well as during the annual audit and budget processes and the regular California Department of Public Health (DPH) inspections. The District reported that evaluating district performance is a challenge, as the system dictates the productivity of the employees. The District places an emphasis on safety and high quality work.

To improve its operational efficiency the District installed radio-read heads on all meters, which has reduced staff time dedicated to meter reading from approximately one week to one day. The District also recently completed a main replacement and extension project, which replaced asbestos cement main with ductile iron, improved water quality, and enhanced fire suppression flow and service to customers by augmenting pressure and seismic safety.

The District's financial planning efforts include an annually adopted budget, annually audited financial statement, a rate study, and a rolling five-year capital improvement plan. Other planning documents adopted by the District include a strategic plan and an emergency/contingency plan. The District is in the process of drafting and adopting the strategic plan.

County water districts are required to complete annual audits per the district enabling act.[55] Additionally, all special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of Supervisors has approved a biennial or five-year schedule.[56] In the case of PHWD, the District must submit audits annually. The District has submitted its audit to the County for FY 09-10 within the required 12 month period.

POPULATION AND PROJECTED GROWTH

The District's system serves 2,176 connections, comprised of 2,059 residential, 35 commercial and institutional, eight landscape irrigation, and 74 inactive connections.[57] Based on an average household size throughout the County of 2.98 people,[58] the estimated population of PHWD is 6,136.

Since the District's boundaries overlap significantly with that of the City of Los Altos Hills, ABAG projections for the town may be used to estimate the future population of PHWD. According to the 2010 Census, Los Altos Hills has a population of 7,722. ABAG projects that the population of the town will grow by three percent by 2035, with an average annual growth rate of 0.1 percent. ABAG's population projections for 2010 were slightly higher than the actual population reported in the 2010 Census. Population projections have been adjusted assuming ABAG's projected rate of growth from the 2010 Census population. In 2035, it is projected that the District will serve an estimated population of 6,180 residents.

The District reported that demand for water over the last decade had generally increased until 2004, when the District experienced peak demand, and has steadily declined since then. PHWD attributes the decrease in demand to cooler summers, higher utility rates and difficult economic conditions. However, water demand within the District

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[55] California Water Code §30540.

[56] Government Code §26909.

[57] Purissima Hills WD, *Annual Report to the Drinking Water Program for Year Ending December 31, 2010*, 2010.

[58] U.S. Census Bureau, American Community Survey, 2009.

remains higher than typically found in districts of similar size, likely due to the size of the homes and landscaped area associated with the minimum one-acre parcels.

The District previously anticipated a high rate of future growth due to landscaping associated with new construction, but currently believes that demand will remain stable or decline due to increases in SFPUC water costs and new irrigation legislation. The District is expecting ten additional connections at build out. Potential growth through new development within the District's boundaries is limited to infill. There are presently between 20 to 40 empty lots scattered throughout the District, some of which may not be developable. The District was not aware of any planned or proposed development projects on these lots.

To assist in projecting future demand, the District contracted with an engineering firm to estimate the amount of new development and the resulting impact on demand. The firm concluded that the majority of expected construction would result from tear-downs and not from new development. Additionally, due to the legislation (AB 2717) requiring landscaping to be more efficient, the District anticipates that people will likely plant less grass and use less water.

There is little potential for growth through expansion of the District as well. The District is surrounded by other providers to the north, east and west. Territory adjacent to PHWD in the south is not served, but the topography of the area limits the potential for development.

The District coordinates with SFPUC in planning for future growth and service needs by annually reporting anticipated use.

FINANCING

Financial Adequacy

The District reported that the current financing level is generally sufficient to provide an adequate level of service. Rates are evaluated annually and increased as needed by the Board. There have reportedly been no particular challenges related to the recent recession, although there has generally been a lower use of water (13 percent reduction from FY 08-09 to FY 09-10) and thus lower revenues. While the District has experienced relatively little impact from the recession, it has taken steps to minimize expenditures, including changing healthcare programs and benefitting from reduced insurance costs as a result of consistent capital spending to increase reliability and reduce water related damage payouts.

Revenue Sources

In FY 09-10, the District's total revenue was $4.4 million. The District's primary source of revenue is water sales (70 percent), property taxes (13 percent) and service charges (11 percent). Other charges, rental income and investments earnings made up approximately six percent of revenue sources.

The District charges rates for water services provided. Rates were last updated in 2010 and are evaluated annually. Rates are structured to cover all anticipated operating and capital costs. Currently, the District charges a flat "readiness to serve" charge for each connection based on meter size. A residential connection would pay $15 per month. In addition, customers are charged for the amount of water used. The District has a six tier system, where the customer pays:

- $2.70 for every 100 cubic feet for the first 1,000 cubic feet,
- $4.15 for every 100 cubic feet between 1,100 cubic feet and 3,000,
- $5.60 for every 100 cubic feet from 3,100 to 6,000,
- $7.05 for every 100 cubic feet from 6,100 to 10,000 cubic feet,
- $8.50 for every 100 cubic feet from 10,100 to 20, 000 cubic feet, and
- $9.95 for every 100 cubic feet in excess of 20,000.

The District is looking into additional revenue sources. Presently, the District leases six antennae sites to cellular service providers. The District is looking into developing two more antennae sites for rental purposes. Also, the District aggressively pursues grant opportunities. Between 2005 and 2010, the District was able to secure over two million dollars from the Los Altos Hills County Fire District for capital improvement projects.

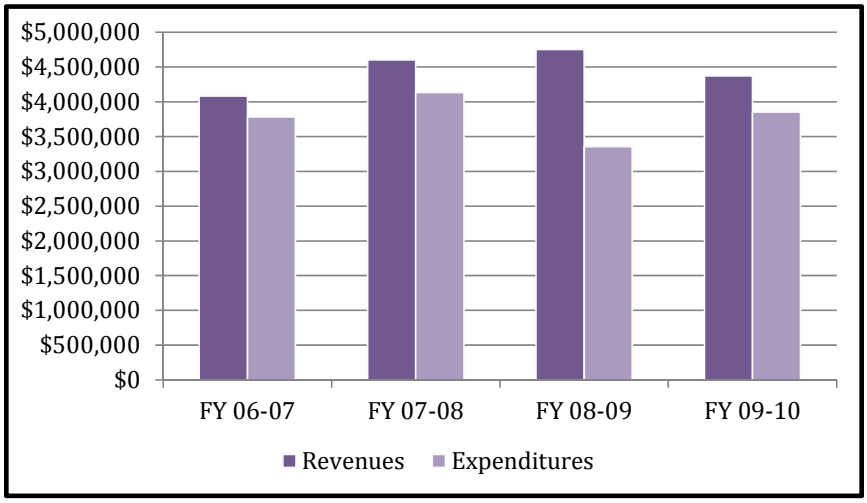
Expenditures

In FY 09-10, the District spent a total of $3.9 million. Primary expenses in FY 09-10 were water purchases (39 percent), operation of the transmission and distribution system (28 percent) and administration (24 percent).

The District purchases water from SFPUC. In FY 10-11, PHWD paid a rate of $1.90 per 100 cubic feet (ccf) plus a $3,000 monthly meter charge. For FY 11-12, SFPUC raised its rates to $2.63 per ccf. Additional rate increases are anticipated over the next 10 years. The increases are attributed to SFPUC's significant $4.3 billion capital improvement program intended to make its water system more reliable in the event of an earthquake or other disaster.

In addition, SFPUC initiated an environmental enhancement surcharge (EES) for agency purchases of water in excess of their allotted amount. The surcharge is to be in effect beginning in FY 11-12 through FY 17-18. The EES is based on each agencies' water use in million gallons per day. If the entire Hetch Hetchy regional system uses more than 265 mgd, then those agencies over their supply assurance will pay a surcharge based on a rate of $850,000 per mgd over the supply assurance.

Figure 5-3: Expenditures and Revenues (FYs 07-10)

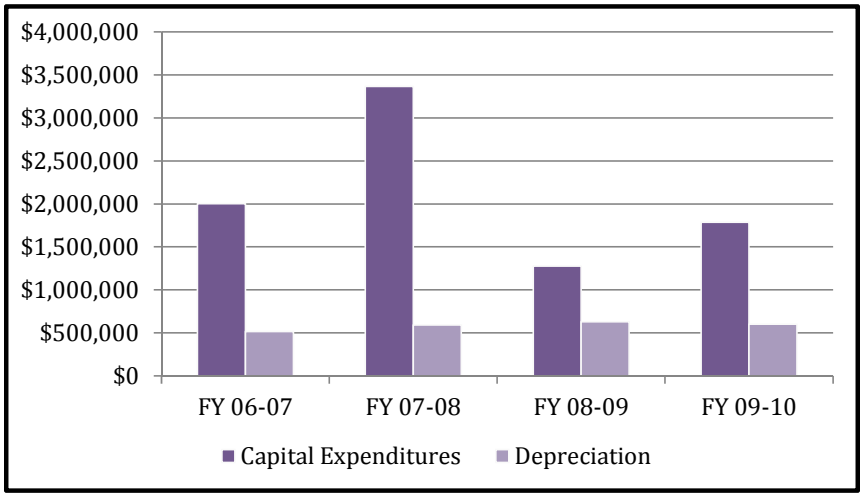


District expenditures and revenues over the last four fiscal years are shown in Figure 5-3. Revenues peaked in FY 08-09, and have slightly declined since then. Revenues have exceeded district expenditures every year.

Capital Outlays

The District plans for its capital improvement needs in its five-year capital improvement plan. The District uses a "pay as you go" approach, financing the majority of infrastructure projects out of reserves. The District has also taken out loans to finance previous capital improvement projects.

Figure 5-4: Capital Outlays and Depreciation (FYs 07-10)



The District's capital outlays and estimated depreciation of assets is shown in Figure 5-4. The capital outlays shown here reflect both the District's direct expenditures and capital contributions. Given that capital outlays have exceeded depreciation in each of the last four fiscal years, it appears that the District regularly reinvests in its capital assets at a rate that greatly exceeds wear and tear.

Long-term Debt

At the end of FY 09-10, the District had $1.6 million in long-term debt in the form of two loans used to finance capital improvements.

In 2007, PHWD took out a $500,000, 3-year loan to assist in financing the construction of the administration building. Principal and interest payments of $90,396 were payable semi-annually at a rate of 4.75 percent. On June 30, 2010, the loan was paid in full.

In 2010, PHWD entered into a $2 million loan payable agreement with the Los Altos Hills County Fire District (LAHCFD) to assist in financing the construction of the Zone 2.5 Phase II and III main projects. Terms of the agreement provide for principal and interest payments payable semi-annually, maturing in 2015. Interest is calculated based on the Local Agency Investment Fund average monthly effective yield rate.

Reserves

The District maintains a single reserve account for both emergency and capital reserves. The District has an informal policy to maintain about $750,000 in its reserve fund for emergency use. At the end of FY 09-10, the District had unrestricted net assets of $2 million, which equates to approximately six months of operating expenditures.

WATER SUPPLY

SFPUC provides PHWD with 100 percent of its water supply requirements via two turnouts from the Hetch Hetchy pipeline along the Foothill Expressway on the northern edge of the District. The SFPUC water supply is gravity-fed through 18" transmission mains to two pump stations that pump to tanks distributed throughout the District. All water is pre-treated by SFPUC.

The Master Agreement between PHWD and the SFPUC was negotiated by the Bay Area Water User's Association (BAWUA), which preceded BAWSCA, and authorized by PHWD in 1984. The agreement allocates the District 1.62 million gallons per day (based on system capacity). This individual supply guarantee was originally based on historical usage by PHWD and was last adjusted in 1993. For FY 08-09, the total water purchased by PHWD was 24 percent over its individual supply guarantee. For the last few years, there have been no water shortages, and PHWD has been able to purchase the additional water from SFPUC at current rates without any additional charges for exceeding its individual supply guarantee. In 2009, PHWD, through BAWSCA, negotiated a new contract for delivery of water with SFPUC. The new contract was adopted by PHWD in 2009.[59] During contract

[59] Resolutions No. 2009-2, 2009-3 and 2009-4.

negotiations, the District attempted to increase its allocation; however, the final contract did not change the individual supply guarantee of any BAWSCA member and, therefore, PHWD continues to expect its requirements to exceed its water supply.

In light of the terms of the new contract with SFPUC, PHWD believes that an additional water supply may need to be developed or purchased to ensure water delivery for both the near and long term future, and especially in time of drought. PHWD continues to explore various possibilities for this additional supply. Groundwater is not used by PHWD, and it has no existing wells. The District has performed extensive research to develop a well both inside and adjacent to the District and ultimately drilled two test holes based on the best potential of this research. Results of these test holes have indicated poor water quality and quantity. The District is no longer pursuing a well as a supply alternative. Current supply allocations from the SFPUC are set out in Figure 5-5.

Figure 5-5: PHWD Water Supplies

Supply Source	Total Water Supplies (mgd)
SFPUC	1.62
Source: 2010 PHWD Water Rate Study, February 2010	

SFPUC attempts to limit how much water the District uses by collecting an environmental enhancement surcharge if its annual purchase exceeds 1.62 mgd and the overall SFPUC demand of 265 mgd is exceeded. Supply limitations started in FY 11-12 and will last through FY 17-18.[60]

Emergency Preparedness

Water Supply Hazards

Although the District has adequate storage, there is a concern regarding the reliability of SFPUC supply in the event of a natural or manmade disaster. The District has not identified any specific water supply hazards.

Emergency Water Supply

Emergency backup supply is provided by 11 water storage tanks. The District's current storage capacity is equal to just over two days of maximum day demand.

[60] SFPUC, *Agenda item: Environmental Enhancement Surcharge beginning FY 2011-12*, Commission meeting May 10, 2011.

Interties and Back-up Supply

In the 2005, the District had one emergency intertie with Cal Water and a temporary connection with Palo Alto. The 2005 Water Service Review identified this as an infrastructure deficiency, and reported that if SFPUC's supply were interrupted for any extended period of time, the District's ability to provide service would be limited. Since then, the District has added three permanent interties to its system. Presently, in addition to the two SFPUC turnouts, the District has four back-up interties with neighboring purveyors—two with Cal Water and two with Palo Alto, each with the ability to transfer about 1,000 gpm. The District continues to investigate using Quarry Hills Lake as a non-potable water source for health fire suppression purposes as a last resort in the event of an extended water outage.

WATER DEMAND

As of December 2009, the PHWD serves 2,060 residential services and 53 institutional services including Foothill College, Pinewood High School and the Town's Little League Baseball field. In calendar year 2010, the District purchased 620 million gallons or 105 percent of the available water supply from SFPUC. The District has experienced a reduction in its water demand by 13 percent over the last two years, since 2008.

District customers have a relatively higher use of water than other water agencies in the County. On average, a residential connection used 889 gallons per day in FY 08-09.

The majority of the PHWD service area is built out, and only a few parcels remain that are not served by the District's water distribution system. Future development will primarily be a result of subdividing parcels, replacing existing homes with larger homes and construction of second units. While the District previously anticipated two percent growth in water use per year, the District now projects that there will be no or declining growth in demand for water in the near term due to increased rates and conservation efforts.

WATER INFRASTRUCTURE AND FACILITIES

The District's water system includes 81 miles of pipelines, 11 reservoirs, and 10 million gallons of storage capacity. The District's only water source is imported water purchased from SFPUC; groundwater and recycled water are not available

Water Storage Facilities

The District owns and maintains 11 storage tanks with a combined capacity of 9.8 million gallons (mg). The storage tanks are as follows:

- McCann 1 (1957) – 0.13 mg
- McCann 2 (1966) – 1.0 mg
- Neary 1 (1965) – 0.2 mg
- Neary 2 (1981) – 3.0 mg
- Page Mill (1965) – 0.5 mg
- Altamont 1 (1962) – 0.2 mg
- Altamont 2 (1964) – 0.25 mg
- Elena (1960) – 0.5 mg
- Hungry Horse (1976) – 3.0 mg
- La Cresta 1 (1957) – 0.1 mg
- La Cresta 2 (1992) – 0.9 mg

These tanks were all identified by the District as being in good condition. All of the tanks have been relined or recoated within the last 15 years, with the exception of La Cresta 2, and all tanks have been cleaned since 2008.

Conveyance and Distribution Facilities

The total distribution system is composed of 81 miles of primarily ductile (40 percent) and cast iron (42 percent) with some asbestos cement (15 percent), PVC (two percent) and steel (one percent) pipelines. There are five pump stations, 14 pumps, and four pressure zones. The system utilizes tank elevation and gravity to provide pressurized flow. There are no hydro-pneumatic pressure zones in the District. All connections are metered with radio read heads.

The District identified the distribution system as generally being in good condition. Portions of the system are old and undersized dating back to 1957, primarily due to acquisitions of mutual water systems. The distribution system pipe size is mostly 6-inch and 8-inch (80 percent) with just 1 percent of the mains less than 6-inch. In the last fifteen years, the priority has been to replace the undersized and high risk cross country mains for reliability. As part of its capital improvement plan, the District has identified cross country mains with recent breaks in Duval Way, Julietta Lane, and Deer Springs Way, and a main with a history of breaks and leaks along Altamont Road in Zone 4. The District has identified one million dollars per year in capital improvement projects over the next five years (through 2015) which focus on repair and replacement of aging infrastructure to maintain and improve system reliability. Most recently, the District completed a major main replacement project (Zone 2.5 Phases I, II and III) to improve water quality and increase throughput and pressure to enhance fire protection and service to customers in a low pressure and seismically vulnerable area. The project was completed in summer 2011 and cost approximately $4.4 million (including contributed capital).

The distribution system's integrity is indicated by the District's rate of distribution loss and number of breaks and leaks in 2010. The District estimates that there is less than five

percent unaccounted for distribution loss from the point of treatment to the delivery point to each of the connections. There were approximately 12 main breaks or leaks in 2010.

Infrastructure Needs

The District expanded its service area by taking over five to six smaller mutual water companies within Los Altos Hills back in the 1970's. Some of its current infrastructure was originally owned by these companies and was incorporated into the system at the time of acquisition. The system is aging and the District has taken a proactive approach to making upgrades and replacements prior to failure.

Additionally, the most recent DPH inspection from 2010 found several needs or deficiencies related to the system's infrastructure. With few exceptions, the District has addressed DPH's concerns since that time. Deficiencies identified were as follows:

- Removal of the roof drainage system on Neary Tank #2;
- Replacement of the large-sized mesh on the La Cresta #2 roof vent;
- Elimination of rust on the hatches of the McCann 2, Elena and La Cresta 1 tanks;
- Welding of side vents on Page Mill Tank;
- Installation of vent covers on the McCann 2, La Cresta 2, Hungry Horse, Altamont 2, and Neary 1 tanks (The District has completed a temporary upgrade for McCann 2, La Cresta 2 and Altamont 2 and a permanent upgrade for Neary 2. The District has the parts on hand to make the upgrade in the near future.);
- Installation of steel overhangs at the Page Mill, Neary 1, and Altamont 2 tanks;
- Repair of a leaking pump; and
- Destroy two test wells that the District does not intend to use.

Capital Improvement Plans

The District's capital improvement plan outlines nine projects totaling $4.9 million. Five of the projects are planned to be completed by FY 14-15, while four projects are yet unfunded and there is no timeline for completion. Planned projects include:

- Improvements to the McCann pump station in FY 11-12 ($300,000);
- Extension of main along Altamont Road to the storage tank to be completed in FY 13-14 ($1.6 million);

- Installation of a main from Elena Road to Taaffe Road to solidify Zone 3 and enable cross-country abandonment in FY 13-14 ($330,000);
- Replacement of an abandoned cross-country pipeline from Julietta Lane to Deer Springs Way in FY 14-15 ($275,000);
- Replacement of main along Altamont Road in Zone 4 in FY 14-15 ($220,000);
- Installation of new pumps at the Elena pump station sometime after FY 14-15 ($500,000);
- Abandonment of two cross country mains, in the Liddicoat subdivision, due to safety concerns during an emergency, to be completed sometime after FY 14-15 ($375,000); and
- Replacement of asbestos cement water main along Taaffe Road to be completed sometime after FY 14-15 ($710,000).

Shared Facilities

The District practices facility sharing by receiving water through facilities owned and operated by SFPUC. Additionally, PHWD shares emergency intertie facilities with Cal Water and Palo Alto.

PHWD is a member of BAWSCA, utilizing the structure and functions of that agency to represent the District's interests with the SFPUC. The District also participates in a joint effort with the Los Altos County Fire District to upgrade water mains and fire hydrants within the water service area. The upgrades are made to improve system reliability, fire flows and circulation.

The District did not identify any other potential facility sharing opportunities.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other

words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir.

Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

According to the EPA Safe Drinking Water Information System, PHWD has had no health or monitoring violations within the last 10 years with regard to its water treatment system.

PHWD was not out of compliance with Primary Drinking Water Regulations throughout 2010.

Overall, in 2010, DPH found the system to be in satisfactory condition. In addition to the infrastructure deficiencies outlined under the Infrastructure section of this chapter, DPH identified several operational concerns regarding the District's system and operating plans. DPH made the following requirements and recommendations, of which, the District has addressed to the satisfaction of DPH:

- Provide DPH with the regular test results for TTHM, HAA5 and disinfectant residuals, which had not been filed with DPH since 2006;
- Develop valve maintenance and routine flushing programs;
- Develop a plan to prevent and control nitrification in the storage tanks and distribution system;
- Recommended revisions to the District's cross connection control policies;
- Ensure that the District reports only the results of samples collected from sampling locations specified in the approved bacteriological sampling plan.

PURISSIMA HILLS WATER DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The estimated population of PHWD is 6,136.
- It is projected that the District will serve an estimated population of 6,180 residents, in 2035, with an average annual growth rate of 0.1 percent over the next 25 years.
- Potential for growth within the District is minimal. New development will be limited to infill of approximately 10 additional lots through build-out and tear downs of existing structures. Additionally, there is little potential for growth through expansion of the District.
- PHWD experienced peak demand in 2004, and demand for water has steadily declined since then, due to cooler summers, higher utility rates and difficult economic conditions.
- As water rates increase and new legislative requirements on landscaping go into effect, demand for water is expected to continue to decline, outweighing any increase in demand as a result of population growth.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Although demand for water in the District has declined over the past five years, the District regularly exceeds its individual supply guarantee, as allocated by the San Francisco Public Utilities Commission (SFPUC), and must purchase additional water supply from the SFPUC in order to meet demand.
- The District appears to have sufficient water storage to weather a short-term water outage and adequate back up supply through four interties with other systems for periods of extended SFPUC water supply interruption.
- No capacity constraints related to district infrastructure were identified.
- The primary infrastructure need related to the PHWD water system is the upgrade and replacement of aging undersized mains that are prone to breaks and leaks. PHWD has taken a proactive approach in replacing and upgrading these mains prior to failure.

- California Department of Public Health identified several infrastructure deficiencies and operational issues during its most recent inspection. With few exceptions, the District has addressed these concerns.

- Water demand within the District remains higher than typically found in districts of similar size, likely due to the size of the homes and landscaped area. There is a need to enhance conservation programming with a particular focus on landscaping.

- PHWD provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough district response to California Department of Public Health infrastructure and operational concerns.

- District management methods appear to generally meet accepted best management practices. The District prepares a budget before the beginning of the fiscal year, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and district workload, and has an established process to address complaints.

- The District has complied with audit requirements and submitted audits to the County in a timely manner.

Financial Ability of Agency to Provide Services

- Although PHWD has experienced decreasing revenue as a result of declining water use, the current financing level appears sufficient to provide an adequate level of service. Rates are evaluated annually and increased as needed to cover all expenditures. The District maintains sufficient reserves to cover contingencies.

- The District appropriately plans for capital needs in a multi-year capital improvement plan and regularly reinvests in its capital assets at a rate that greatly exceeds wear and tear.

Status and Opportunities for Shared Facilities

- The District practices facility sharing by receiving water through facilities owned and operated by SFPUC and four emergency interties with Cal Water and Palo Alto.

- The District participates in collaborative efforts with other agencies, including membership in the Bay Area Water Supply and Conservation Agency, and a joint effort with the Los Altos Hills County Fire District to improve system reliability, fire flows and circulation.

- No further facility sharing opportunities were identified.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. PHWD demonstrated accountability with respect to all of these factors.

Governance Structure Options

Governance structure options are limited for the Purissima Hills County Water District. There is little potential for growth through expansion of the District. The District is surrounded by other providers to the north, east and west. Territory adjacent to PHWD in the south is not served, but the topography of the area limits the potential for development.

The District has considered consolidating into either the Cal Water or San Jose Water Company systems in order to augment water supply at a potentially lower cost than what the District is presently paying to SFPUC. In the mid 1990's, Cal Water expressed interest in acquiring the District. At the time, the change was not supported by the residents. However, the District's unusually high demand per connection for water has led to the District regularly exceeding its SFPUC allocated amount. PHWD hoped for an enhanced allocation during the 2009 renegotiation of the master agreement; however, the District's individual supply guarantee remained the same. Moreover, SFPUC has initiated a surcharge on usage in excess of the combined BAWSCA members' allocated amount.

In light of the terms of the new contract with SFPUC, PHWD believes that an additional water supply may need to be developed or purchased to ensure water delivery for both the near and long term future, and especially in time of drought. PHWD continues to explore various possibilities for this additional supply. Options to enhance water supply include either receiving additional water from an outside water source (i.e., SCVWD) or completely consolidating into a neighboring purveyor's service area (Cal Water or San Jose Water Company). Based on the District's contract with SFPUC, PHWD may lose its SFPUC allotment, if such a complete consolidation were made. Consequently, either private purveyor would need adequate existing water supply to fully serve the entire District before this kind of consolidation could take place. Given that the District is presently experiencing declining demand for water and less overages on its SFPUC allocation, PHWD has deferred indefinitely any discussions of consolidation.

- Governance structure options for Purissima Hills Water District are limited. There is the potential to consolidate into either San Jose Water Company or Cal Water;

however, the District is not actively pursuing this option in light of the recent decline in water demand.

PURISSIMA HILLS WATER DISTRICT SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The District's SOI is coterminous with its boundaries. The SOI was last updated in 2007.

Recommended Sphere of Influence Boundary

Given that there is little opportunity for expansion of PHWD's bounds, it is recommended that the District's coterminous SOI be retained.

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

The District serves a majority of the Town of Los Altos Hills and unincorporated area to the south. The District's service area is primarily low-density residential, characterized by estate homes on minimum one-acre lots. There are also some institutional public utilities, hillside and open space. PHWD's largest customer is Foothill College.

Present and probable need for public facilities and services in the area

There is a clear and present need for PHWD domestic water services within the existing service area, as shown by demand for water services. The District serves a developed area, and water services are needed to serve the existing homes and future development on existing parcels. Present needs for water service are currently being met solely by the District.

There is a probable need for continued PHWD domestic water services within the existing bounds at a level similar to or lower than existing demand. Population growth is anticipated to be minimal, averaging 0.1 percent a year through 2035. As water rates increase and new legislative requirements on landscaping go into effect, demand for water is expected to continue to decline, outweighing any increase in demand as a result of population growth.

There is little potential for growth through expansion of the District as well. The District is surrounded by other providers to the north, east and west. Territory adjacent to PHWD in the south is not served, but the topography of the area limits the potential for development.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

The District faces water supply capacity constraints. Although demand for water in the District has declined over the past five years, the District regularly exceeds its individual supply guarantee, as allocated by the San Francisco Public Utilities Commission (SFPUC), and must purchase additional water supply from the SFPUC in order to meet demand. In recent years, the District has been able to purchase the necessary water. However, SFPUC recently adopted a surcharge for additional water purchases in excess of the combined wholesaler allotment.

Water facilities and services appear to be adequate based on State inspection reports, recent regulatory compliance, and management methods. The primary infrastructure need related to the PHWD water system is the upgrade and replacement of aging undersized mains that are prone to breaks and leaks. PHWD conducts multi-year capital improvement planning to provide for such improvements. The District could improve upon its conservation programming to bring customer water use more into line with other similar water providers.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

The District serves a majority of the Town of Los Altos Hills and unincorporated area to the south. The District is funded through a portion of the one-percent property tax, and the residents and landowners have an economic interest in the services provided by the District. The SOl update will not affect the existence of any social or economic communities of interest in the area that are relevant to the District.

The nature, location, extent, functions, and classes of services provided

The present PHWD bounds encompass approximately 13.4 square miles. The District's bounds encompass about two-thirds of the town of Los Altos Hills and an unincorporated area to the south. PHWD provides domestic water services to its residents in the form of distribution to its customers. The District does not provide treatment, as all water is pre-treated by the San Francisco Public Utilities Commission (SFPUC) and delivered through SFPUC's Hetch Hetchy Water System. The District relies solely on SFPUC's surface water. The District has a water conservation program in conjunction with SCVWD, which is coordinated by a part-time employee. Recycled water is not available within the District's bounds.

6. SAN MARTIN COUNTY WATER DISTRICT

AGENCY OVERVIEW

The San Martin County Water District (SMCWD) was formed in 1988 as an independent special district when the former private water company that served the area entered into receivership. The District provides water services in the unincorporated community of San Martin between Morgan Hill and Gilroy. A water service review for the District was last conducted in 2005.

The principal act that governs the District is the County Water District Law.[61] The principal act empowers the District to "store water for the benefit of the district, conserve water for future use, and appropriate, acquire, and conserve water and water rights for any useful purpose."[62] Districts must apply and obtain LAFCO approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.[63]

Type and Extent of Services

Services Provided

SMCWD provides water services to a portion of the unincorporated San Martin community, east of Monterey Road and centered along San Martin Avenue. The District provides potable water for a variety of uses, including residential, commercial, and industrial. The District does not provide water for agricultural purposes, nor does the District have a water conservation program. The District provides water for fire suppression as there are no other providers in the area.

SMCWD relies on groundwater extracted from the Llagas Subbasin, which is managed by Santa Clara Valley Water District. Recycled water is not available within the District's service area.

[61] California Water Code §30000-33901.

[62] California Water Code §31021.

[63] Government Code §56824.10.

Service Area

The District serves the entirety of its boundaries. There are reportedly no unserved areas within the District's boundary area, as all parcels have connections to the system. However, seven properties are inactive and are instead operating off of private wells.

Additionally, the District reports that it is serving at least 13 parcels outside its boundaries. Since 1994, state law requires local agencies to seek LAFCO approval prior to extending services beyond their boundaries.[64] Of the 13 extraterritorial connections, five were possibly added prior to the law requiring LAFCO approval, and prior to the SMCWD formation, as discussed below. The District sought LAFCO approval for only one of the remaining connections (APN 825-37-043)—all other connections were made without LAFCO approval. Extraterritorial parcels are described in Figure 6-1 and shown on Figure 6-2.

The District reports that prior to the formation of the District, a 12-inch pipeline was constructed by the County to supply water from West San Martin Water Works (WSMWW) to a county facility on Murphy Avenue, as well as to a residence, due to the unreliability of the supply from the private water company that was the predecessor to SMCWD. In the early years of the District, the contract manager at the time extended a pipeline from the 12-inch pipeline to serve three properties on Llagas Avenue, north of San Martin Avenue, outside of the District's bounds. These five connections were connected to the system prior to the formation of the SMCWD, and acquired by SMCWD in 1999 as part of a lawsuit settlement.[65] These five connections are indicated in Figure 6-1.

In 2001, SMCWD sought and was granted approval by LAFCO for extending water service outside its boundaries to the Santa Clara County's Household Hazardous Waste Collection Facility (APN 825-37-043). LAFCO approved the service extension and a sphere of influence amendment to include the parcel in anticipation of future annexation of the parcel to the District. As an assurance to LAFCO, SMCWD adopted a resolution in June 2001 to annex all parcels receiving service, as well as those parcels that were requesting service from the District. LAFCO approved the service extension and decided to resolve the sphere of influence and boundary issues along with other existing service extensions through a comprehensive sphere of influence review.

In 2005, LAFCO conducted a countywide water service review and in the consequent sphere of influence update in 2007, LAFCO expanded the District's sphere of influence to include eight of the 10 parcels receiving extraterritorial service, in order to facilitate annexation of the parcels to the district. One connection to the north of the District, along

[64] Government Code §56133.

[65] APNs 825-03-011, 825-03-012, 825-09-012, 825-09-034, and 825-09-057.

Llagas Avenue, was excluded as it was not contiguous to the District's bounds and had intervening parcels that were not served. The Coyote Lake-Harvey Bear Ranch County Park, at the east end of the District's service area, was also excluded from the SOI expansion in order to verify which facilities were being served.

The District, however, has not followed through with annexation applications to LAFCO for the parcels, nor does the District seek LAFCO approval prior to extending service beyond its boundaries. Since 2007, three additional extraterritorial connections were added by SMCWD outside its boundaries. SMCWD was informed by LAFCO on several occasions in 1999, 2001, 2005, and 2007, and most recently, during the course of this service review that they must seek LAFCO approval prior to extending services. . The District reported that it has repeatedly failed to comply with LAFCO requirements and State law due to the anticipated LAFCO application processing costs and the perceived lack of repercussions for failure to comply. LAFCO will send letters to the property owners, the County Department of Environmental Health, the State Department of Public Health and other offices to inform them that these water service connections have not been approved by LAFCO.

Figure 6-1: Extraterritorial Service Connections

APN	Address	Connection Date	Current Land Use	Within current district SOI?
Connections acquired by SMCWD as part of the 1999 lawsuit settlement agreement from WSMWW. No records prior to these dates are available for these connections. It is possible they were connected prior to LAFCO approval requirements in 1994.				
825-09-012	13505 Murphy Avenue	1996	Residence and dog grooming	Yes
825-09-057/058	Murphy Avenue	1981	Santa Clara County Roads	Yes
825-03-011	13775 Llagas Avenue	1996	Cement product manufacturer	Yes
825-03-012	13755 Llagas Avenue	1996	Building material supplier	Yes
825-09-034	13920 Llagas Avenue	1996	Industrial buildings	No
Connections with LAFCO Approval				
825-37-043	14070 Llagas Avenue	2001	Santa Clara County Household Hazardous Waste Disposal Facility	Yes
Connections without LAFCO Approval				
825-03-001	13805 Llagas Avenue	2008	Food processing plant	No
825-03-010	13905 Llagas Avenue	2005	Auto auction storage yard	No
825-09-030	13710 Llagas Avenue/ 13720 Llagas Avenue	2001	Residence	Yes
825-09-048	13515 Murphy Avenue	2008	Residence	Yes
825-10-075	13025 Murphy Avenue	1998	Santa Clara County Airport	Yes
825-31-016	N/A	2005	Harvey Bear Ranch County park	No
825-38-016	13155 Sycamore Avenue	2001	Tractor Supply and Service	Yes

Services to Other Agencies

Although SMCWD does not provide contract services to other agencies, the District has a reciprocal agreement with West San Martin Water Works, Inc. to provide water to each

other through an intertie during emergency outages. The existing valve between the two systems was closed as a result of a lawsuit between the two purveyors, but relations have improved and West San Martin has agreed to assist SMCWD if needed.

Contracts for Water Services

The District does not receive any water services from other agencies under contracts.

Collaboration

Currently, the District does not engage in any collaborative efforts. Opportunities for collaboration with other agencies may arise through joint water service planning with the nearby providers of Morgan Hill, Gilroy, SCVWD, and West San Martin Water Works. The agencies providing water in the South County region share common concerns for groundwater cleanup, long-term groundwater quality, growth and development.

Boundaries

The District's boundary is entirely within Santa Clara County. The present boundaries encompass approximately 0.7 square miles east of Monterey Road which are centered along San Martin Avenue. SMCWD serves a portion of the San Martin Planning Area as described in the 1995-2010 County's General Plan. SMCWD adopted a resolution in 2002 stating that it is the District's goal to eventually serve the entire San Martin Planning Area east of Monterey Road.[66] The County General Plan describes the San Martin Planning Area as including all valley lands between the hillside areas to the east and west, and land between Maple Avenue to the north and Masten and Fitzgerald Avenues to the south.

Outside of the District's service area, the San Martin community is primarily served by West San Martin Water Works, Inc. (a private company) to the west of Monterey Road, and private or shared wells, small water systems or small mutual water companies in the rest of the area.

Sphere of Influence

The District's sphere of influence extends outside its boundaries. The SOI was last updated in December 2007 to include parcels that had been outside of District's boundaries but were receiving service and/or were surrounded by parcels served. An additional 173 acres was added to the District's SOI. At that time, eight extraterritorial service

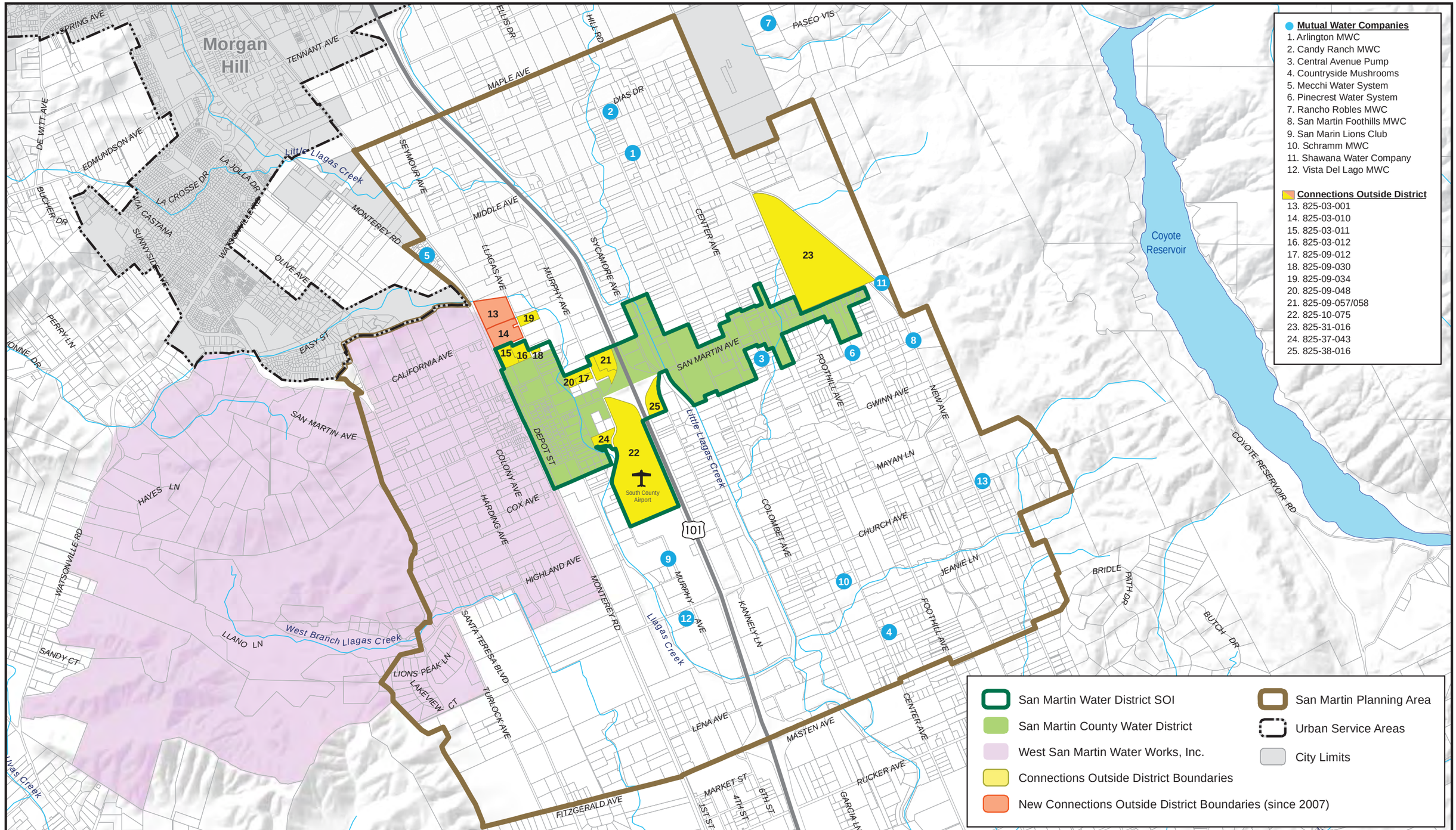
[66] SMCWD Board Resolution 2002-04, November 19, 2004.

connections were included in the SOI, as discussed in the Service Area section of this chapter. No further revisions to the District's sphere of influence have occurred since then.

According to the District, as of 2005, it provided services to Coyote Lake-Harvey Bear Ranch County Park at the east end of the District service area. The area was outside of District boundaries. LAFCO determined that there was a need to verify which facilities were being served. The area was not included in the 2007 SOI expansion and was postponed to be addressed during the next round of updates. Following the 2007 SOI update, the SMWCD added two additional extra territorial connections outside the SMCWD SOI and one extraterritorial connection within the District's SOI—without LAFCO approval. Presently, there are a total of four connections that are receiving services outside the District's SOI.

The 2005 Water Service Review indicated that the District desired that the SOI to be expanded to include the entire San Martin Planning Area east of Monterey Road. However, the proposal was not adopted by LAFCO, as a water system master plan had not been prepared and there were no projections for future water demand or storage capacity needs within this area.

Figure 6-2



San Martin County Water District

September 2011

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This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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LAFCO
Local Agency Formation Commission of Santa Clara County

ACCOUNTABILITY AND GOVERNANCE

San Martin County Water District is governed by a five-member Board of Directors elected at-large to serve staggered four-year terms. There are currently three board members, all of whom were appointed. All current directors filed for election, but being unopposed they were appointed by the Board of Supervisors. The Directors generally do not receive any compensation; however, they are reimbursed for direct expenses. Current board member names, positions, and term expiration dates are shown in Figure 6-3.

The Board meets on the third Tuesday of every month at the California Antique Aircraft Museum at 5:30 in the afternoon. Agendas are posted on the bulletin board at the San Martin post office. The date, time and place of the meetings are also listed on monthly bills. Minutes are available upon request.

Figure 6-3: SMCWD Governing Body

San Martin County Water District				
District Contact Information				
Contact:	Peter J. Forest, District Manager			
Address:	P.O. Box 120, San Martin, CA 95046-0120			
Telephone:	408-779-4633			
Fax:	408-779-4633			
Email/website:	sanmartincwd@gmail.com			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Vacant	Director 1	December 2013	N/A	4 years
Donald E. Popma	Director 2	December 2013	Appointed	4 years
P. Dennis Gothot	Director 3	December 2011	Appointed	4 years
Victoria E. Gothot	Director 4	December 2011	Appointed	4 years
Vacant	Director 5	December 2011	N/A	4 years
Meetings				
Date:	Third Tuesday of every month at 5:30pm.			
Location:	California Antique Aircraft Museum, 12777 Murphy Avenue, San Martin, CA 95046.			
Agenda Distribution:	Posted at the San Martin post office.			
Minutes Distribution:	Available upon request.			

In addition to the legally required agendas and minutes, the District encourages voter participation by enclosing items of interest with the monthly bills and annual consumer confidence report, and direct mailings of any additional items as necessary. The District does not maintain a website where documents and information are made available to the public.

If a customer is dissatisfied with the District's services, that customer may call the office or mail a complaint. The district manager is responsible for addressing complaints about

billing, business and service quality, while the treatment operator handles complaints regarding water quality and quantity emergencies. The District reported that there were three complaints filed in 2010—two were regarding leaks and one regarding low pressure or the absence of water during a power outage.[67]

San Martin County Water District demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

The District is managed and operated by contract employees, including a district manager, certified water treatment/distribution operator and bookkeeper

The District does not generally track the workload handled by the agency and its staff, due to minimal demand; the water operator does, however, keep a maintenance log and the district manager supplies a monthly written activity and system status report to the Board, which includes extraordinary time spent in the field by the manager or operator. Informal evaluations of each of the contractors are completed by the Board at monthly meetings and as issues surface.

The District does not formally evaluate its own performance in the form of an annual report or benchmarking study. However, the District reported that it has tried to closely monitor its costs from month to month, in order to minimize expenditures. District operations are also informally evaluated during the budget process.

To improve its operational efficiency, the District upgraded two and three-inch pipelines to six and eight-inch pipelines, and upgraded residential service connections to one inch. These upgrades were completed between 1995 and 2010 for a combined cost of $1.5 million. These improvements helped eliminate leaks and breakages and limit unaccounted for loss from the system.

The District's financial planning efforts include an annually adopted budget. The District conducts informal capital improvement planning, but no CIP has been adopted. The District keeps a list of projects that are anticipated to be completed over the next ten years. The project list is updated annually, and planned projects are included in the annual budget. SMCWD does not adopt any other planning documents, such as a master plan.

[67] Multiple calls were received during a single power outage.

All county water districts are required to completed annual audits[68] and submit the annual audits to the County within 12 months of the completion of the fiscal year.[69] SMCWD has not completed annual audits for several years. The District is in the process of having the last six fiscal years audited. During this time, SMCWD has failed to submit its audits to the County annually within the required 12 month period.

POPULATION AND PROJECTED GROWTH

The District has a system that serves a total of 189 connections—151 residential and 38 commercial. Based on an average household size throughout the County of 2.98 people,[70] the estimated population of SMCWD is 450. According to the Department of Public Health records, SMCWD served approximately 600 year-long residents in 2010.[71]

The District reported that it had observed no change in the level of service demand in the last few years. Although the District does not make formal population projections, the District reported that it anticipated a similar growth trend in population over the next 20 years, with little or no change in demand for water services within its existing boundaries.

Most of the empty lots within the District are undevelopable. There are approximately three lots that are developable that are expected to be built out in the next 20 years. There are currently two known projects that may potentially bring additional demand. A Fry's Electronics-related company has expressed interest in building an athletic facility within the District's boundaries, but the project is currently on hold. In addition, a small commercial gas station has approached the District for water service; however, no action has been taken by the property owner to formally petition the District for service.

The District anticipates expanding its services to eventually encompass the San Martin Planning Area east of Monterey Road. There are at least 13 State and County regulated small water systems in the San Martin Planning Area (east of Monterey Road), including community, non-transient non-community and transient community water systems, which have the potential to eventually connect to the District's system. These systems are shown in Figure 6-4. None of these systems are within the District's current SOI. The location of each system is shown on the District's map in Figure 6-2. The District reported that the potential for any water system to merge with SMCWD is severely restricted by the cost of

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[68] California Water Code §30540.

[69] Government Code §26909.

[70] U.S. Census Bureau, American Community Survey, 2009.

[71] California Department of Public Health, *Annual Sanitary Survey Findings, San Martin County Water District, Water system No. 4300542*, 2010.

extending existing water mains and LAFCO fees, which would be entirely borne by these small water systems. It is recommended that the District work with LAFCO to maximize the number of properties annexed at any given time in order to spread out the processing costs amongst several applicants.

Figure 6-4: Mutual Water Companies in the San Martin Planning Area

Small Water System	Location	Connections
Arlington MWC	East Middle Avenue	8
Candy Ranch MWC	Dias Drive	6
Center Avenue Pump	Center Avenue	Unknown
Countryside Mushrooms	Center Avenue	1
Mecchi Water System	Crowner Avenue	26
Pinecrest Water System	Pinecrest Drive	6
Rancho Robles MWC	Paseo Vista	35
San Martin Foothills MWC	Vincent Drive	48
San Martin Lions	Murphy Avenue	3
Schramm MWC	Benetta Lane	8
Shawana Water Company	New Avenue	6
South County Retirement Home	Church Avenue	35
Vista del Lago MWC	Church Avenue	11

A few mutual water companies (MWCs) have expressed interest in connecting to the District's system. Specifically, Mecchi MWC, located on Crowner Avenue, faces challenges with septic systems adjacent to the company well and would like to connect to the SMCWD system. In the past, Chiri Ranch Mutual Water Company approached the District regarding the potential of connecting to the SMCWD's system, due to water quality concerns. Chiri Ranch also approached Candy Ranch Mutual Water Company to share the costs of connecting to the system between the two companies. Chiri Ranch MWC subsequently decided the costs were too high and split into individual well connections. Candy Ranch MWC has not expressed interest in connecting to the SMCWD system since then.

FINANCING

Financial Adequacy

The District reported that the current financing level was sufficient to provide an adequate level of service. Rates were adopted in 1992 and last updated in 2002; there has not been a rate increase since. However, SCVWD groundwater production service charges have increased and are reflected on a separate line item in the District's utility bills. SMCWD reported that the SCVWD groundwater production service charge has been an ongoing concern for SMCWD.

Similar to other water providers, the District reported an increase in delinquent accounts as a result of the recession. SMCWD has been forced to shut off accounts that owed over $100 and were more than 90 days late. Although it was reported that the District's financing level is adequate, SMCWD has made efforts to minimize costs and maximize efficiency by re-piping the entire system to avoid water loss and installing accurate meters to minimize unbilled water use.

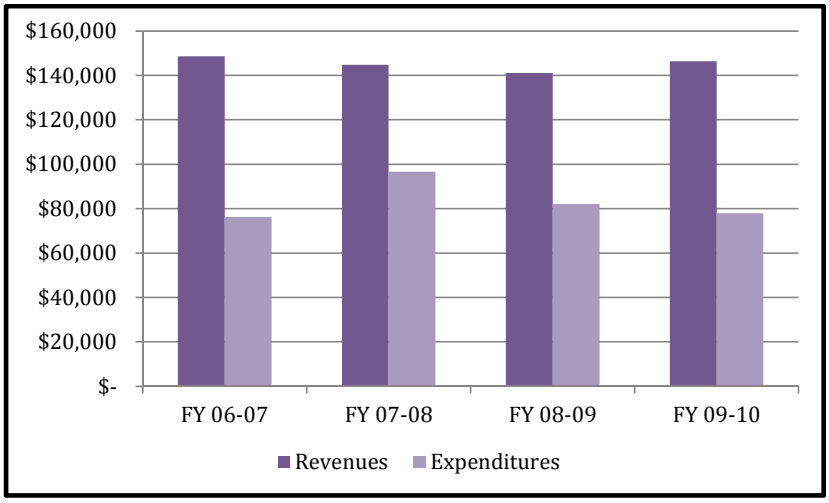
Revenue Sources

SMCWD's primary source of revenue is water sales (99 percent), with the remainder coming from interest on investments. The District receives no property tax income.

The District charges rates based on water usage. A base rate, which depends on water meter size and ranges from $20 to $60 per month, is charged to cover meter reading and replacement, billing, collection, quality testing, administration, and distribution maintenance. The water usage charge pays for electricity to pump water, treatment chemicals and mechanical equipment replacement. SCVWD collects a groundwater production service charge based on the amount of groundwater pumped by each user. The service charge is set by SCVWD to cover groundwater recharge and groundwater management services. SMCWD passes this service charge onto each of its customers. The District has a two-tiered rate structure for water usage with the split at five units (1 unit = 748 gallons). For each unit up to five units, customers pay $2.36 to SMCWD and for each unit over five units, customers pay $2.81 to SMCWD. Of the amount that is paid to SMCWD, $0.66 per unit is paid by SMCWD to SCVWD.

Expenditures

Figure 6-5: Expenditures and Revenues (FYs 06-10)



In FY 09-10, the District's primary expenses were the SCVWD groundwater production charge (38 percent), utilities (nine percent), management services (nine percent), customer billing (eight percent), repairs and maintenance (seven percent), meter reading (five percent), meter analysis (four percent), bookkeeping (three

percent), legal services (two percent), telephone services (one percent), and operating fees (one percent).[72]

District expenditures and revenues over the last four fiscal years are shown in Figure 6-5. Each year, district revenues were significantly higher than expenditures.

Capital Outlays

The District plans for capital improvements for a ten year period, but does not have a formal capital improvement plan. The District uses a "pay as you go" approach, financing the majority of infrastructure projects out of capital improvement reserve.

The District does not estimate annual depreciation. The District has made no major capital expenditures in the last four fiscal years (FYs 07-10). In FY 10-11, the District replaced a significant portion of their pipeline system at a cost of $250,000. The District appears to invest in its water system as needs and funding are identified.

Long-term Debt

In 1995, the District was issued a loan from the California Department of Water Resources for $597,450, which was used to acquire the infrastructure and the main well as part of the District's formation. The 30-year loan will be paid in full in 2025. Annual payments are approximately $16,000, including principal and interest. The District recently paid off a large portion of this loan, ultimately saving over $26,000 in interest. The balance at the end of FY 09-10 was $362,358, and following the prepayment, was $252,545 at the end of FY 10-11.

Reserves

The District initially operated with little or no reserves. As part of an overall effort to improve the District's management and financial condition, the Board of Directors adopted a resolution to establish a minimum emergency reserve level of $50,000. At the end of FY 09-10 the District had a fund balance of approximately $168,546, or 14 months of operating expenditures.

WATER SUPPLY

The San Martin County Water District, Morgan Hill, Gilroy, and West San Martin Water Works all share the same groundwater basin. The San Martin County Water District relies on groundwater extracted from the Llagas Sub-basin, which is managed by SCVWD. The

[72] All revenues and expenditures are as reported by the District in unaudited financial statements for each fiscal year.

District has the capability to pump 2,000 gallons per minute or a maximum of one billion gallons in one year. In calendar year 2010, the SMCWD extracted 37.1 million gallons of groundwater, or four percent of the well's maximum permitted capacity.

WATER DEMAND

Of the amount pumped in 2010, the District delivered 29.8 million gallons to metered connections, or 80.4 percent of the amount produced. Average daily demand in 2010 was 101,643 gallons per day.

WATER INFRASTRUCTURE AND FACILITIES

The District owns and operates one well, one treatment facility, one storage tank and 5.92 miles of distribution system. Water is pumped from the well up to the treatment facility, and then stored in the storage tank. The water is treated for perchlorate and is chlorinated.

Wells

The District owns one well with a capacity of 2,000 gallons per minute (gpm), which was reported to be in good condition. The well was constructed in 1986 and acquired in 1990 by the District after formation. The well's capacity greatly exceeds the current regular service demand of approximately 72 gpm. This excess capacity was designed into the system to ensure adequate fire flow.

The well does not have a back-up generator, because the electricity needed to operate the existing 200 hp well pump motor requires too large a generator output to be feasible for a small water company. Consequently, if PG&E's service is ever interrupted, the supply of water from the well will be disrupted. The District has considered building another well with a smaller pump and an emergency generator as a backup water source, should the main well ever go out of commission, due to a power outage. The project was put on hold, while the District concentrated on repiping. A small well is expected to be put in place by 2013. It will have sufficient capacity to serve the current potable needs of the District's service area during an emergency outage.

Water Treatment Facilities

The District's treatment facility, provided by the Olin Corporation, is adjacent to the well site. Olin was identified as the manufacturing operation that created the perchlorate contamination issue in South County. The treatment facility treats for perchlorate and the treatment capacity matches the well production capacity of 2,000 gpm; it has booster pumps to keep up with the well.

The treatment system was monitored and operated by Olin Corporation until summer 2009, when SMCWD took over operations. In July 2008, SMCWD and Olin Corporation approached the Department of Public Health (DPH) for permission to discontinue perchlorate treatment. The DPH requested that the District submit a formal application and directed the District to continue to provide perchlorate treatment until approval is granted by the Department to discontinue treatment[73]

Water Storage Facilities

The District currently has one 5,000-gallon storage tank, which allows the well to be periodically shut down to promote energy savings. The tank was constructed in 1990 and was reported to be in good condition. The District recognizes the need for more storage capacity in the future, and an elevated site that could offer gravity flow would greatly improve service reliability. The service area is almost entirely flat and the current water delivery system is pressurized, making the District completely dependent on power service from PG&E for pumping. The District has identified an elevated site within a park to the east for a new one million-gallon reservoir tank. SMCWD plans to construct the tank with savings, and anticipates completion of the new tank around 2020 when funds become available.

Conveyance and Distribution Facilities

The total distribution system pipeline is 5.92 miles in length. About half of the original 80 year old system pipelines and one third of the service connections were upgraded in 1995 at a cost exceeding $1 million. The last portions of the original system were repiped and upgraded in 2002, 2005 and 2010, from two and three inch mains to six and eight inch ones to comply with industry standards. The western portion of the service area has a 12-inch main. The repiping project cost the District approximately $414,000 between 2002 and 2010.

The system's pressure ranges from 50 to 70 psi, sometimes reaching 80 psi in lower elevations. The system appears to have sufficient minimum pressure to meet fire suppression requirements of 20 psi.

The distribution system's integrity is reflected in the District's rate of distribution loss and number of breaks and leaks in 2010. The District estimates that there is less than 15 percent unaccounted for distribution loss from the point of treatment to the delivery point

[73] California Department of Public Health, *Annual Sanitary Survey Findings, San Martin County Water District, Water system No. 4300542*, 2010.

to each of the connections. The rate of loss prior to the pipeline replacement project was reportedly significantly worse. There were no main breaks or leaks in 2010.

Infrastructure Needs

The District reported that it had recently finished replacing all of the original pipes and fire hydrants, and is in the process of replacing bad water meters as required; therefore, there are no further infrastructure needs or deficiencies that must be addressed in the short-term.

Capital Improvement Plans

The District has two planned infrastructure improvement projects. A smaller well, that will be able to have a back-up generator for emergency purposes, is expected to be constructed by 2013. A new one million-gallon storage tank is projected to be completed around 2020 when funds become available. These projects combined are estimated to cost about $500,000.

Shared Facilities

The District shares facilities and collaborates with multiple entities:

- SMCWD pays a fee to the Air Museum to use its facilities for district meetings.
- The District has the potential to purchase water from West San Martin Water Works when necessary.
- SMCWD makes use of contract employees that serve other water systems in that area as well.
- SMCWD purchases supplies, such as chlorine, in bulk with other purveyors.

WATER QUALITY

Source Water

As identified in the 2005 Water Service Review, perchlorate contamination of groundwater in the Llagas subbasin is still an issue of concern for some groundwater users. Olin Corporation's (Olin) signal flare manufacturing plant in southern Morgan Hill, closed since 1997, released perchlorate that affected many wells in the South County area. Perchlorate contamination at the site occurred primarily from an unlined evaporation pond

that received wastes from the cleaning of the ignition material mixing bowls, on-site incineration of manufacturing wastes, and accidental spills. The perchlorate leached through the soil into the groundwater, creating a 9.5-mile perchlorate plume in the South County area. Perchlorate is a chemical that affects the normal function of the thyroid gland if consumed by humans at sufficiently high doses. Water containing more than 6 parts per billion (ppb) perchlorate is considered unsafe to drink and to cook with by the California Department of Public Health, which has set the Maximum Contaminant Level (MCL) for perchlorate at 6 ppb. When the extent of perchlorate contamination in the Llagas subbasin was first delineated, perchlorate detections above the 4 ppb action level in effect at that time were found in hundreds of wells. Some of the wells in South County initially contaminated with perchlorate were found to have concentrations of perchlorate up to 50 ppb. Presently, only eight private wells in the County exceed California's 6 ppb MCL.

The Central Coast Regional Water Quality Control Board (Regional Board) has regulatory oversight over the cleanup of the groundwater plume. The Olin Corporation began soil remediation and groundwater treatment on the Tennant Avenue site in 2004. Since that time, the Regional Board has directed Olin to perform treatment to address the off-site perchlorate plume. Construction of the off-site groundwater extraction system is scheduled to begin in July 2011. Perchlorate levels have decreased significantly and the size of the plume is decreasing; however, some wells still contain perchlorate above the MCL and remediation is ongoing. Olin continues a comprehensive well-sampling program to monitor the perchlorate plume.

The groundwater in South County also suffers from high nitrate levels. The presence of nitrates in groundwater is commonly associated with septic systems, livestock waste, and fertilizer use. The District's well regularly meets nitrate level standards for potable water.

According to DPH's Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the District's groundwater is susceptible to potential contamination from septic tanks and chemical/petroleum processing.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

According to the EPA Safe Drinking Water Information System, SMCWD has had no health or monitoring violations within the last 10 years with regard to its water treatment system.

SMCWD was not out of compliance with Primary Drinking Water Regulations throughout 2010.

During its most recent inspection in 2010, DPH identified three operational concerns regarding the District's system and operating plans. DPH found that the District had not collected the perchlorate mid-point sample ever since the water system began monitoring and operating the treatment facility in summer 2009, and was therefore out of compliance with one of the original 2004 permit conditions. DPH also directed the District to appoint a person trained in cross connection control to carry out the cross connection program and to establish a schedule and procedures to flush the water mains and exercise the distribution valves.

SAN MARTIN COUNTY WATER DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The estimated population of San Martin County Water District (SMCWD) is 450.
- Little or no change in demand for water services is anticipated within SMCWD's existing boundaries over the next 20 years with the addition of approximately three new connections. There are currently two known proposed commercial projects that may potentially bring additional demand.
- There is potential for growth through expansion of the District as SMCWD is anticipating expanding its services to eventually encompass the San Martin community east of Monterey Road.
- A few mutual water companies have expressed interest in connecting to the District's system. However, the potential for any water system to merge with SMCWD is constrained by the cost of extending existing water mains, which would be entirely borne by these small water systems with few service connections.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- SMCWD appears to have more than adequate water supply to serve existing and near-term demand; only four percent of the District's well pumping capacity was made use of on average.
- The District has sufficient system capacity. Excess capacity was designed into the system to ensure adequate fire flow.
- Should the main well that does not have a generator ever go out of commission due to power outage, the District does not have a backup water source. By 2013, SMCWD is anticipating acquiring a small well with a backup generator that will serve the current potable needs of the District's service area during an emergency outage.
- SMCWD has minimal water storage for emergency purposes and needs additional storage capacity to handle any interruptions in service. In lieu of the additional storage, the District shares an intertie with West San Martin Water Works.

- The District recently finished replacing all pipes and water meters, and therefore, the distributions system is considered in good condition, with no further infrastructure needs or deficiencies that must be addressed in the short-term.

- Groundwater users in the San Martin vicinity face challenges related to groundwater contamination, specifically by perchlorate and nitrate. SMCWD's water has regularly tested within the legal limits for both contaminants and perchlorate levels appear to be on the decline.

- District management methods appear to meet certain accepted best management practices. The District prepares a budget before the beginning of the fiscal year, maintains relatively current transparent financial records, regularly evaluates rates and fees, and has an established process to address complaints. It is recommended that the District begin operating within State legal requirements when extending services and institute a regular auditing schedule and a means to track workload handled by the agency and its staff.

- It is recommended that if the District desires to extend its boundaries to eventually encompass the San Martin community east of Monterey Road, that the District begin operating within State law, prepare a water system master plan, and make projections for future water demand and storage capacity needs within this area.

- The District has failed to submit its annual audit to the County for the last five fiscal years. SMCWD could improve upon transparency and accountability by submitting annual audits within the legally required time frame.

Financial Ability of Agency to Provide Services

- The District reported that the current financing level was sufficient to provide an adequate level of service. Similar to other water providers, the District reported an increase in delinquent accounts, as a result of the recession. SMCWD's operating reserves appear to be adequate to handle contingencies as they arise.

- SMCWD has made efforts to minimize costs and maximize efficiency by re-piping the entire system to avoid water loss and installing accurate meters to minimize unbilled water use.

- The District plans for capital improvements for a ten year period, but does not have a formal capital improvement plan. The District uses a "pay as you go" approach, financing the majority of infrastructure projects out of the capital improvement reserve. It is recommended that all water agencies have a multi-year capital improvement program, which may be used to identify timing and funding for the projects

Status and Opportunities for Shared Facilities

- The District makes use of space at the Air Museum and shares an intertie with West San Martin Water Works. SMCWD shares employees and supplies with other water purveyors.

- The District does not see further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- The District is operating outside of State law by extending services outside of bounds without LAFCO approval. The District should not allow any future connections outside its bounds without first seeking LAFCO approval.

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. Based on these indicators, SMCWD appears to lack accountability and transparency to the public and regulatory agencies. In particular, those customers that are served outside of the District are considered disenfranchised as they cannot hold office, cannot effectively influence rates, or vote in a district election. Additionally, the District 1) has not had recent contested elections and two board positions are vacant, indicating a lack of constituent interest in district activities, 2) does not have a website to keep customers informed, and 3) has failed to properly complete annual audits and submit the audits to the County for the last five years.

- It is recommended that SMCWD, as a public agency, maintain a website where information can be made available to the public.

Governance Structure Options

Governance structure options for SMCWD include the annexation of extraterritorial service areas and consolidation with nearby small water systems.

SMCWD is serving at least 13 parcels outside its boundaries, and with the exception of one connection, these parcels are being served without LAFCO approval. Since 1994, service providers have been required by law to obtain LAFCO approval to serve territory outside their boundaries.[74] LAFCO has informed the District about this issue and expanded

[74] Government Code §56133.

the District's SOI to facilitate annexation of parcels receiving service outside its boundaries. The District, however, has not applied to LAFCO to annex these areas. Annexation of these extraterritorial service areas is an option that would promote logical boundaries. The District should work with LAFCO to determine a means to make annexation feasible for these property owners, perhaps by conducting several annexations at once.

A few mutual water companies (MWCs) have expressed interest in connecting to the District's system. Specifically, Mecchi MWC and Candy Ranch MWC have considered consolidating into SMCWD's system at one point. None of the previously mentioned companies are within the District's current SOI. The District reported that the potential for any water system to merge with SMCWD is restricted by the cost of extending existing water mains and LAFCO fees, which would be entirely borne by these small water systems. The benefits of consolidation of these MWCs into a larger water system may include greater efficiencies of scale, reduced cost, heightened regulation by a regulatory health agency, higher quality of service and enhanced transparency and accountability related to a public agency. However, this may not presently be the case, given the numerous concerns identified regarding the SMCWD's accountability and transparency, including illegal service connections with disenfranchised customers, failure to comply with audit requirements, board vacancies, lack of contested elections, and lack of a district website. LAFCO should not consider expansion of SMCWD's service area favorably until these concerns have been addressed.

- Governance structure options for SMCWD include 1) consolidation of systems with nearby small water systems and 2) annexation of current extraterritorial service areas.

SAN MARTIN COUNTY WATER DISTRICT SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The District's sphere of influence is larger than its bounds. The SOI was last updated in December 2007 to include parcels that had been outside of District's boundaries but were receiving service and/or were surrounded by parcels served. Five separate areas totaling to 173 acres were added to the District's SOI in 2007.

At the time of the SOI update, one extraterritorial connection (APN 825-09-034), north of the District's bounds east of Llagas Avenue, was not included within the expanded SOI, as it was not contiguous to the District's bounds and had intervening parcels that were not served.

According to the District, as of 2005, it provided services to Coyote Lake-Harvey Bear Ranch County Park at the east end of the District's service area. The area was outside of District boundaries. LAFCO determined that there was a need to verify which facilities were being served. The area was not included in the 2007 SOI expansion and was postponed to be addressed during the next round of updates. Since that time, it has been determined that water from that particular connection is used to provide potable water for use in a horse trough, dog fountain, and drinking fountain at the "Bear Staging Area," just off San Martin Avenue within the park. The remainder of the 4,595-acre park is served off of county wells.

Since the District's SOI update in 2007, SMCWD has added three additional out of bounds service connections—two outside of the District's SOI (APNs 825-03-001 and 825-03-010). These properties are outside of the District's SOI to the north—located on the west side of Llagas Avenue adjacent to the District's SOI.

Recommended Sphere of Influence Boundary

Given SMCWD's failure to come to LAFCO to annex existing extraterritorial service areas, it is recommended that the current SOI be retained until such time as the District complies with State law. After the annexation of current extraterritorial service areas, it is recommended that LAFCO work with the District to determine what a logical SOI would be, based on need and which areas can feasibly be served by existing infrastructure.

Areas that could potentially be included in a future SOI expansion consist of 1) the three parcels (APNs 825-09-034, 825-03-001 and 825-03-010) where the District is presently

providing services outside of its existing SOI and 2) parcels that are feasibly served by existing pipelines extending outside the District's bounds.[75] Established pipelines from the period just following the formation of SMCWD extend outside of the District. Those parcels that lie adjacent to one of these pipelines outside of the District's bounds and presently receive water through private individual wells could feasibly be connected to the District's system and may be considered for inclusion in SMCWD's SOI in the future. Also for future consideration, may be expanding the SOI to include nearby small water systems. In particular, Mecchi MWC is struggling with water quality issues, and may benefit by consolidating into SMCWD.

It is recommended that the Coyote Lake-Harvey Bear Ranch County Park continue to be excluded from the District's SOI. The park encompasses 4,595 acres, of which a small fraction receives potable water from the District. The County does not intend to expand use of the water supplied by San Martin CWD to any other portions of the park.

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

SMCWD's service area, centered along San Martin Avenue east of Monterey Road, covers approximately 0.71 square miles and includes an estimated 184 connections. Land uses within the area include residential, industrial, commercial, institutional, and open space. Land use within the District's boundaries is subject to the County's growth and development policies relating to rural unincorporated areas as well as those policies specific to the San Martin Planning Area. The Santa Clara County General Plan land use designations within the vicinity of the San Martin County Water District include rural residential with transportation uses for the South County Airport and the area adjacent to Highway 101 and regional parklands to the east (Santa Clara County Land Use Plan August 2005). Future land use within the District is anticipated to remain similar to the present uses.

Present and probable need for public facilities and services in the area

There is a clear and present need for SMCWD domestic water services within the existing service area, as shown by demand for domestic water and fire flow services. The District serves a developed area, and water services are needed to serve the existing homes and future development on existing parcels. The present need for water service is currently being met solely by the District.

[75] APNs 825-09-031, 825-09-032, 825-09-033, 825-09-047, 825-38-006, 825-38-005, 825-14-003, 825-14-004, 825-14-005, 825-14-006, and 825-14-007.

It is anticipated that demand for SMCWD domestic water services will remain relatively the same within its bounds, as the area is largely built out. It is anticipated that demand for district services outside its bounds will grow, as small water systems and single private connections are impacted by groundwater contamination and search for alternative water sources. The water produced at individual and shared wells frequently does not meet drinking water quality standards. The State Department of Health is not in favor of point-of-use treatment systems as they require significantly more oversight and must be managed by a certified water treatment operator.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

SMCWD appears to have more than adequate water supply to serve existing and near-term demand; only four percent of the District's well pumping capacity was made use of on average in 2010. The District has sufficient system capacity. Excess capacity was designed into the system to ensure adequate fire flow.

Water facilities and services appear to be adequate based on State inspection reports, recent regulatory compliance, and management methods. The primary infrastructure need related to the SMCWD water system is a backup well with a generator for emergency purposes. It is recommended that the District initiate formal capital planning.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

The ratepayers have participated in purchasing the system and funding the infrastructure upgrades for the District's water delivery system; therefore the ratepayers have an economic interest in the services provided by the District. No other communities of interest were identified. The SOl update will not affect the existence of any social or economic communities of interest in the area that are relevant to the District.

The nature, location, extent, functions, and classes of services provided

SMCWD provides water services to a portion of the unincorporated San Martin community, east of Monterey Road and centered along San Martin Avenue. The District provides potable water from groundwater for a variety of uses, including residential, commercial, and industrial. The District does not provide water for agricultural purposes, nor does the District have a water conservation program. The District provides water for fire suppression as there are no other providers in the area.

7. PACHECO PASS WATER DISTRICT

AGENCY OVERVIEW

Pacheco Pass Water District (PPWD) was formed in 1931 as an independent special district that lies within both Santa Clara and San Benito Counties. The District's primary purpose is to capture, store and release local water in order to recharge groundwater in the area. A water service review for the District was last conducted in 2005 by Santa Clara LAFCO and in 2007 by San Benito LAFCO.

PPWD lies in both Santa Clara and San Benito Counties, with 76 percent of the District located in San Benito County. Based on the assessed value of property within the District in each county, San Benito LAFCO is the principal LAFCO for determining the sphere of influence for the District, and therefore LAFCO of Santa Clara County is not asked to adopt determinations for this District.[76] PPWD is included in this report to ensure a comprehensive review of water service in Santa Clara County, and due to the potential for consolidation with Santa Clara Valley Water District. However, any application for boundary change or change of governance would be processed by San Benito LAFCO, as the principal LAFCO.

The principal act that governs the District is the California Water District Law.[77] The act empowers water districts to produce, store, transmit and distribute water for irrigation, domestic, industrial, and municipal purposes and to provide related drainage services. Districts must apply and obtain LAFCO approval to exercise latent powers or, in other words, those services authorized by the principal act but not provided by the district at the end of 2000.[78]

Type and Extent of Services

The District's function is to provide water supply for natural groundwater recharge through reservoir storage and release. The reservoirs are designed to collect and store local surface water from Pacheco Creek and naturally occurring runoff.

[76] Assessed value of property within the District in FY 10-11 in Santa Clara and San Benito Counties was $16.9 million and $124.3 million, respectively.

[77] California Water Code §34000-38501.

[78] Government Code §56824.10.

PPWD collects water and releases it to percolate downstream and raise groundwater levels in the District. The District does not treat or sell water. Electricity is not produced at these dams.

The District does not provide services to or receive water services from other agencies via contracts. The District also does not engage in any collaborative planning efforts. In the 2005 Countywide Water Service Review, the District reported that it was a stakeholder in SCVWD's San Luis Reservoir Low Point Improvement Project; however, the District has since stopped participating in the project.

Boundaries

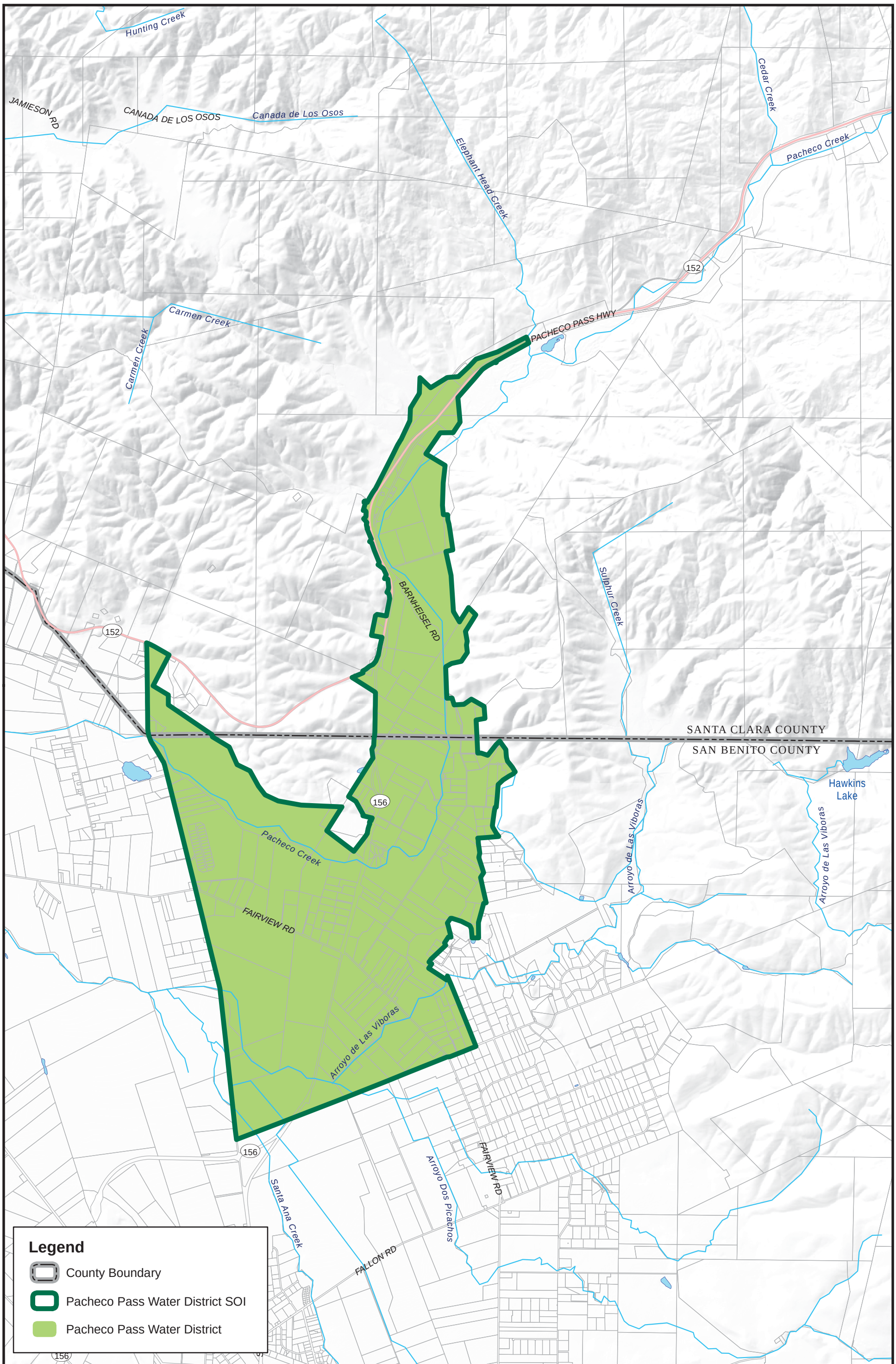
The District is located in Santa Clara and San Benito counties. PPWD is adjacent to SR 156 and consists almost entirely of ranchland. Its boundary area contains 5,467 acres, of which 4,151 acres are located in northern San Benito County and 1,316 acres are in Santa Clara County.

Sphere of Influence

It is assumed that the District's existing SOI is coterminous with its boundaries and was last updated by San Benito LAFCO, in 2007, subsequent to the adoption of the Service Review; however, San Benito LAFCO has limited computer records prior to March 2011, and cannot verify that an update was completed at that time. The District's boundaries and SOI are shown in Figure 7-1.

As the principal LAFCO, San Benito LAFCO has the responsibility of processing any change in organization of this district. It is recommended that San Benito LAFCO and Santa Clara LAFCO work together to determine a process for any SOI update and/or reorganization.

Figure 7-1



Pacheco Pass Water District

September 2011

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This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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LAFCO
Local Agency Formation Commission of Santa Clara County

ACCOUNTABILITY AND GOVERNANCE

PPWD is governed by a five-member Board of Directors; Directors are elected at large for staggered four-year terms. There are currently three members on the Board of Directors, two of whom were elected and one appointed. The board members do not receive compensation. Current board member names, positions, and term expiration dates are shown in Figure 7-2.

The Board meets four times a year at 120 Marks Drive in Hollister, California. Agendas are posted at the San Benito County Courthouse. Minutes are available upon request. The District does not have a website, so documents are not available online.

Figure 7-2: PPWD Governing Body

Pacheco Pass Water District				
District Contact Information				
Contact:	Michael O'Connell, President			
Address:	354 First Street, Hollister, CA 95023			
Telephone:	831-637-5548			
Email/website:	None			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Michael O'Connell	President	December 2012	Elected	4 years
Sam E. Lomanto, Jr.	Director	December 2012	Elected	4 years
Mark Wright	Director	December 2012	Appointed	4 years
Vacant				
Vacant				
Meetings				
Date:	Four times a year.			
Location:	120 Marks Drive, Hollister, CA			
Agenda Distribution:	Posted at the courthouse.			
Minutes Distribution:	Available upon request.			

In addition to posting the legally required agendas and making minutes available, the District does not undertake efforts to encourage voter participation and keep its constituents apprised of the agency's activities. The District does not maintain a website.

If a customer is dissatisfied with the District's services, that customer may mail complaints to the District's Office (P.O. Box 1382, Hollister, CA 95023). The President of the Board is responsible for handling complaints. The District reported that it received no complaints in CY 2010.

PPWD demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

Daily operations of the District are managed by a part-time secretary who receives a yearly compensation. She does not have set hours; and her workload is not tracked. In addition, there are two part-time water masters who submit their hours once a year.

Given the small size of the District, there is little need for evaluations and workload monitoring of staff. PPWD does not perform formal evaluations of overall district performance, such as benchmarking or annual reports. However, the State Division of Safety of Dams performs evaluations of the North Fork dam annually, and appraises the adequacy of the dam's infrastructure and maintenance practices.

The District's financial planning efforts include an annually adopted budget. Every special district in the state is required to file a salary and compensation report. In 2010, PPWD filed a non-compliant report and may be facing a penalty of $5,000.[79] The District does not adopt any other planning documents, such as a capital improvement plan or master plan. Capital improvement needs are identified by the watermasters during regular inspections.

All special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year. The Board of Supervisors may approve an alternative submittal schedule for each special district depending on revenue, but at a minimum all districts must submit audited financial statements every five years.[80] In the case of PPWD, they are required to submit audited financial statements every five years. San Benito County reported that PPWD last submitted an audited financial statement for FY 03-04 and failed to provide an audited statement for FY 08-09. The District reported next audit is planned to be completed through FY 11-12. Additionally, PPWD is required to annually submit unaudited financial statements to the County. These financial statements lack clarity, and could be greatly improved to enhance transparency and accuracy.

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[79] California State Controller's Office, Noncompliant Counties, Cities and Special Districts, http://sco.ca.gov/noncompliant_reports.html

[80] Government Code §26909.

POPULATION AND PROJECTED GROWTH

The estimated population of Pacheco Pass Water District is 863.

The District reported that it was difficult to determine whether demand had changed in recent years, as it does not track the amount of groundwater pumped by each landowner, groundwater levels, or the amount of water released through the dams.

Although no formal population or demand projections have been made by the District, PPWD anticipates no growth in service demand and possibly even a decline in demand. The District reported that this decline in groundwater use was likely due to the increase in use of surface water from the San Luis Reservoir for agricultural purposes.

FINANCING

Financial Adequacy

The District reported that its financing levels were not adequate to deliver services. Funds are not sufficient to complete capital improvements on the dams as recommended by the State. Additionally, the District has been unable to cover annual operating costs with regular revenue sources and has been forced to draw down reserves. There is a concern that once the reserve accounts are depleted the District will not have enough funds for its operating and capital expenses and will have to either be dissolved or consolidated with another agency, such as San Benito County Water District or Santa Clara Valley Water District.

Revenue Sources

PPWD operates out of a single fund for all revenue sources.

The District's total revenues for FY 10-11 were $25,094. Revenue sources included income from property taxes (98 percent) and interest revenue (two percent). The Pacheco Pass WD's primary source of revenue is property tax with a small portion of revenues from interest earned on investments. The District does not charge user fees.

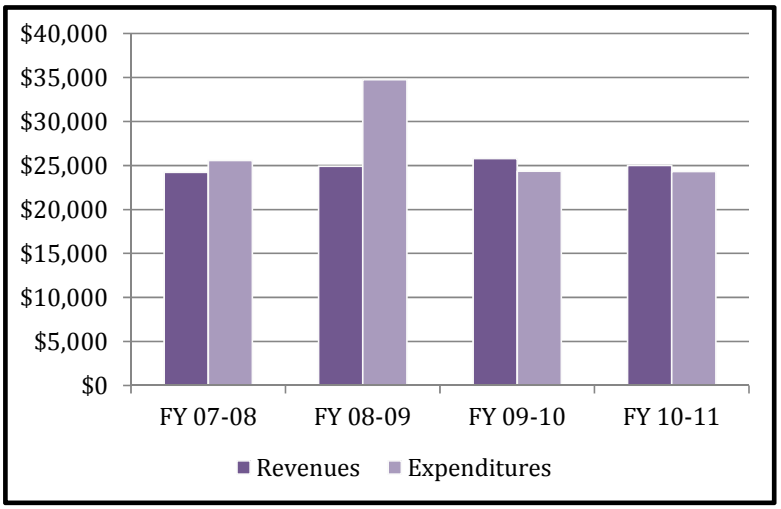
Although, the District's territory within San Benito County has a greater assessed value than the portion in Santa Clara County, the District is presently receiving a majority of its property tax revenue from the territory in Santa Clara County (68 percent). The San Benito County Auditor's Office reported that since at least prior to the early 1990s, the District was not receiving revenue for any portion of the incremental property tax, and has only been receiving a flat property tax amount ($8,609.13 net ERAF), which does not change from

year to year. San Benito County is unsure why this occurred and is still researching the issue.[81]

Expenditures

The District's expenditures in FY 10-11 were $24,311. Expenditures were composed of dues and fees (53 percent), salaries (33 percent), insurance (nine percent), payroll taxes (three percent), office expenses (one percent) and administration (one percent). Dues and fees are paid to the State for dam inspections. The District does not purchase water.

Figure 7-3: Expenditures and Revenues (FYs 09-11)



District expenditures and revenues over the last four fiscal years are shown in Figure 7-3. Revenues have remained relatively stable over this period. Expenditures exceeded district revenues in FYs 07-08 and 08-09, but remained within revenues in subsequent years. It should be noted that the District's financial reporting lacked clarity and double counted income from FY 08-09 in FY 09-10.[82] Corrected figures are shown in Figure 7-3.

Capital Outlays

The District does not plan for capital improvement needs. Historically, small capital improvements have been financed entirely through the District's annual revenues and reserves. As can be seen from the breakdown of expenditures, the District did not make any capital outlays in FY 10-11.

Similarly, over the last four years (FYs 07-11), the District has had no capital expenditures. Over that same period, annual depreciation of district-owned assets is unknown, as the District has not completed an audit where depreciation is approximated. However, it is apparent that the District's capital outlays have not covered depreciation of

[81] Interview with Janet Norris, San Benito County Assessor's Office, August 26, 2011.

[82] Correspondence with Janet Norris, San Benito County Assessor's Office, September 10, 2011.

district-owned assets, indicating an inadequate level of capital reinvestment to cover depreciation.

Long-term Debt

The District did not have any long-term debt at the end of FY 10-11.

Reserves

The District has two reserve funds in the form of Certificates of Deposit (CD). However, PPWD has been unable to make additions to these reserves for the last few years. In fact, the District frequently draws from both funds to pay the State dam inspection fees. The interest income earned on these funds has declined from about eight percent in the past to approximately one percent currently. The combined balance of the CDs at the end of 2010 was approximately $89,576, which equates to approximately 44 months of operational expenditures.

WATER SUPPLY

PPWD does not purchase any water or charge any user fees. Its primary purpose is to capture, store and release local surface water in order to recharge the groundwater in the area. The District's reservoirs are designed to collect and store local surface water from Pacheco Creek and naturally occurring runoff. Under a 1946 water right, the District can take up 7,250 AFA from the North Fork of Pacheco Creek, tributary to the Pacific Ocean via the Pajaro River between October 1 and June 1 of each year.

WATER DEMAND

Water is released from the dams into Pacheco Creek from April to October each year. The amount and timing of the water releases depends on the weather and is based on the watermaster's experience and judgment. According to the District's water rights, there is no minimum flow that is required to be maintained in the creek. The District does not track the amount of water released from the dams.

WATER INFRASTRUCTURE AND FACILITIES

PPWD's infrastructure consists of two dams and their adjacent reservoirs. Water is collected between October and April in the two reservoirs. When needed, water is released from the reservoirs through the dams into Pacheco Creek, and allowed to naturally percolate into the groundwater.

Water Storage Facilities

The Los Viboroas Dam is reportedly in good condition and has the capacity to store 500 acre-feet of water. The Los Viboroas Dam is not inspected by the State Division of Safety of Dams, due to its size, but instead is regulated by the County.

The North Fork Dam was built in 1936 and has a capacity to store 6,000 acre-feet of water. The North Fork Dam was also identified as being in overall good condition, with the exception of the spillway.

The Los Viboroas Dam is located in San Benito County, and the North Fork Dam is located in Santa Clara County. The District reported that no improvements to its infrastructure had been completed in the last five years.

Infrastructure Needs

The spillway wall at the North Fork Dam gave out several years ago and the District made temporary repairs, which are sufficient in the short-term. The Division of Safety of Dams, during its dam inspections, has identified a need to replace the spillway wall in the long-term, which is estimated to cost approximately $474,000. The temporary repairs that the District previously completed are adequate in the meantime, and the spillway is operational. The Dam is not in violation of requirements, but the District will need to find funds to complete the spillway replacement at some point in the future. These improvements are not a high priority presently, as the spillway is rarely used. However, when it does become necessary to make the repairs, the District does not anticipate that it will have adequate funds.

Other infrastructure needs identified during the most recent dam inspection include removal of all vegetation growing out of the construction joints of the concrete lined upstream slope and spillway exit channel.[83]

Capital Improvement Plans

The District currently does not have any specific capital improvement planned, due to a lack of funding for necessary improvements.

[83] DWR Division of Safety of Dams, *Inspection of Dam and Reservoir in Certified Status*, June 1, 2011.

Shared Facilities

The District does not share its facilities with other agencies and does not see any opportunities to do so in the future.

GOVERNANCE ALTERNATIVES

Reorganization options for PPWD include 1) consolidation into San Benito County Water District (SBCWD), 2) consolidation into Santa Clara Valley Water District (SCVWD), 3) consolidation of the District's territory in each county into the respective water district or 4) a joint powers authority or other collaborative agreement between the affected agencies.

PPWD consists of territory in both Santa Clara and San Benito Counties, and water districts completely overlap PPWD in each of these counties—SCVWD in Santa Clara and SBCWD in San Benito. Both SCVWD and SBCWD are responsible for groundwater management, including groundwater recharge, in their respective counties, which duplicates the services offered by PPWD; however, neither district provides groundwater recharge services within the PPWD boundaries. Additionally, PPWD faces the challenge of minimal property tax revenues combined with significant capital needs at the North Fork Dam. PPWD has indicated an interest in reorganizing with a larger more established agency with greater financial resources that could fund the necessary capital improvements and continue the groundwater recharge services currently provided. Both SCVWD and SBCWD have indicated interest in some kind of collaborative solution to this issue. The continued operation of the North Fork Dam and groundwater recharge into the Pacheco Subbasin is in the interest of both agencies.

As a majority of PPWD's territory lies within San Benito County, there is the potential for PPWD to consolidate with SBCWD, with SBCWD as the successor agency. The PPWD territory within Santa Clara County could not be annexed into SBCWD, as the District's boundary is defined as the area within the County of San Benito by its enabling act, similar to SCVWD.[84] SBCWD would operate and maintain the North Fork Dam in Santa Clara County, which largely benefits downstream users in San Benito County, outside of its boundary. SBCWD is empowered to "cause such waters to percolate into the soil within or without the district."[85] The transfer of property tax revenue in San Benito County to the successor agency would be negotiated by the County on behalf of the district. In this scenario, SBCWD would operate the dam in Santa Clara County outside of the District's bounds without property tax revenue from the Santa Clara portion of PPWD.

[84] San Benito County Water Conservation and Flood Control District Act §70-2.

[85] San Benito County Water Conservation and Flood Control District Act §70-4.

Since the largest of PPWD's dams is located in Santa Clara County, an option may be for PPWD to consolidate with SCVWD, with SCVWD designated as the successor agency. Because SCVWD's boundaries are defined in the principal act as being the exterior lines of Santa Clara County,[86] the area within PPWD's existing boundaries in San Benito County cannot be annexed into SCVWD, unless the enabling act is adjusted by the legislature. SCVWD is not precluded from protecting water sources outside of the County or its boundaries, but the water must flow into the County.[87] SCVWD may also obtain, retain, and protect water outside its bounds, but it must be used for beneficial uses within the District.[88] As the water from Pacheco Creek flows out of Santa Clara County into San Benito County, SCVWD may not operate the PPWD Los Viboroas Dam in San Benito County outside of its bounds. SCVWD is empowered to distribute water to areas outside of its boundaries. Therefore, SCVWD may operate the North Fork Dam and release water out of the dam for distribution downstream and percolation into the groundwater in both Santa Clara and San Benito Counties. However, with this scenario, a means for reimbursing SCVWD for the benefit to downstream properties in San Benito County would need to be identified.

Another option may be the consolidation of PPWD's territory in each county into the respective water district, and the joint financing of operations and capital improvements at the North Fork Dam by SCVWD and SBCWD. Given that SCVWD cannot annex the territory in San Benito County, and annexation of territory in Santa Clara County by SBCWD would create an overlap of similar service providers, this option may be the most practical and feasible. This option would require SCVWD and SBCWD to determine a means to jointly finance the necessary dam improvements and continued operations. Similar to the other two options, the transfer of the property tax revenue would be negotiated by the two Counties on behalf of the district.

The final option may be retaining the current governance structure, with PPWD continuing operations, and SCVWD and SBCWD assisting PPWD with financing for the necessary capital improvements through some form of joint financing agreement. The affected agencies would need to determine the appropriate structure for this arrangement. The benefit of this option would be continued local control through PPWD; conversely, through the other governance structure options previously discussed, constituents would benefit from the enhanced transparency and professional management offered by either SCVWD or SBCWD.

In summary, there are several concerns regarding the financing, operations and management of PPWD, including a lack of necessary revenue to complete essential capital

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[86] Santa Clara Valley Water District Act §2.

[87] Santa Clara Valley Water District Act §4 (c) (1).

[88] Santa Clara Valley Water District Act §4 (c) (6).

improvements, lack of transparency and clarity in financial statements, inaccuracies in the District's accounting and State reporting, failure to submit a timely audited financial statement to the County, lack of a website to inform constituents of district activities and functions, a lack of a means to track operations and water flows at the dams, extended board vacancies and a lack of contested elections. Additionally, there is a concern regarding how property taxes in San Benito County are allocated to the District. Santa Clara LAFCO will forward this information to San Benito LAFCO for follow-up on these issues and use in the next SOI update, as San Benito would be responsible for processing any change in governance.

8. GUADALUPE-COYOTE RESOURCE CONSERVATION DISTRICT

AGENCY OVERVIEW

Guadalupe-Coyote Resource Conservation District (GCRCD) was formed as an independent special district in 1944. At that time, the District was named the Evergreen Soil Conservation District and was formed to conduct research in, and to advise and assist other agencies and private individuals in the field of land use planning, pollution control and the conservation of soil, water, woodlands, wildlife and other natural resources. Originally, the District served territory in the northeastern portion of the County. In 1971, pursuant to an expansion of the districts' soil and water resource conservation mandates, California renamed the soil districts "Resource Conservation Districts". Their expanded powers included related resources, such as fish and wildlife habitat. In 1977, the District annexed the Black Mountain Soil Conservation District which had been organized in 1943. The Black Mountain territory included the northwestern portion of Santa Clara County. It later expanded to include land south to the Loma Prieta Mountain and the Loma Prieta Soil Conservation District boundary. The combined districts were known as the Evergreen Resource Conservation District. Most urban areas at that time were excluded from the District, as were Stanford University lands. In 1995, the Evergreen District was renamed the Guadalupe-Coyote Resource Conservation District to avoid confusion with the Evergreen area and enterprises using the name of Evergreen, the name also better reflected the District's watershed component. A Countywide Water Service Review, in which this District was included, was last conducted in 2005.

The principal act that governs the District is Division 9 of the California Public Resources Code.[89] The principal act empowers resource conservation districts to control runoff, prevent and control soil erosion, protect water quality, develop and distribute water, improve land capabilities, and facilitate coordinated resource management efforts for watershed restoration and enhancement.[90] Resource conservation districts may promote "conservation practices, including, but not limited to, farm, range, open space, urban development, wildlife, recreation, watershed, water quality, and woodland, best adapted to save the basic resources, soil, water, and air of the state from unreasonable and economically preventable waste and destruction." Districts must apply and obtain LAFCO

[89] Public Resources Code §9001 et seq.

[90] Public Resources Code §9001.

approval to exercise services authorized by the principal act but not already provided (i.e., latent powers) by the district at the end of 2000.[91]

Type and Extent of Services

GCRCD is a non-regulatory agency with the mission of achieving conservation of resources. The District has established a series of long range goals with relation to watershed, floodplain, riparian corridor and land management, waterway protection and restoration, habitat preservation, erosion prevention, invasive species control, and scientific studies, education and information. These goals are detailed in the District's Long Range Plan.

The District anticipates that efforts to achieve long-range goals will require numerous tasks that will be identified in detail in the District's annual plans and tracked in annual reports. Projects GCRCD has or intends to sponsor, directly provide, or partner with other organizations to provide the following:

- Watershed Management: GCRCD aided in the establishment of the Santa Clara Basin Watershed Management Initiative (SCBWMI). The SCBWMI goals include developing a stakeholder process for effectively managing the watershed, thus improving their natural functions and reducing negative impacts to basin water bodies and improving their beneficial uses. The District participates in the Core Group and a number of the subcommittees. It has also been collecting and accumulating stream and anadromous fish-related data and provides this data to the initiative.

- Flood Plain Management: The District encourages agencies to establish sensible floodplain management policies. The District contributed to the Urban Creek Flood Control Restoration Project on the Lower Silver Creek in conjunction with NRCS and SCVWD. GCRCD proposed that an alternative to cementing the channel be found. The District is in the process of providing comments on the Guadalupe River Flood Control Projects. The District is also reviewing the Mid-Coyote Flood Control Project that is being launched.

- Waterway Protection & Restoration: The District aims to preserve the natural or quasi natural areas along waterways and restore the degraded sections.: The District is reviewing projects to ensure habitat preservation and restoration on the Reach 6 and Reach 10b flood control projects of the Upper Guadalupe. The District also provides financial support to the Santa Clara Creeks Coalition and assists with their annual conference. Additionally, the District is participating and assisting in the Save the Bay movement.

[91] Government Code §56824.10.

- Scientific Studies/Education: GCRCD has been collecting data on environmental conditions of waterways for over 15 years. The District has also collected tissue samples from anadromous fish and provided them for laboratory analysis. The District has worked with local high schools on salmonid education and stream monitoring programs and soil judging programs. The District plans to continue sponsoring Applied Fluvial Geomorphology classes, and stream restoration classes to educate professionals and others in methods of river restoration. The District has held educational classes at the museum and lyceum.

- Creek Cleanups: The District assists with creek clean ups for the American River Cleanup Day and Ocean Cleanup Day.

- Vegetation/Habitat Preservation: The District works to preserve habitats for special status species and to educate the public on the importance of species diversity and the protection of habitat for all species. The District reported that it is trying to establish a large butterfly protection area in the northeastern portion of the County. The District is in the process of providing comments on the Santa Clara Habitat Conservation Plan.

- Farm/Range Land Management: The District participates in a collaborative San Francisco Bay Area Livestock and Land program proposed by Ecology Action. The goal of the program is to reduce the negative effects of livestock non-point source nutrient, pathogen and sediment pollution by implementing Best Management Practices in TMDL, 303(d) and other priority watersheds draining into the San Francisco Bay. Ecology Action applied for funding through the EPA for this project, but was not awarded the grant.

- Native Species Information: The District is working on gathering historic accounts of native species and to document present accountings of these species. It is working with SCBWMI to assure the most accurate listings and historic accounting of native species possible.

Collaboration

Many of the conservation agencies work closely together to promote communication, coordination and greater leveraging of resources. Like many other RCDs, GCRCD operates under Memorandums of Understanding (MOUs) with the U.S. Department of Agriculture and the State of California. The latter agreement recognizes a commitment from the State in aiding administration, coordination, financing and delivery of the conservation programs through local conservation districts. Through another cooperative work agreement, GCRCD, NRCS, the California Association of RCDs, and the California Department of Conservation agree to share information and resources, when available, to capitalize on synergies in program effectiveness and reduce duplication of efforts and contradictory mandates.

The District was previously recognized for working with NRCS and acquiring funds to restore the Silver Creek. Through NRCS, the District also provides assistance to land owners in methods of erosion prevention, land management issues, range improvement, grazing methods and schedules, landscaping and resource conservation.

GCRCD works and partners with other agencies, local governments and organizations. The following is a partial list of agencies and organizations the District is working with:

- California Department of Fish and Game
- California Native Plant Society
- Children's Discovery Museum
- City of San Jose
- City of Sunnyvale
- City of Santa Clara
- Clean South Bay
- Fisheries and Aquatic Habitat Collaborative Effort
- Friends of Calabazas Creek
- Los Gatos High School
- Natural Heritage Institute (NHI)
- National Marine Fishery Service (NMFS)
- Pacific Coast Federation of Fishermen (PCFFA)
- Pioneer High School, Regional Water Quality Control Board (RWQCB)
- San Jose Conservation Corps, San Jose Flycasters, San Jose Police Department
- San Jose Parks Department, San Francisco Estuary Institute (SFEI)
- Santa Clara Basin Watershed Management Initiative (SCBWMI)
- Santa Clara County Board of Supervisors
- Santa Clara County Urban Runoff Pollution Prevention Program
- Santa Clara Valley Audubon Society, Santa Clara Valley Manufacturer's Group
- Santa Clara Valley Water District (SCVWD)
- Silichip Cinook Salmon & Steelhead Restoration Group
- Stanford University- Hopkins Marine Station, Streams for Tomorrow
- Technical Museum of Innovation, Toxics Coalition
- Trout Unlimited, United Anglers, University of California Bodega Bay Marine Laboratory
- Urban Creeks Council- South Bay Chapter/Friends of the Guadalupe River

- U.S. Army Corps of Engineers, U.S. Environmental Protection Agency-Region 9 (EPA)
- U.S. Fish & Wildlife Service
- USDA Natural Resource Conservation Service
- Western Waters Canoe Club
- West Valley Clean Water Program
- Wildland Hydrology

Since the makeup of land and demands for service between GCRCD and Loma Prieta RCD are different, collaboration with the Loma Prieta RCD has not been extensive. There have been soil judging contests in years past, but only on a yearly basis.

Service Area

GCRCD serves the northern portion of Santa Clara County extending from north of Morgan Hill to the San Francisco Bay. Within the boundaries are portions of the cities of San Jose, Palo Alto, Los Altos, Los Gatos, Saratoga, Los Altos Hills, Cupertino, Campbell, Milpitas and Monte Sereno. Much of the urban area within the northwestern portion of the County is excluded from the District's boundaries; however, this is where many of the District's services are focused.

At the outset, urban areas were, for the most part, left out of the districts' boundaries because district purposes, at that time, were directed towards agriculture and soil conservation. In 1971, the soil conservation districts' mandate was expanded legislatively, at which time they were renamed resource conservation districts. The GCRCD's focus has transitioned to stream protection, because of the impacts of urbanization and construction activities on aquatic resources, water quality, and riparian areas. Consequently, the District is presently providing more services in the urban centers, outside of its bounds. The District's primary revenue source is property taxes, which it receives from only those lands within its bounds. The District provides a majority of its services within the cities outside of its bounds without compensation.

The District reported that it would like to enhance services in the northeastern area of the County, but would need more personnel and volunteers to extend services out towards Alameda County.

Services to/from Other Agencies

The District does not provide services to or receive services from other public agencies under contract. The District does, on occasion, receive support from contract technical consultants when reviewing development projects.

Boundaries

The Evergreen Soil Conservation District originally covered about 10,000 acres on the northeastern side of the Santa Clara Valley, largely the Silver Creek Watershed. It later expanded to include most of the land on the eastern side of Santa Clara Valley which included a large portion of the Coyote Creek Watershed just north of Morgan Hill. The District boundary extended to the Alameda and Stanislaus County lines, excluding then-urban incorporated lands.

In 1977, the Evergreen RCD merged with the Black Mountain District. The Black Mountain Soil Conservation District was organized in 1943 to cover about 5,500 acres of the Clabazas Watershed on the western side of Santa Clara Valley. It later expanded to cover most of the hill land on the western side of the valley from just south of the San Mateo County line to Loma Prieta Mountain and the boundary of the Loma Prieta Soil Conservation District. Most urban territories and Stanford University land were excluded.

Currently, the District encompasses 565 square miles. The boundaries include most of the hilly and mountainous land surrounding the Santa Clara Valley on the eastern side. The narrow part of the valley north of Morgan Hill, and the southeastern portion of the valley in the City of San Jose are included. Much of the urban area of the northwestern portion of the County, mostly lying within the low, flat land section of the Santa Clara Valley is not in the District.

The boundary on the western side of the valley lies just below the San Mateo County line extending to the Santa Cruz County line and southwest to Loma Prieta and the Loma Prieta Conservation District boundary. The middle urbanized portion of Santa Clara County is not included in the District.

The eastern part of the District includes the Diablo Mountain Range extending to the Stanislaus and the Alameda county lines. The District territory extends southeast from Alameda County line to the Almaden, Calero and Coyote Creek ending just north of Anderson Reservoir. The District's bounds are shown in Figure 8-1.

Provider Overlap

The District's bounds overlap with Santa Clara Valley Water District, which covers the entire county and provides similar resource conservation services.

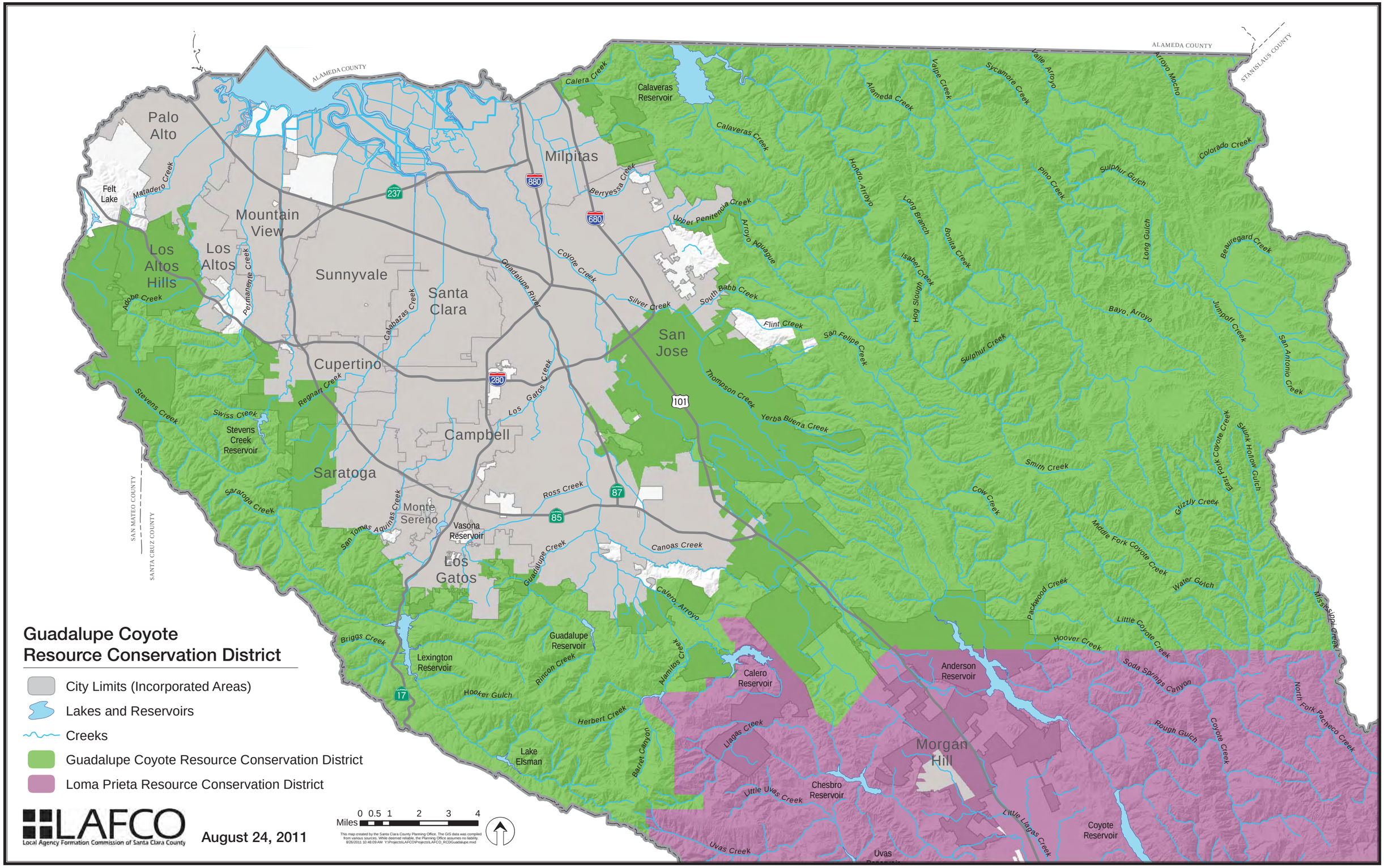
SCVWD provides technical support and spearheads regionalized watershed stewardship and groundwater quality protection campaigns. It aims to protect and improve watersheds, streams, and natural resources, and promotes awareness of creek and bay ecosystem functions. Additionally, SCVWD watershed conservation programs are largely focused on northern Santa Clara County which lies within the Santa Clara Basin—through which the County's surface water supplies flow. Similarly, GCRCD focuses on

watershed protection by primarily providing comments on developments and projects along creeks and rivers, and engaging in some stewardship activities. It encourages environmental responsibility and attempts to educate the public and relevant parties about the importance of preserving natural habitat and watershed issues. Similar to SCVWD's efforts on watershed stewardship issues, the RCD's efforts are focused on the northern part of the County. This overlap has occurred due to SCVWD's evolving role in in flood control and watershed stewardship services. Unlike SCVWD, GCRCD can act as a conduit for non-competitive federal funds through the NRCS that are not available to SCVWD.

Sphere of Influence

The District's Sphere of Influence is coterminous with its bounds and was last updated in 2007.

Figure 8-1


Guadalupe Coyote
Resource Conservation District
City Limits (Incorporated Areas)
Lakes and Reservoirs
Creeks
Guadalupe Coyote Resource Conservation District
Loma Prieta Resource Conservation District
LAFCO
Local Agency Formation Commission of Santa Clara County
August 24, 2011
Miles
0 0.5 1 2 3 4
This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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ALAMEDA COUNTY
STANISLAUS COUNTY
SAN MATEO COUNTY
SANTA CRUZ COUNTY
Palo Alto
Felt Lake
Mountain View
Los Altos Hills
Los Altos
Sunnyvale
Santa Clara
Milpitas
Cupertino
San Jose
Campbell
Saratoga
Monte Sereno
Los Gatos
Calaveras Reservoir
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Lake Elsman
Calero Reservoir
Anderson Reservoir
Chesbro Reservoir
Morgan Hill
Coyote Reservoir
Uvas Reservoir
Matadero Creek
Adobe Creek
Permanente Creek
Calabazas Creek
Stevens Creek
Swiss Creek
Regnart Creek
Saratoga Creek
San Tomas Aquinas Creek
Ross Creek
Guadalupe Creek
Canoas Creek
Los Gatos Creek
Guadalupe River
Coyote Creek
Silver Creek
Berryessa Creek
Calera Creek
Calaveras Creek
Upper Penitencia Creek
Arroyo Aguague
South Babb Creek
Flint Creek
San Felipe Creek
Thompson Creek
Yerba Buena Creek
Calero Arroyo
Namitos Creek
Briggs Creek
Hooker Gulch
Rincon Creek
Herbert Creek
Barret Canyon
Llagas Creek
Little Uvas Creek
Uvas Creek
Little Llagas Creek
Alameda Creek
Valpe Creek
Sycamore Creek
Valle Arroyo
Arroyo Mocho
Hondo Arroyo
Long Branch
Bonita Creek
Isabel Creek
Hog Slough
Pino Creek
Sulphur Gulch
Colorado Creek
Long Gulch
Beauregard Creek
Bayo Arroyo
Sulphur Creek
Jumpoff Creek
San Antonio Creek
Smith Creek
Cow Creek
East Fork Coyote Creek
Skunk Hollow Gulch
Grizzly Creek
Middle Fork Coyote Creek
Water Gulch
Packwood Creek
Mississippi Creek
Little Coyote Creek
Hoover Creek
Soda Springs Canyon
Rough Gulch
Coyote Creek
North Fork Pacheco Creek
237
880
680
280
101
87
85
17

ACCOUNTABILITY AND GOVERNANCE

GCRCD is governed by a five-member Board of Directors. Directors are appointed by the County Board of Supervisors for staggered four-year terms. New directors are provided with an orientation. There are currently five members on the Board of Directors. Board members do not receive compensation for services, with the exception of reimbursement for training and associated expenses to attend conferences, which is a part of educating board members on relevant issues. Current board member names, positions, and term expiration dates are shown in Figure 8-2.

The Board meets on the second Wednesday of every month at six in the evening at the District office. The Agenda is publicly posted at the county building the Friday before the Board Meeting and on the entry doors to the Bank of the West building where meetings are held. Minutes are available upon request. Agendas are written with the approval of the President.

Figure 9-2: GCRCD Governing Body

Guadalupe-Coyote Resource Conservation District				
District Contact Information				
Contact:	Nancy Bernardi, Office Manager			
Address:	888 North 1st Street, Room 204, San Jose, CA 95112			
Telephone:	408-288-5888			
Fax:	408-993-8728			
Email/website:	gcrcd@pacbell.net			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Vacant	Director	December 2012	Appointed	4 years
Margaret Giberson	Director	December 2012	Appointed	4 years
James Moore	Director	December 2012	Appointed	4 years
David Crites	Director	December 2014	Appointed	4 years
Roger Castillo	Director	Replacement appointment	Appointed	4 years
Meetings				
Date:	Second Wednesday of every month at 6:00pm.			
Location:	District office.			
Agenda Distribution:	Posted on website.			
Minutes Distribution:	Available upon request and posted on website.			

In addition to the legally required posting of agendas and making minutes available, the District undertakes several outreach and educational programs in an effort to keep constituents informed of services provided and district activities. As previously mentioned, the District teaches salmonid education, stream monitoring programs, and soil judging

programs in local high schools and the Lyceum. It also sponsors classes on stream and river restoration. The District maintains a website where some information is made available to the public.

If a constituent is dissatisfied with the District's services, they may submit a complaint in written or oral form. The operations manager tries to address complaints or requests as soon as possible. If a complaint were not handled to the constituent satisfaction, it would be passed on to the Board. There was one complaint in 2010 from a developer that did not appreciate criticism regarding a potential development. The complaint was resolved prior to handing it off to the Board.

GCRCD demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

The District's personnel policies are based on the California Association of Resource Conservation Districts tools and suggestions. The District has one full-time staff and supplements services with part-time staff and contract consultants as needed. The District is managed and operated by the operations/office manager who reports to the president of the Board of Directors. The employee also receives direction from the president and accommodates other board members in their requests. The operations/office manager is the district filing official, board deputy clerk, board recording secretary (agendas and minutes), and the board secretary. The manager performs several other functions required for the operations of the District.

The District does not track the operations manager's workload through timesheets. The manager gives monthly staff reports at Board meetings and other reports as necessary. The manager also updates the Board through the agenda for monthly meetings, enabling board member discussions on the operations of the District, any District needs and any potentially new district activities. All staff work is performed under the direction of the President and the Board. The President of the Board is the staff supervisor and an executive who may make decisions without board meetings, if needed.

Employee evaluations are not performed regularly; however, it is one of the District's goals to initiate regular reviews. Personnel policies state that written employee performance evaluations will be done by the Board of Directors within one year of employment and annually thereafter on the review anniversary for all GCRCD employees. If the evaluation is satisfactory, appropriate action may be taken to adjust the employee's salary. The most recent staff evaluation took place about a year and a half ago.

The operations and productivity of the District are evaluated during annual plan and long range plan discussions. Ongoing issues, such as stream restoration, are discussed

monthly. The District does not have adopted criteria to determine successful completion of a project.

To improve its operational efficiency, the District reported that it has looked into hiring part-time staff.

The District's financial planning efforts include an annually adopted budget and financial statements that are audited on a biennial basis. The District does not conduct capital improvement planning as it neither owns nor shares any facilities.

All special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year, unless the Board of Supervisors has approved a biennial or five-year schedule.[92] In the case of GCRCD, the District must submit audits every three years. The County reported that GCRCD has complied with these requirements.

The District's other planning documents include a long range plan for the years 2010–2015, an annual work plan and annual report. The District sets and adopts goals through its long range and annual work plans. Division 9 of the Public Resource Code outlines the functions of the long range plan and annual work plan.[93] The District could improve upon its long range plan and annual work plan by ensuring that they embody the functions outlined for these plans in the Public Resource Code.

POPULATION AND PROJECTED GROWTH

Based on GIS analysis of 2010 census data, GCRCD has a population of approximately 300,577.

ABAG projects that the population of Santa Clara County will grow by 33 percent by 2035, with an average annual growth rate of 1.2 percent countywide. ABAG's population projections for 2010 were slightly higher than the actual population reported in the 2010 Census. Population projections have been adjusted assuming ABAG's projected rate of growth from the 2010 Census population. The unincorporated areas of the District are projected to have an average annual growth rate of 0.7 percent, while the cities are anticipated to have average annual growth of between 0.8 and 1.7 percent. Based on these projections, the District will have an estimated population of 355,355 in 2035.

Generally, population growth within the District is expected to be modest and consist of infill rather than new development. Northern Santa Clara County is highly dependent on the quality of its local surface water sources as well as groundwater recharge opportunities

[92] Government Code §26909.

[93] Public Resources Code §9413.

and flood protection along the creeks. Although population growth may not be significant overall, as land use intensifies in the region, there will be an increased demand for services related to conservation and watershed stewardship. The District's demand for services will most likely further increase as the cities undergo further urbanization and increase urban runoff, litter and manmade structures affecting water quality and wild life, thus creating a greater need for conservation programs and new development project reviews.

GCRCD reports that it does not make formal population projections, as population growth does not directly impact the level of demand for the District. GCRCD currently forecasts its service needs through its long range plan. The District reported that it has experienced an increase in demand in recent years, as it has started new types of projects and had several documents and projects to evaluate.

Specific planned and proposed developments within the District include the Brookside Development on Guadalupe Mines Road along Guadalupe Creek, which is planned to consist of hundreds of dwelling units and the Ross Creek Reserve in Los Gatos consisting of eight to 12 condos.

The District reported that it reviews and provides comments on planned and proposed developments within and outside its boundaries. GCRCD does not maintain a set of its own policies by which to evaluate these potential projects, but instead aims to ensure the all projects are consistent with the conservation related policies of the various local, state and federal agencies. Additionally, the District bases its comments on any potential negative environmental impact identified by consultants and/or biologist reviews of the project and habitat. The District does not maintain a list of its own policies or standards to guide district comments and evaluation of proposed projects and ensure consistency between reviewers and projects.

FINANCING

Financial Adequacy

GCRCD reported that the current financing level was generally inadequate to provide services. Current funding reportedly only covers basic services provided by the District. The District identified a need for increased grant funding in order to enhance its level of services and better fulfill its mandate. Two challenges to financing were identified: 1) the exception of the repeal of Proposition 1A, which required California agencies to pay eight percent of their property tax income with the expectation that it will be paid back in 2013 and 2) the District is providing services outside of bounds without compensation or property taxes from the area.

GCRCD has made attempts to minimize expenses by being more conscientious of costs and performing cost comparison analyses when hiring personnel. To enhance cost savings, the District also practices cost sharing with SCVWD for consultants.

Revenue Sources

GCRCD is funded by its share of the one percent property tax ($170,106 in FY 09-10), as well as interest income ($2,258 in FY 09-10). The District's property tax share for FY 09-10 was 0.58 percent.

GCRCD does not charge fees for its services. A potential revenue source may be fees for technical services that other RCDs have implemented. Under Division 9 of the California Public Resources Code, RCDs are permitted to function to a certain degree as enterprise districts, because they are empowered to charge reasonable fees for services rendered to individuals and agencies.[94] Other RCDs that charge fees for services generally provide contract services to the County or other agencies. GCRCD has considered charging fees, but no concrete steps had been taken as of drafting of this report.

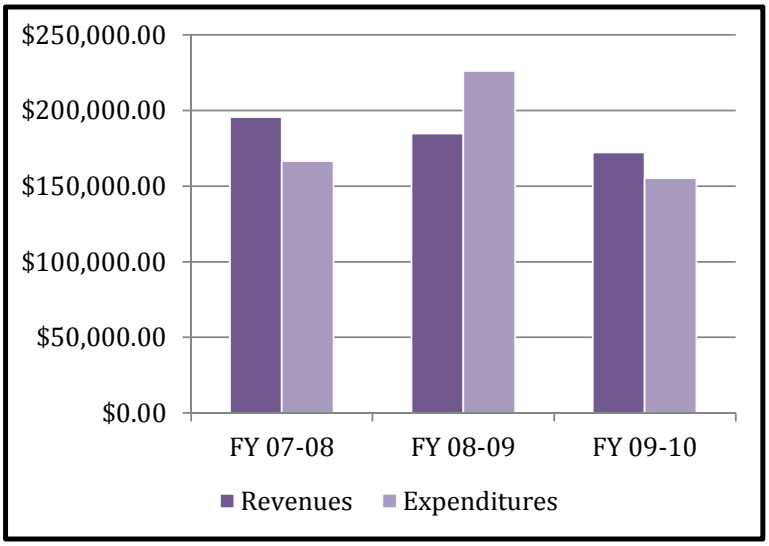
The District is also actively applying for grants to enhance its financing level. GCRCD applies for multiple grants as a single agency and through collaborative partnerships. It recently applied for an EPA grant but the application was denied.

Expenditures

District expenditures in FY 09-10 were $155,404, and were mainly comprised of salaries (42 percent), watershed project expenses (25 percent), trust fund disbursements (nine percent), building lease (seven percent), federal payroll taxes (four percent), contract services (two percent), equipment and furniture (two percent), bank and FDIC insurance charges (two percent), and property tax administration fees, phone/web, insurance, and office supplies (one percent each). State unemployment, worker's comp, resource library, project and programs, education expenses, workshops and conferences, membership dues, printing and reproduction, and miscellaneous food and refreshments constitutes less than one percent each of the total revenue.

[94] Public Resources Code §9403.5.

Figure 8-3: Expenditures and Revenues (FYs 08-10)



The District's revenues and expenditures over the last three years are shown in Figure 8-3. Revenues have generally declined since FY 07-08, while expenditures peaked in FY 08-09, and exceeded revenues. Higher expenditures in FY 08-09 were attributed to watershed capital improvement services and contract services.

Capital Outlays

The District does not own or maintain any fixed assets; however, it expends money every year on watershed capital projects towards plan evaluations and consultant fees. In FYs 08, 09 and 10, GCRCD spent $42,282, $103,955 and $39,552 respectively for these projects. The projected expenditures for watershed projects in FY 10-11 was approximately $50,000.

Long-term Debt

The District had no long term debt at the end of FY 09-10.

Reserves

The District has an informal policy to set aside some money annually—net revenues carry over to the following year. At the end of FY 09-10, the District had a cash fund balance of $274,889, which equates to almost 28 months of operating expenditures for the District.

WATER INFRASTRUCTURE AND FACILITIES

The District currently does not own or maintain any facilities and consequently does not have any infrastructure needs or deficiencies attributed to district-owned assets. Instead, the watersheds in the area may appropriately be referred to as district infrastructure, as they define the demand for district services.

Watershed Stewardship Infrastructure

While the District does not own facilities with regard to watershed stewardship, its bounds include at least a part of four distinct watersheds that drain to the San Francisco Bay—the Lower Peninsula, West Valley, Guadalupe, and Coyote watersheds.

Infrastructure Needs

All of these watersheds once supported large runs of salmon and steelhead trout. Due to severe human impacts over the years only token salmonid runs exist today, and unless the trend is reversed, these fish could become extinct in the not too distant future.

The District reports that virtually all waterways in these watersheds are severely impacted by development, water diversions, dry backs, dams, instream percolation, flood control projects, pollution, and vegetation removal, especially in the lower reaches of Santa Clara Valley. Water bodies within GCRCD that are significantly affected by pollutants and classified as impaired include Alamitos Creek, Calero Reservoir, Coyote Creek, Guadalupe Creek, and Guadalupe Reservoir. Guadalupe River, which is also an impaired water body, is located outside of the District's boundaries, but surrounded by the District. Alamitos Creek, Calero Reservoir, Guadalupe Creek, and Guadalupe Reservoir are impaired by mercury and have a medium priority level as determined by the San Francisco Bay Regional Water Quality Control Board. Coyote Creek is impaired by diazinon and has a high priority level. Guadalupe River is impaired by both, mercury and diazinon, which have priority levels of medium and high, respectively.

Capital Improvement Plans

The District does not have any capital plans related to these impaired water bodies, but instead evaluates projects as they are proposed by others.

Shared Facilities

Guadalupe-Coyote shared its leased building with NRCS in the past, but NRCS has since moved out. Currently, the District does not share its facilities with other agencies.

The District does not see opportunities for facility sharing in the future, but is exploring the possibility of regional collaboration with Alameda RCD, Santa Cruz RCD and possibly Loma Prieta RCD on projects.

GUADALUPE-COYOTE RESOURCE CONSERVATION DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The estimated population of Guadalupe-Coyote RCD is 300,577.
- Generally, population growth within the District is expected to be modest and consist of infill rather than new development. The District is projected to have a population of approximately 355,355 in 2035.
- Although population growth may not be significant overall, as land use intensifies in the region, it is anticipated that there will be an increased demand for services related to conservation and watershed stewardship. The District's demand for services will most likely further increase as the cities undergo further urbanization and increase urban runoff, litter and manmade structures affecting water quality and wild life, thus creating a greater need for conservation programs and new development project reviews.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- GCRCD does not own or operate facilities or infrastructure.
- The District appears to have the capacity to handle present demand for services. Any increase in demand would require additional funding and staffing to address it.
- It is recommended that the District make use of property tax revenue for services directed at areas where it was collected.
- The District is providing adequate services given financial constraints, based on the quality of services provided and professional management practices.
- GCRCD management practices are adequate as the District maintains up-to-date financial information and budgets, and conducts annual and long-range planning. However, GCRCD could improve upon management practices by conducting regular employee evaluations and tracking the workload of staff and the district.
- It is recommended that the District adopt specific criteria to determine successful completion of a project or goal as part of the annual work plan.

- It is recommended that the District establish policies and guidelines by which to review potential development projects in order to clearly define what criteria GCRCD will be using to guide district comments and evaluation of proposed projects, as well as ensure consistency between reviewers and projects..

- GCRCD submits audited financial statements to the County, as required by State law.

Financial Ability of Agency to Provide Services

- GCRCD financing level is considered inadequate to provide services as current funding reportedly only covers basic services provided by the District. The District identified a need for increased grant funding in order to enhance its level of services and better fulfill its mandate.

- Two challenges to financing were identified: 1) the repeal of Proposition 1A, and 2) providing a majority of services outside of bounds without compensation or property taxes from the area.

- GCRCD is searching for additional financing sources by actively applying for grants and considering charging fees for services.

- GCRCD maintains considerable reserves to compensate for funding shortfalls in the long-term.

Status and Opportunities for Shared Facilities

- Guadalupe-Coyote shared its leased building with NRCS in the past, but NRCS has since moved out. Currently, the District does not share its facilities with other agencies.

- The District does not see opportunities for facility sharing in the future.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and to ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. GCRCD appears to generally be accountable to the public based on these indicators; however, board members are appointed, not elected, which constrains accountability to the constituents.

- It is recommended that GCRCD continue to populate its website with further documents and information to enhance transparency to the public.

Governance Structure Options

Three governance structure options were identified for GCRCD: 1) reorganization with Santa Clara Valley Water District, 2) consolidation with Loma Prieta RCD, and 3) annexation or detachment of incorporated areas.

Reorganization with Santa Clara Valley Water District

GCRCD's bounds overlap with that of Santa Clara Valley Water District (SCVWD), which provides similar resource conservation services. As the two agencies are empowered to provide the same general category of water conservation services, there is the potential for duplication of services. GCRCD is empowered to provide both watershed stewardship and land management services to control runoff, prevent and control soil erosion, protect water quality, develop and distribute water, improve land capabilities, and facilitate coordinated resource management efforts for watershed restoration and enhancement.[95] Similarly, SCVWD is empowered to provide comprehensive water management for all beneficial uses and protection from flooding within Santa Clara County.[96]

As identified in the Agency Overview section of this chapter, there appears to be significant overlap in the services provided by SCVWD and GCRCD. Both agencies provide services directed at protecting watersheds, streams and ecosystems. This overlap has largely occurred due to SCVWD's evolving role in in flood control and watershed stewardship services, and GCRCDs growing interest in ensuring proper habitat preservation along the urbanized waterways. GCRCD concluded that SCVWD's flood control projects on the Guadalupe and related waterways were harmful to the streams and their tributaries and filed a complaint with the State Water Resources Control Board in 1996. Since then GCRCD has worked to promote amelioration of the blocked fish passages, the degraded riparian vegetation, channel forms and substrates and water quality of these streams, by submitting numerous comments on potential projects. In 2001, environmental stewardship responsibilities were added to SCVWD's powers to balance the District's flood control activities with the protection of the County's waterways and ecosystems. Presently, both agencies direct efforts at many of the same projects, granted participation in these programs are at different stages in the project and to different degrees.

Given that both agencies are making use of property tax revenue to finance similar services, LAFCO may choose to reorganize GCRCD and SCVWD, in order to eliminate any

[95] Public Resources Code §9001.

[96] Santa Clara Valley Water District Act, §4.

duplication of services. With this option, the RCD would either be dissolved and SCVWD would be responsible for providing resource conservation programs to the extent it is authorized in its enabling act or the two agencies would be consolidated into a single agency designated as SCVWD with the same enabling act. Both of these options could be initiated by LAFCO or the agencies. In both scenarios, the transfer of the property tax would be negotiated by the County on behalf of the district.

The primary advantages of this option are the elimination of any duplicate services, enhanced leveraging of property tax revenue through a single entity for conservation purposes, and reduced administration costs. Presently, both agencies make use of property tax revenues to provide conservation services. Aggregating all property tax revenue under the control of a single resource conservation provider would allow for greater "purchasing power" and maximize the impact of the services provided. Additionally, by eliminating the governmental structure of one agency, a smaller portion of the available funding pool would be used for administrative purposes. Yet, given the size of SCVWD's watershed stewardship and flood control operations ($51.8 million in FY 09-10), the effect of this additional revenue ($170,106 in FY 09-10) would most likely be minimal.

Prospective disadvantages to this option are a perceived loss of local control and public access, the potential for a narrower range of services available to residents, a lack of certainty as to how the property tax funding would be used, and restricted access to NRCS funding.

While the resource conservation programs and services the SCVWD is authorized to provide are broad in scope, they must in some way relate to water resource management and flood protection. The RCD is not limited in this way and can provide programs that are related to a wide range of conservation issues. However, at present, GCRCD's projects are entirely focused on water-related resource management, and the District does not provide any programs or services that would be considered outside of the purview of SCVWD.

Equally important is consideration for how the property tax funding could be used in the future. Watershed management is a core business for SCVWD and receives a significant amount of funding. SCVWD is a countywide district and there is no requirement and no means to ensure that the property tax funding collected locally within the GCRCD service area is used for local programs. Though, it should be noted that GCRCD is presently making use of property tax funds for projects outside of its boundaries.

Finally, GCRCD acts as a conduit for non-competitive federal grants from NRCS, which are not available to SCVWD. Should SCVWD be the successor agency, conservation efforts in Santa Clara County would no longer be eligible for these funds. However, GCRCD has not received these funds from NRCS in at least the last 10 years, and NRCS does make other grant funds available to agencies on a competitive basis.

GCRCD reported that it is not amenable to consolidating with SCVWD. GCRCD expressed concern that there is the potential for conflicting objectives if SCVWD provides both flood control and environmental protection services. SCVWD, however, believes that providing water supply and flood control services is consistent with its efforts to protect creeks and watersheds, and supports reorganization of the two agencies in some form.

Consolidation with Loma Prieta Resource Conservation District

A potential governance structure option may be consolidation of GCRCD with LPRCD. GCRCD abuts LRPRCD to the south.

Possible benefits of an RCD consolidation may be capitalizing on each other's existing programming, economies of scale, greater regional collaboration and planning on regional issues and concerns with regard to watersheds that cross RCD boundaries, better leveraging of limited funding, and improved efficiency for funding projects at a regional level. Given LPRCD's present financial constraints, improved efficiencies and reduced competition for grant funding would greatly benefit the District.

Together, GCRCD and LPRCD serve a large majority of the territory within Santa Clara County, with the exception of the urban cores of the cities. The primary benefit of consolidation of GCRCD and LPRCD and creation of a countywide resource conservation district would be comprehensive conservation coverage throughout the County with uniform programming. At present, the programing of these two agencies greatly varies. LPRCD focuses largely on soil conservation and land management services, while GCRCD concentrates efforts on watershed stewardship activities. Consolidation would allow for shared programming between the two agencies and expand the types of services offered throughout the County.

Additionally, both agencies reported that financing levels were generally inadequate to provide services. Presently, both agencies are largely dependent on property tax revenues to provide conservation services. Aggregating all property tax revenue under the control of a single resource conservation provider, would allow for greater leveraging of available resources. Moreover, by eliminating the management and governing body of one agency, a smaller portion of the available funding pool would be used for administrative purposes.

Although the consolidation of LPRCD and GCRCD has the potential for significant benefits, there are several challenges and disadvantages to such a governance structure option. The challenges to consolidation include the dissimilarity in the type of territory served in each district and the difference in programming. GCRCD serves the more urban and suburban area in the northern portion of the County, while LPRCD serves a more agricultural and rural area in the southern portion of the County. Consequently, LPRCD's services are more focused on soil conservation and land management of small acreage agricultural lands, while GCRCD focuses on watershed stewardship in the heavily impacted urban centers. The variation in the composition of land between the two districts would

force the newly consolidated district to either offer a wide variety of services for all types of land use or specialize in only a few types of services.

LPRCD and GCRCD both indicated that consolidation of the two agencies was not a desirable option, given the differences previously cited. The districts do not presently participate in collaborative activities of any kind together, and lack a working relationship. The two districts should explore further options to share resources and expertise and evaluate the potential to collaborate on achieving any common goals.

Annexation or Detachment of Incorporated Areas

This option would involve making boundary adjustments by either detaching all incorporated territory or annexing the city centers that remain excluded from GCRCD. When GCRCD was originally formed, it was intended to provide soil and water conservation services to rural areas outside the cities. As areas were annexed by the cities there were no subsequent detachments from the RCD's boundaries.

Detachment of these areas would restore the RCD's boundaries to the original intent by removing any areas annexed to the cities. The RCD's share of the one percent property tax for the detached areas would be reallocated to each taxing jurisdiction within that Tax Rate Area. The primary advantage of this option includes increased public benefit from the property tax funding in those areas as the funding is reallocated to other public services. However, GCRCD would likely continue to provide services in these areas without compensation as it is presently doing in the urban centers.

There are several disadvantages to this option. First, the RCDs boundaries would recede, although the RCD would most likely continue to provide services there. Second, the RCD's operating revenue would be reduced per the amount and valuation of the detached areas and the District would no longer be compensated for services provided in these areas. Third, residents within the cities may place a high value on the services provided by the RCD and there may be a potential lack of community support for any change.

The alternative option is to annex those excluded areas to ensure consistent and comprehensive coverage within the District's boundaries. While it was the original intent at the time of formation that the cities be excluded, the demand for services is shifting from rural lands to more developed areas. The California Public Resources Code §9152 authorizes other lands besides agricultural lands to be included within the District if necessary for the control of runoff, the prevention or control of soil erosion, the development and distribution of water, land improvement, and for fully accomplishing the purposes for which the district is formed. GCRCD almost entirely focuses its efforts in the urban centers that are presently outside of its boundaries. Annexation of these areas would allow the District to recoup costs related to services provided there.

- Three governance structure options were identified for GCRCD: 1) reorganization with Santa Clara Valley Water District, 2) consolidation with LPRCD, and 3) annexation or detachment of incorporated areas.

GUADALUPE-COYOTE RESOURCE CONSERVATION DISTRICT SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The District's SOI is coterminous with its boundaries. The SOI was last updated in 2007.

Recommended Sphere of Influence Boundary

It is recommended that LAFCO maintain a coterminous SOI for GCRCD on a provisional basis and revisit the sphere when recommended conditions are adequately addressed in a timely manner.

There are concerns about the duplication of conservation services that are presently offered by GCRCD and SCVWD and the double taxation of property owners for these conservation services. Given such duplicative provision of services, it may be appropriate to assign a zero sphere for GCRCD and consolidate it with SCVWD. However, consolidation of the two agencies would limit the range of potential conservation services that could be provided in the northern portion of the County in the future. The resource conservation programs and services SCVWD is authorized to provide are broad in scope; however, they must in some way relate to water resource management and flood protection. The RCD is not limited in this way and can provide programs that are related to a wide range of conservation issues. At present, GCRCD's projects are entirely focused on water-related resource management, and the District does not provide any programs or services that would be considered outside of the purview of SCVWD.

As part of this sphere recommendation, it is proposed that GCRCD return to LAFCO within a specified timeframe to outline what services the District intends to provide (along with a timeline for implementation) that do not overlap with SCVWD's efforts and could not otherwise be provided by SCVWD through its enabling act. At that time, LAFCO may reevaluate GCRCD's sphere considering the district's plan and application for new or different services per Government Code §56654(b) and §56824.12.

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

GCRCD serves the northern portion of Santa Clara County. The District encompasses 565 square miles. The boundaries include most of the hilly and mountainous land surrounding the Santa Clara Valley. Much of the urban area of the northwestern portion of

the County, mostly lying within the low, flat land section of the Santa Clara Valley is not in the District.

Land use within the RCD's boundaries ranges from urban development within incorporated areas to rural areas with agricultural and open space lands. A majority of the territory within the RCD boundaries is open space, including areas within the Santa Cruz Mountains to the west and the Diablo Range to the east. The entire RCD area is generally projected to have moderate growth rates.

Present and probable need for public facilities and services in the area

GCRCD provides conservation services related to watershed management, floodplain management, conservation education and services, and watershed studies and projects. Population growth in Santa Clara County has increased pressures on natural resources, such as creeks, streams and other areas used for recreation. In addition, development has expanded the area covered by impervious surfaces, thereby increasing the need for resource conservation in support of flood control and water quality. The District reported that it has experienced an increase in demand in recent years, as it has started new types of projects and had several documents and projects to evaluate.

Generally, population growth within the District is expected to be modest and consist of infill rather than new development. Although population growth may not be significant overall, as land use intensifies in the region, it is anticipated that there will be an increased demand for services related to conservation and watershed stewardship. The District's demand for services will most likely further increase as the cities undergo further urbanization and increase urban runoff, litter and manmade structures affecting water quality and wild life, thus creating a greater need for conservation programs and new development project reviews.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

The District does not own or maintain facilities to provide services. GPRCD appears to have the capacity to handle present demand for services. Any increase in demand would require additional funding and staffing to address it. The District is providing adequate services given financial constraints, based on the quality of services provided and professional management practices.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

GCRCD serves a majority of the foothills and mountainous land surrounding the Santa Clara Valley in the northern portion of Santa Clara County. This includes portions of several cities and some unincorporated communities. The residents and landowners within the

District's boundaries in northern Santa Clara County have an economic interest in the programs and services provided by the District as a portion of the property tax funds District services. Presently, the Cities of Los Altos, Cupertino, Saratoga, Los Gatos, San Jose, and Milpitas are divided as only a portion of the population in these cities is within the District's bounds.

The nature, location, extent, functions, and classes of services provided

GCRCD is a non-regulatory agency with the mission of achieving conservation of resources by promoting sustainable agriculture and proper range land management practices, supporting well-defined urban boundaries for the preservation of open space and farmlands, and promoting proper watershed, wetlands and riparian corridor management. Current efforts are largely focused on watershed management and the protection and restoration of waterways.

9. LOMA PRIETA RESOURCE CONSERVATION DISTRICT

AGENCY OVERVIEW

Loma Prieta Resource Conservation District (LPRCD) was formed as an independent special district in 1942 to provide soil conservation services for the southern portion of Santa Clara County and a portion of northern San Benito County. The RCD's boundary has changed over time such that it now only serves the area within Santa Clara County. The range of services has been expanded to include watershed-related programs in keeping with its authorizing legislation. A service review for the District was last conducted in 2005.

The principal act that governs the District is Division 9 of the California Public Resources Code.[97] The principal act empowers resource conservation districts to control runoff, prevent and control soil erosion, protect water quality, develop and distribute water, improve land capabilities, and facilitate coordinated resource management efforts for watershed restoration and enhancement.[98] Districts must apply and obtain LAFCO approval to exercise services authorized by the principal act but not already provided (i.e., latent powers) by the district at the end of 2000.[99]

Type and Extent of Services

Services Provided

LPRCD is a non-regulatory agency with the mission of advising and assisting individuals and public agencies in the prevention of soil erosion, runoff control, development and use of water, land use planning, conservation of wildlife and other related natural resources. The District accomplishes its mission by promoting public awareness of the continuing need for resource conservation through educational workshops, informational fliers and papers, planning partnerships, and hands on cleanup or restoration projects, and as a conduit for or source of grant financing.

[97] Public Resources Code §9001 et seq.

[98] Public Resources Code §9001.

[99] Government Code §56824.10.

Projects LPRCD has sponsored, directly provided, or partnered with another organization are as follows:

- Stewardship For Small Acreages: Once a year LPRCD offers a four-week series of workshops for rural landowners with small farms, small horse ranches, or vineyards. Topics include soil conservation, septic systems, fire-safe landscaping and other related subjects. The workshops have averaged approximately 40 to 50 attendees. SCVWD provides initial information on the workshops to new landowners identified through the Tax Assessor's information, and then coordinates the registration process. LPRCD sponsors the workshop and is responsible for the meeting arrangements such as the location, refreshments, etc. Other contributing agencies include USDA Natural Resources Conservation Service, Santa Clara County Department of Environmental Health, UC Cooperative Extension, Santa Clara County FireSafe Council and Livestock and Land.

- Creek Connections Action Group (CCAG): A consortium of public agencies and non-profit organizations that share a goal of protecting Santa Clara County's waterways. These agencies include LPRCD, Santa Clara Valley Water District, Santa Clara County Parks and Recreation, Santa Clara Valley Urban Runoff Pollution Prevention Program, and the City of San José, among others. CCAG currently coordinates two waterway cleanups a year in Santa Clara County. LPRCD participates in the cleanups and assists by assembling volunteers for the efforts.

- Informational brochures and white papers: LPRCD makes available to the public several fliers and papers on various conservation topics, including Atmospheric Nitrogen Pollution (authored by LPRCD), Cover Crops for Santa Clara County Farmland (authored by LPRCD), Horse Owners Guide to Water Quality Protection (in cooperation with the Council of Bay Area RCDs), Irrigation Nutrient Management in Cantonese (sponsored by LPRCD), and the Guide to Stream/Wetland Project Permitting for Santa Clara County (in cooperation with the California Association of RCDs).

- Upper Pajaro River Watershed (also known as the Uvas/Llagas Watershed) Partners in Restoration Permit Coordination Program: LPRCD provides assistance in designing work plans, as well as technical and cost share assistance, for environmentally beneficial projects on private lands in the Upper Pajaro River or Uvas/Llagas Watershed. Program partners include San Benito RCD, Sustainable Conservation (an environmental non-profit partner), and USDA Natural Resources Conservation Service (NRCS).

- The Livestock and Land Program: The program offers assistance to livestock property owners in implementing best management practices through funding for land improvements, free site visits and consultations, workshops and trainings, and publications and brochures. This program is a collaborative effort between local

RCDs in Santa Clara, Santa Cruz, San Benito, Monterey and San Mateo Counties and NRCS.

- Cañada de la Osos Ecological Reserve: LPRCD contributed to four restoration projects at the reserve in FYs 08-09 and 09-10 through grant funding and made contributions to a California deer publication.

- High School Educational Programs: LPRCD sponsors programs directed at educating high school age youth on resource conservation issues. LPRCD holds an annual Conservation Speak-Off Competition to select representatives for the statewide competition. The District sponsors a student for a week trip at Range Camp and hosts a land judging competition that solicits the participation of young adults from high schools within the District to experience hands-on conservation practices.

- Illegal Dumping Site Cleanup: LPRCD received a grant for $48,000 from CAL Recycle to aid a landowner in cleaning up illegal dumping on private property that is not the responsibility of the landowner. LPRCD will administer the grant.

- Fire Management Chipping Program: LPRCD assists the Santa Clara County Fire Safe Council in promoting this program through informational handouts and calendars.

- Gilroy Demonstration Garden: LPRCD made contributions to the newly created garden in downtown Gilroy, which is intended to teach about environmentally sustainable gardening.

- California Association of RCDs Meeting Host: LPRCD hosted the Spring 2011 Central Coast area meeting of RCDs.

- Partnerships and Collaborations: The District participates in several partnerships and planning committees dedicated to various facets of regional resource conservation. These partnerships are listed in the Collaboration section of this chapter.

According to the District's annual workplan, LPRCD has plans to continue these projects, as well as initiate several other projects, including:

1) Participate in the review, implementation and completion of the Llagas Creek Flood Control project.

2) Develop an efficient program for the recycling of irrigation drip tape and film mulch for the agricultural community.

3) Respond to community concerns of noxious weeds and other invasive plant species.

4) Develop watershed projects, emphasizing the reduction of flood water and sediment damage, control of runoff and reduction of erosion, silt and Total Maximum Daily Loads (TMDL) of nitrogen, pesticides and fecal coliform pollution.

Collaboration

Many of the conservation agencies work closely together to promote communication, coordination and greater leveraging of resources. LPRCD operates under Memorandums of Understanding (MOUs) with the U.S. Department of Agriculture and the State of California. The latter agreement recognizes a commitment from the State in aiding administration, coordination, financing and delivery of the conservation programs through local conservation districts. Through another cooperative work agreement, LPRCD, NRCS, the California Association of RCDs, and the California Department of Conservation agree to share information and resources, when available, to capitalize on synergies in program effectiveness and reduce duplication of efforts and contradictory mandates.

There are a number of conservation-related resources available to the RCD to use in delivering its programs. The US Department of Agriculture's Natural Resources Conservation Service has offices in Hollister and Salinas. At one point Loma Prieta RCD was housed with the NRCS Gilroy Service Center, but the office merged with the San Benito Service Center, due to Federal Budget cuts. However, the District reported that NRCS staff assistance is still made available to the area and the RCD at levels similar to those offered prior to the merger. The RCD may also leverage the expertise of the University of California Cooperative Extension Program and the Santa Clara County Farm Bureau. In addition, the State Department of Conservation also provides programs and information to support and enhance the RCD's services.

Outside of these agreements, LPRCD engages in several collaborative efforts and partnerships, and participates in regional planning activities. Specifically, the District collaborates with eight RCDs in the Central Coast region, which extends from Santa Barbara to Monterey and sits on the committee for the Central Coast RCD Council as a voting member. Other affiliate organizations that LPRCD partners with, supports, and coordinates programs through include:

- Sustainable Conservation
- Santa Clara Valley Water District
- University of California Cooperative Extension
- USDA/Natural Resources Conservation Service
- Santa Clara County Department of Environmental Health
- Santa Clara County Fire Safe Councils
- Monterey Bay National Marine Sanctuary
- Santa Clara County Farm Bureau

- Regional Water Quality Control Board
- National Foundation for Agriculture in the Classroom
- Santa Clara Valley Water District Flood Control Committee
- Agriculture Water Quality Alliance
- Livestock and Land – Ecology Action
- Agriculture Water Advisory Committee
- Santa Clara County Agricultural Department
- Pajaro River Watershed Council

Service Area

LPRCD reported that district services primarily focus on ranchettes of one to five acres that are concentrated around San Martin, and from Holiday Lake Estates to Silver Ridge and the Santa Cruz countyline. A majority of the District's boundary area in the east is open space where there is less demand for services. LPRCD does not generally provide services within the incorporated cities; however, the District makes services available to anyone within or outside the District, and recently contributed to the Gilroy Demonstration Garden in downtown Gilroy. The District has also done projects in the Grant Ranch Park area in the past, which is outside the District's bounds and within Guadalupe-Coyote RCDs bounds.

Services to/from Other Agencies

The District does not provide services to or receive services from other agencies under contract.

Boundaries

Loma Prieta RCD encompasses approximately 296,863 acres. The RCD's original boundaries excluded the city limits of Gilroy and Morgan Hill, as well as the community of San Martin as they existed prior to July 13, 1942. The RCD's boundaries around the two cities and San Martin have not been updated since the RCD's inception, and the areas that were subsequently annexed by the cities are still within LPRCD's service area. The District's bounds and SOI are shown in Figure 9-1.

LPRCD's bounds encompass the southern portion of Santa Clara County. LPRCD is bordered on the east, south and west by Stanislaus, Merced, San Benito and Santa Cruz Counties. The RCD's service area is primarily rural and unincorporated with the exception of the portions of the Cities of Gilroy and Morgan Hill that are within the District's bounds. The District's northern boundary is contiguous with the Guadalupe-Coyote RCD.

Based on documentation provided by San Benito LAFCO, in 1981, the portions of Bolado-Fairview and San Felipe Soil Conservation Districts in Santa Clara County (in Pacheco Flats) were annexed into LPRCD, and the portions of those districts that were in San Benito County were annexed into San Benito RCD. The soil conservation districts were subsequently dissolved. Tax rate records have not been updated to reflect this change, and still show these areas as being within the Bolado-Fairview and San Felipe Soil Conservation Districts. The State Board of Equalization (BOE) also does not have records of this change. Loma Prieta RCD is not presently receiving property tax income from these areas, as this reorganization was likely not covered under the County's Master Tax Sharing Agreement, which only applies to areas that were not previously receiving the services in question upon annexation. LAFCO is working with the BOE to formalize this change and update the tax rate area agency listing; however, in order for the District to begin receiving property tax revenue from this area, there would likely need to be a revenue transfer agreement with the County.

Provider Overlap

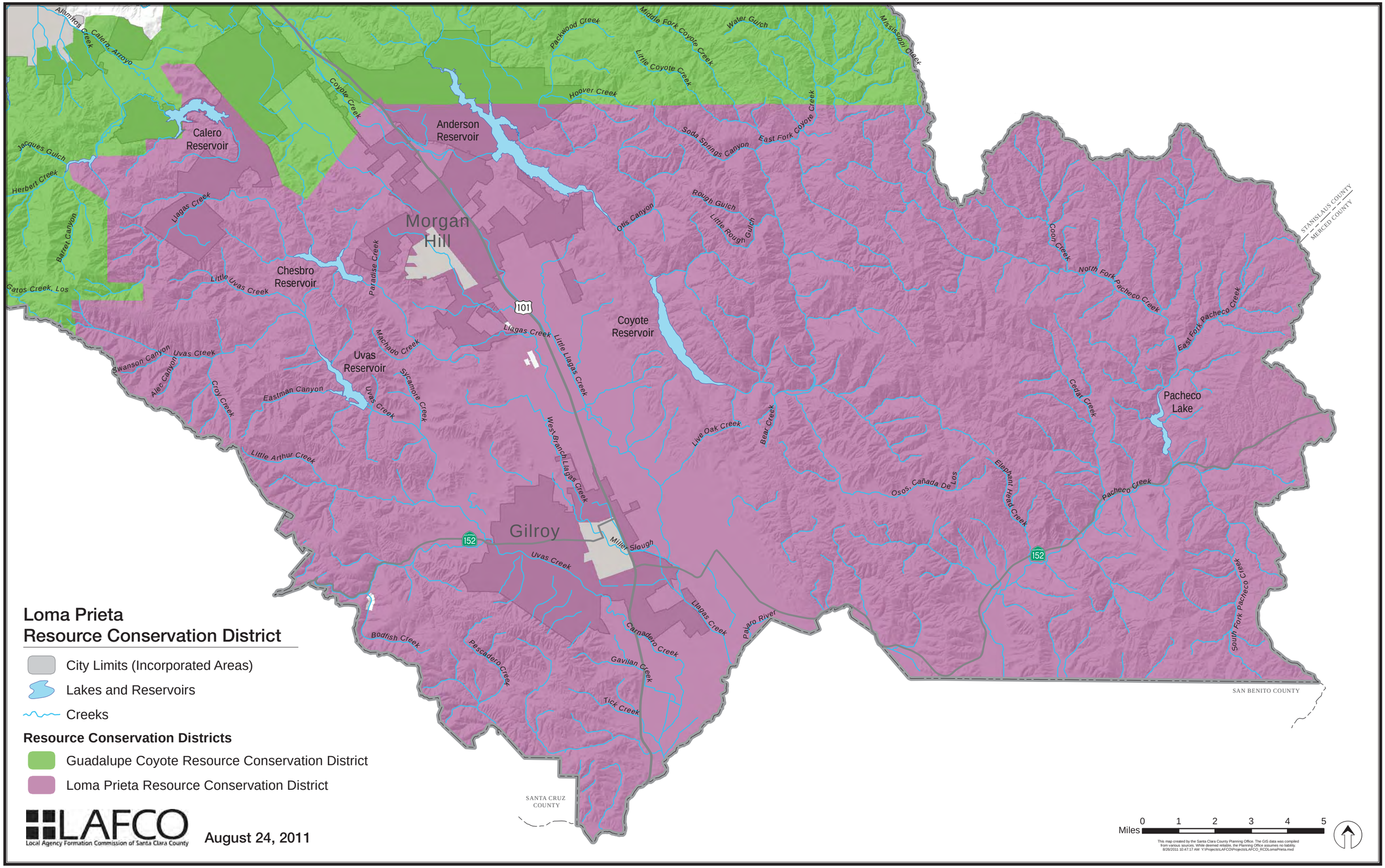
The District's bounds overlap with Santa Clara Valley Water District, which provides similar resource conservation services. LPRCD reports that although generally the category of services that are provided by the two districts are alike, the two districts provide services at differing levels of scope with divergent focuses that complement one another. LPRCD reportedly acts as a coordinator of events and activities providing a localized focus on land management and soil conservation, while SCVWD provides technical support and spearheads regionalized watershed stewardship and groundwater quality protection campaigns. Additionally, SCVWD watershed conservation programs are largely focused on northern Santa Clara County which lies within the Santa Clara Basin—through which the County's surface water supplies flow. LPRCD encompasses the Uvas/Llagas or Upper Pajaro Watershed, which flows southwesterly out of the County, and is not a primary surface water source, as water consumers in the southern portion of the County rely heavily on groundwater.

Based on conversations with both SCVWD and LPRCD, it appears that LPRCD provides a grass roots approach focused on agricultural programs that SCVWD does not generally provide. Additionally, LPRCD acts as a conduit for non-competitive federal grants through NRCS that are not available to SCVWD. The two agencies appear to have a good working relationship that limits any duplication of efforts.

Sphere of Influence

The District's Sphere of Influence is coterminous with its bounds and was last updated in 2007.

Figure 9-1


Loma Prieta
Resource Conservation District
City Limits (Incorporated Areas)
Lakes and Reservoirs
Creeks
Resource Conservation Districts
Guadalupe Coyote Resource Conservation District
Loma Prieta Resource Conservation District
LAFCO
Local Agency Formation Commission of Santa Clara County
August 24, 2011
Morgan Hill
Gilroy
Calero Reservoir
Anderson Reservoir
Chesbro Reservoir
Uvas Reservoir
Coyote Reservoir
Pacheco Lake
101
152
152
Alamitos Creek
Calero, Arroyo
Coyote Creek
Packwood Creek
Middle Fork Coyote Creek
Water Gulch
Mississippi Creek
Little Coyote Creek
Hoover Creek
Soda Springs Canyon
East Fork Coyote Creek
Jacques Gulch
Herbert Creek
Barrett Canyon
Llagas Creek
Otis Canyon
Rough Gulch
Little Rough Gulch
Coon Creek
North Fork Pacheco Creek
East Fork Pacheco Creek
Gatos Creek, Los
Little Uvas Creek
Paradise Creek
Machado Creek
Sycamore Creek
Swanson Canyon
Uvas Creek
Alec Canyon
Croy Creek
Eastman Canyon
Little Arthur Creek
Little Llagas Creek
West Branch Llagas Creek
Live Oak Creek
Bear Creek
Cedar Creek
Osos, Cañada De Los
Elephant Head Creek
Pacheco Creek
South Fork Pacheco Creek
Miller Slough
Pajaro River
Carnadero Creek
Gavilan Creek
Tick Creek
Bodfish Creek
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STANISLAUS COUNTY
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This map created by the Santa Clara County Planning Office. The GIS data was compiled from various sources. While deemed reliable, the Planning Office assumes no liability.
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ACCOUNTABILITY AND GOVERNANCE

LPRCD is governed by a five-member Board of Directors. Directors are appointed by the County Board of Supervisors for staggered four-year terms. There are currently five members on the Board of Directors, supplemented by three Associate Directors. Board members do not receive compensation for services, with the exception of reimbursement for travel expenses. Current board member names, positions, and term expiration dates are shown in Figure 9-2.

The Board meets on the third Wednesday of every month at 8010 Wayland Lane, Suite 1D in Gilroy, California. Agendas and minutes are available upon request as well as on their website.

Figure 9-2: LPRCD Governing Body

Loma Prieta Resource Conservation District				
District Contact Information				
Contact:	Patty Marfia, Executive Director			
Address:	8010 Wayland Lane, Suite 1D, Gilroy, CA 95020			
Telephone:	408-847-4171			
Fax:	408-847-1521			
Email/website:	www.lomaprietarcd.org			
Board of Directors				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Steven (Burt) Malech	Chair	December 2012	Appointed	4 years
David Boll	Treasurer	December 2012	Appointed	4 years
Sandra Petersen	Director	December 2012	Appointed	4 years
Mary Anders	Director	December 2014	Appointed	4 years
David Robledo	Director	December 2012	Appointed	4 years
Meetings				
Date:	Third Wednesday of every month at 4:00pm.			
Location:	District Office at 8010 Wayland Lane, Suite 1D, Gilroy, CA.			
Agenda Distribution:	Posted on website.			
Minutes Distribution:	Available upon request and posted on website.			

In addition to the legally required agendas and minutes, the District undertakes several outreach and educational programs in an effort to keep constituents informed of services provided and district activities. As previously mentioned, the District makes informational brochures and papers available to the public and hosts or sponsors several workshops, educational competitions and meetings. The District maintains a website where documents are made available to the public. As one of the District's annual goals for FY 11-

12, the District intends to maintain and update the lomaprietarcd.org website to publicize special events and conservation opportunities.

If a customer is dissatisfied with the District's services, that customer may call, email or mail the executive director of the District, who would be responsible for handling all complaints. The District reported that it had never received a complaint in the memorable history of the staff.

LPRCD demonstrated accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The District responded to the questionnaires and cooperated with the document requests.

MANAGEMENT AND STAFFING

The District is managed and operated by an executive director and one contract office clerk, which equates to 0.75 full-time equivalents. The office clerk reports to the executive director who in turn reports to the Board. The District reported that it plans to get a grant administrator to work about two to three hours a week to manage the CAL Recycle grant and the reporting requirements related to the grant. Currently, the District receives grant writing support from Solano County RCD.

The District's executive director performs evaluations of contractors, and the Board evaluates the executive director. Personnel evaluations are not held on a regular basis, but are completed as funding and time permits.

The District tracks the workload handled by the agency and its staff through timesheets and travel log forms. The District also records the number of acres that have made use of district services. Additionally, during the course of the CAL Recycle grant, the District will be required to report regularly on the timeline and status of the project.

The District's performance is informally evaluated annually during the budget process, as well as during the development of the annual work plan. The District reported that the goals in the work plan generally remain the same from year to year, as those are projects/programs the District has determined to be successful. Additionally, the District requires that any program using LPRCD funds must submit a report to the District upon completion of the project.

The District sets and adopts goals through its annual work plan and long range plan. The District has started the process of compiling a strategic plan, which will narrow the District's focus and quantify measures of accomplishing goals.

To improve its operational efficiency the District hired a contract employee, which has allowed the executive director to focus efforts on balancing the budget and minimizing costs. In the last three years (2008-2010), the District has made several changes to

improve its operational efficiency, including: 1) switching over to contract employees, 2) renegotiating rent and lease contracts, 3) transitioning to Quickbooks, 4) initiating grant writing to draw in additional funds to augment administrative funds, and 5) capitalizing on services that are available for free through NRCS.

The District's financial planning efforts include an annually adopted budget and financial statements that are audited on a triennial basis. The District does not conduct capital improvement planning as they neither own nor share any facilities. The basic financial records of the RCD are maintained by the office of the County Auditor-Controller.

All special districts are required to submit annual audits to the County within 12 months of the completion of the fiscal year. The Board of Supervisors may approve an alternative submittal schedule for each special district depending on income, but at a minimum all districts must submit audited financial statements every five years.[100] In the case of LPRCD, they are required to submit audited financial statements every three years. The County reported that LPRCD has complied with these requirements.

The District's other planning documents include a strategic plan in progress, a long range plan for the years 2007–2012, and an annual work plan for FY 10-11. Division 9 of the Public Resource Code outlines the content of the long range plan and annual work plan; however, LPRCD's plans fail to include a majority of the information itemized in the principal act.[101] It is recommended that LPRCD more closely align its long range and annual work plans with the functions described in its principal act. The District reported that it plans to address this issue during this next plan development process at the end of 2012.

The District also makes use of the California Conservation Partnership and California Department of Conservation's guidebook entitled The Resource Conservation District Guidebook: A Guide to District Operations and Management (1999) for planning purposes.

POPULATION AND PROJECTED GROWTH

Based on GIS analysis of 2010 census data, LPRCD has a population of approximately 75,757.

ABAG projects that the population of Santa Clara County will grow by 33 percent by 2035, with an average annual growth rate of 1.2 percent countywide. ABAG's population projections for 2010 were slightly higher than the actual population reported in the 2010 Census. Population projections have been adjusted assuming ABAG's projected rate of growth from the 2010 Census population. The unincorporated areas of the District are

[100] Government Code §26909.

[101] Public Resource Code §9413.

projected to have an average annual growth rate of 0.7 percent, while the City of Gilroy and the City of Morgan Hill will have annual growth rates of 1.3 and 0.9 percent respectively. Based on these projections, the District will have an estimated population of 90,190 in 2035.

Generally, population within the District is expected to be modest and concentrated within the Urban Service Area of each city. Although not as dramatic, the land use and population outside the two Urban Service Areas is changing as well. Economics and changing demographics have generated a trend from large agricultural enterprises to smaller operations, such as three to five-acre farms, small horse ranches and vineyards. The need for landowner services will increase in order to maintain environmental quality and adequate soil/water conservation. In response to this trend, the RCD's services are primarily focused on landowner education for these ranchettes.

LPRCD reported that it does not make formal population projections, as population growth does not necessarily impact the level of demand for RCD services, but instead influences the type of services that are offered. As the County develops, less land will be available for agricultural purposes and thus demand for the District's agricultural services will decline. However, as areas urbanize and urban runoff, litter and manmade structures affect water quality and wild life, there will be a greater need for other types of conservation programs. In addition, the recent trend to be more environmentally conscious combined with LPRCD outreach activities has increased public awareness of ecological needs in the area. LPRCD reported that it had experienced a general increase in demand, which the District attributes to the increase in awareness and a growing change in attitude about stewardship, recycling and other land conservation practices, as opposed to population growth.

Specific planned and proposed developments within the District include the Eagle Ridge development, which is nearing completion, and two new high schools. The District was not aware of any other active planned or proposed developments. The District reported that it generally reviews all development applications that are provided by the cities, but has not received any proposals in a while due to the decline in the housing market.

FINANCING

Financial Adequacy

LPRCD reported that the current financing level was generally inadequate to provide services as property tax revenues have declined and no longer cover annual expenditures. In FYs 08-09, 09-10 and 10-11, the District's expenditures exceeded revenues, and the District was forced to dip into reserves. The District has instituted strategies to minimize expenses by hiring contract personnel and eliminating benefit costs. The District has also started searching for grant funds to augment the District's annual property tax revenue.

Revenue Sources

LPRCD is funded by its share of the one percent property tax ($60,375 in FY 09-10) as well as interest income ($1,063 in FY 09-10). The District's property tax share for FYs 07, 08 and 09 was 0.69, 0.70 and 0.71 percent, respectively. Similar to other agencies that rely on property tax income, LPRCD has experienced a decline in this revenue source, due to decreasing assessed property values.

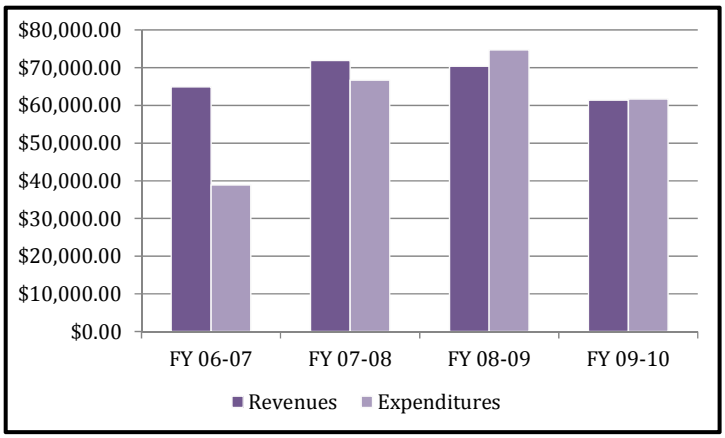
The District has started to aggressively search for grants, and recently was awarded a grant for $48,000 to cleanup illegal dumpsites. The grant will be used in FY 11-12. The District has also received funds from NRCS ($4,000) and the Agriculture Water Quality Alliance ($4,000) for irrigation and nutrient management workshops. The District hopes to continue to capitalize on available grant funding.

LPRCD does not charge fees for its services, other than a nominal registration fee for the workshops. A potential revenue source may be fees for technical services that other RCDs have implemented. Under Division 9 of the California Public Resources Code, RCDs are permitted to function to a certain degree as enterprise districts, because they are empowered to charge reasonable fees for services rendered to individuals and agencies.[102] Other RCDs that charge fees for services generally provide contract services to the County or other agencies.

Expenditures

District expenditures in FY 09-10 were $61,726, and were comprised of salary and benefits (46 percent), administrative costs (24 percent), special project costs (17 percent), and rent (13 percent).

Figure 9-3: Expenditures and Revenues (FYs 07-10)



The District's revenues and expenditures over the last four years are shown in Figure 9-3. Revenues have generally declined since FY 07-08, while expenditures peaked in FY 08-09, and exceeded revenues.

Capital Outlays

[102] Public Resources Code §9403.5.

The District does not have capital expenditures as it does not own or maintain any fixed assets.

Long-term Debt

The District had no long term debt at the end of FY 09-10.

Reserves

The District has an informal policy to set aside $500 annually for contingencies throughout the year and $40,000 for requests for special projects. At the end of FY 09-10, the District had a cash fund balance of $142,876, which equates to almost 28 months of operating expenditures for the District.

INFRASTRUCTURE AND FACILITIES

The District currently does not own or maintain any facilities and consequently does not have any infrastructure needs or deficiencies attributed to district-owned assets. Instead, the watersheds in the area may appropriately be referred to as district infrastructure, as they define the demand for district services.

Watershed Stewardship Infrastructure

While the District does not own facilities with regard to watershed stewardship, its bounds include the Uvas/Llagas and Coyote Watersheds.

Infrastructure Needs

Water bodies within LPRCD that are significantly affected by pollutants and classified as impaired include Coyote Creek and the Pajaro River. Coyote Creek is impaired by diazinon and has a high priority level as determined by the San Francisco Bay Regional Water Quality Control Board. Pajaro River is impaired by fecal coliform and boron as determined by the Central Coast Regional Water Quality Control Board.

Capital Improvement Plans

The District does not have any plans specifically related to these impaired water bodies, but has identified a goal to develop projects related to these pollutants.

Shared Facilities

Loma Prieta regularly shares facilities and programs to maximize its outreach and education efforts. The RCD has entered into MOUs with the Department of Conservation, the Central Coast Resource Conservation and Development Association and the USDA/NRCS.

For the purposes of providing technical assistance to landowners, convening working group meetings, collaborating with district directors and staff on issues of soil erosion, water quality and other natural resource concerns, the NRCS is offered working space at the district office.

LOMA PRIETA RESOURCE CONSERVATION DISTRICT SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The estimated population of Loma Prieta RCD is 75,757.
- Generally, population growth within the District is expected to be modest and concentrated within the Urban Service Area of each city. The District is projected to have a population of approximately 99,530 in 2035.
- Population growth does not necessarily impact the level of demand for RCD services, but instead influences the type of services that are offered. There has been an increase in demand for landowner services of small farms and ranchettes. This trend is anticipated to continue.
- LPRCD has experienced a general increase in demand, which the District attributes to an increase in environmental awareness and a growing change in attitude about stewardship, recycling and other land conservation practices, as opposed to population growth.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- LPRCD does not own or operate facilities or infrastructure.
- The District appears to have the capacity to handle present demand for services. Any increase in demand would require additional funding and staffing to address.
- The District is providing adequate services given financial constraints, based on the breadth and quality of services provided and professional management practices.
- LPRCD is a well-managed agency that conducts annual employee and agency performance evaluations, tracks employee and district workload, maintains up-to-date financial information and budgets, and conducts annual and long-term planning for future service needs. The District could improve its annual and long-range plans by more closely aligning the functions of the plans with those outlined in the RCD principal act.
- LPRCD submits audited financial statements to the County, as required by State law.

Financial Ability of Agency to Provide Services

- LPRCD's financing level is considered inadequate to provide services as property tax revenues have declined and no longer cover annual district expenditures. In FYs 08-09, 09-10 and 10-11, the District's expenditures exceeded revenues, and the District was forced to dip into reserves.
- LPRCD's financial ability to provide services is constrained by limited property tax revenues, the State property tax withholding, and a decline in available grant funding.
- The District has instituted strategies to minimize expenses by hiring contract personnel and eliminating benefit costs. The District has also started searching for grant funds to augment the District's annual property tax revenue.
- LPRCD maintains considerable reserves to compensate for funding shortfalls in the long-term.

Status and Opportunities for Shared Facilities

- LPRCD regularly shares facilities and programs to maximize its outreach and education efforts. LPRCD has entered into MOUs with the Department of Conservation, the Central Coast Resource Conservation and Development Association and the USDA/NRCS. Additionally, NRCS is offered working space at the district office.
- No additional opportunities for facility sharing were identified.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and to ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. LPRCD appears to generally be accountable to the public based on these indicators; however, board members are appointed, not elected, which constrains accountability to the constituents.

Governance Structure Options

Three governance structure options were identified for LPRCD: 1) reorganization with Santa Clara Valley Water District, 2) consolidation with a neighboring RCD, and 3) annexation or detachment of incorporated areas.

Reorganization with Santa Clara Valley Water District

LPRCD's bounds overlap with that of Santa Clara Valley Water District (SCVWD), which provides similar resource conservation services. As the two agencies are empowered to provide the same general category of water conservation services, there is the potential for duplication of services. LPRCD is empowered to provide both watershed stewardship and land management services to control runoff, prevent and control soil erosion, protect water quality, develop and distribute water, improve land capabilities, and facilitate coordinated resource management efforts for watershed restoration and enhancement.[103] Similarly, SCVWD is empowered to provide comprehensive water management for all beneficial uses and protection from flooding within Santa Clara County.[104]

As identified in the Agency Overview section of this chapter, there appears to be little to no duplication of the services offered between the two districts, as the two districts provide services at differing levels of scope with divergent focuses that complement one another. Additionally, the two agencies appear to have a good working relationship that promotes communication and limits any duplication of efforts.

However, given that both agencies are making use of property tax revenue to finance similar services, LAFCO may choose to reorganize LPRCD and SCVWD, in order to eliminate any potential for duplication of services. With this option, the RCD would either be dissolved and SCVWD would be responsible for providing resource conservation programs to the extent it is authorized in its enabling act or the two agencies would be consolidated into a single agency designated as SCVWD with the same enabling act. Both of these options could be initiated by LAFCO or the agencies. In both scenarios, the transfer of the property tax would be negotiated by the County on behalf of the district.

The primary advantages of this option are the prevention of any duplicate services, enhanced leveraging of property tax revenue through a single entity for conservation purposes, and reduced administration costs. Presently, both agencies make use of property tax revenues to provide conservation services. Aggregating all property tax revenue under the control of a single resource conservation provider would allow for greater "purchasing power" and maximize the impact of the services provided. Additionally, by eliminating the

[103] Public Resources Code §9001.

[104] Santa Clara Valley Water District Act, §4.

governmental structure of one agency, a smaller portion of the available funding pool would be used for administrative purposes. Yet, given the size of SCVWD's watershed stewardship and flood control operations ($51.8 million in FY 09-10), the effect of this additional revenue ($60,375 in FY 09-10) would most likely be minimal.

The disadvantages to this option are a perceived loss of local control and public access, a narrower range of services available to residents, a lack of certainty as to how the property tax funding would be used, and restricted access to NRCS funding.

SCVWD, as a large professionally run agency that employs 761 staff, may appear removed and inaccessible to residents outside of San Jose, where SCVWD is headquartered. LPRCD is operated by 0.75 staff and the five board members, which fosters local control and the seeming ease of access and approachability of the District.

While the resource conservation programs and services the SCVWD is authorized to provide are broad in scope, they must in some way relate to water resource management and flood protection. The RCD is not limited in this way and can provide programs that are related to a wide range of conservation issues. LPRCD acts as a coordinator of events and activities providing a localized focus on land management and soil conservation, while SCVWD provides technical support and spearheads regionalized watershed stewardship and groundwater quality protection campaigns. Additionally, SCVWD watershed conservation programs are largely focused on northern Santa Clara County, while LPRCD encompasses the Uvas/Lllagas Watershed in the southern portion of the County. As SCVWD does not place the same priorities on programs as the RCD, reorganization of the agencies would likely result in a change of services or programs. Given that SCVWD is not authorized to provide soil conservation services unless they are related to water resource management or flood control, these services would need to be continued by another agency such as NRCS.

Equally important is consideration for how the property tax funding could be used in the future. Watershed management is a core business for SCVWD and receives a significant amount of funding. SCVWD is a countywide district and there is no requirement and no means to ensure that the property tax funding collected locally within the LPRCD service area is used for local programs.

Finally, LPRCD acts as a conduit for non-competitive federal grants from NRCS, which are not available to SCVWD. Should SCVWD be the successor agency, conservation efforts in Santa Clara County would no longer be eligible for these funds. However, NRCS does make other grant funds available to agencies on a competitive basis.

Consolidation with a Neighboring Resource Conservation District

A potential governance structure option may be consolidation of LPRCD with a neighboring provider. Options include Guadalupe-Coyote RCD (GCRCD) or San Benito RCD

(SBRCD). GCRCD abuts LRPRCD in the north, while SBRCD is contiguous to LPRCD in the south.

Possible benefits of an RCD consolidation may be capitalizing on each other's existing programming, economies of scale, greater regional collaboration and planning on regional issues and concerns with regard to watersheds that cross RCD boundaries, better leveraging of limited funding, and improved efficiency for funding projects at a regional level. Given LPRCD's present financial constraints, improved efficiencies and reduced competition for grant funding would greatly benefit the District.

Together, GCRCD and LPRCD serve a large majority of the territory within Santa Clara County, with the exception of the urban cores of the cities. The primary benefit of consolidation of GCRCD and LPRCD and creation of a countywide resource conservation district would be comprehensive conservation coverage throughout the County with uniform programming. At present, the programing of these two agencies greatly varies. LPRCD focuses largely on soil conservation and land management services, while GCRCD concentrates efforts on watershed stewardship activities. Consolidation would allow for shared programming between the two agencies and expand the types of services offered throughout the County.

Additionally, both agencies reported that financing levels were generally inadequate to provide services. Presently, both agencies are largely dependent on property tax revenues to provide conservation services. Aggregating all property tax revenue under the control of a single resource conservation provider, would allow for greater leveraging of available resources. Moreover, by eliminating the management and governing body of one agency, a smaller portion of the available funding pool would be used for administrative purposes.

Although the consolidation of LPRCD and GCRCD has the potential for significant benefits, there are several challenges and disadvantages to such a governance structure option. The challenges to consolidation include the dissimilarity in the type of territory served in each district and the difference in programming. GCRCD serves the more urban and suburban area in the northern portion of the County, while LPRCD serves a more agricultural and rural area in the southern portion of the County. Consequently, LPRCD's services are more focused on soil conservation and land management of small acreage agricultural lands, while GCRCD focuses on watershed stewardship in the heavily impacted urban centers. The variation in the composition of land between the two districts would force the newly consolidated district to either offer a wide variety of services for all types of land use or specialize in only a few types of services.

LPRCD and GCRCD both indicated that consolidation of the two agencies was not a desirable option, given the differences previously cited. The districts do not presently participate in collaborative activities of any kind together, and lack a working relationship. The two districts should explore further options to share resources and expertise and evaluate the potential to collaborate on achieving any common goals.

Another option for consolidation may be between LPRCD and San Benito RCD. Consolidation of LPRCD with San Benito RCD would create a multi-county RCD; there are at least 13 such RCDs in California that overlap two or more counties.

LPRCD and SBRCD both serve the greater Pajaro River Watershed (of which the Uvas/Llagas Watershed is a part). There is a trend toward a more regionalized approach to watershed management. This option would promote regional planning and funding of watershed stewardship activities, eliminating the current patchwork style of conservation efforts for the watershed.

The two RCDs provide similar programming to rural and agricultural communities. However, San Benito RCD does not receive property tax revenue and has a significantly smaller budget than LPRCD, indicating significant challenges to any consolidation of these two districts. Without similar revenue sources and budget sizes, there is no way to ensure that property tax revenue from the LPRCD territory is being used for service in that area. It appears that consolidation of these two agencies may not be feasible in the short-term, but may be an option in the future, should SBRCD find additional financing.

Annexation or Detachment of Incorporated Areas

This option would involve making boundary adjustments in the Gilroy and Morgan Hill areas by either detaching all incorporated territory or annexing the city centers that remain excluded from LPRCD. When LPRCD was originally formed, it was intended to provide soil and water conservation services to rural areas outside the cities and the San Martin area. As areas were annexed by the cities there were no subsequent from the RCD's boundaries.

Detachment of these areas would restore the RCD's boundaries to the original intent by removing any areas annexed to the Cities of Gilroy or Morgan Hill. The RCD's share of the one percent property tax for the detached areas would be reallocated to each taxing jurisdiction within that Tax Rate Area. The primary advantage includes increased public benefit from the property tax funding in those areas as the funding is reallocated to other public services. The RCD was formed to serve rural areas and its core programs provide greater benefit to those areas over more developed areas. Based on the RCD's existing programs, the drop in service levels within the annexed areas would be minimal and could be addressed through the programs the SCVWD is currently providing. City residents could still participate in LPRCD sponsored programs.

There are several disadvantages to this option. First, removing these areas may limit the scope and scale of programs that could be provided in the future. Second, the RCD's operating revenue would be reduced per the amount and valuation of the detached areas and the District would no longer be compensated for services provided in these areas. Third, residents within the cities may place a high value on the services provided by the RCD and there may be a potential lack of community support for any change.

The alternative option is to annex those excluded areas to ensure consistent and comprehensive coverage within the District's boundaries. While it was the original intent at the time of formation that the cities be excluded, the demand for services is shifting from rural lands to more developed areas. The California Public Resources Code §9152 authorizes other lands besides agricultural lands to be included within the District if necessary for the control of runoff, the prevention or control of soil erosion, the development and distribution of water, land improvement, and for fully accomplishing the purposes for which the district is formed. LPRCD has in the past provided services within the City of Gilroy, where it is not receiving compensation for services. Annexation of these areas would allow the District to recoup costs related to services provided there.

- Three governance structure options were identified for LPRCD: 1) reorganization with Santa Clara Valley Water District, 2) consolidation with a neighboring RCD, and 3) annexation or detachment of incorporated areas.

LOMA PRIETA RESOURCE CONSERVATION DISTRICT SPHERE OF INFLUENCE UPDATE

Existing Sphere of Influence Boundary

The District's SOI is coterminous with its boundaries. The SOI was last updated in 2007.

Recommended Sphere of Influence Boundary

It is recommended that the District's SOI be expanded to include the Cities of Gilroy and Morgan Hill in their entirety and the community of San Martin. This SOI would indicate that LAFCO anticipates the eventual annexation of these areas by LPRCD. By annexing these areas, LPRCD will be able to recoup the costs for services provided by receiving a share of the property tax revenues in these areas. Although, at present, the District does not provide a large amount of services within the cities, it appears that there is a growing trend of awareness of conservation efforts that has shifted demand to the more urban areas. Resource conservation services do not themselves induce or encourage growth, and no change to the present or planned uses will result from this SOl update.

Annexation of these areas would have to be initiated by LPRCD, through an application to LAFCO. Based on the County's Master Tax Sharing Agreement, upon annexation, LPRCD would receive a share of the property tax increment in these areas.

Proposed Sphere of Influence Determinations

Present and planned land uses in the area, including agricultural and open-space lands

LPRCD serves the southern portion of Santa Clara County. LPRCD is bordered on the east, south and west by Stanislaus, Merced, San Benito and Santa Cruz Counties. Present land uses include urban development in and around the incorporated Cities of Gilroy and Morgan Hill, in the community of San Martin and along the Highway 101 corridor. The majority of the area within the boundary of the RCD is unincorporated and rural with a large expanse of mountainous area. A significant portion of the area has agricultural land uses. Public lands in the area include the Henry Coe State Park and several large County Parks.

Present and probable need for public facilities and services in the area

LPRCD provides services related to prevention of soil erosion, runoff control, development, and use of water, land use planning, and conservation of wildlife and other natural resources. The area has a long agricultural history, and land stewardship is

important for the protection and appropriate use of resources, particularly as larger agricultural operations transition to smaller farms, vineyards, and small ranches.

LPRCD reported that it had experienced a general increase in demand, which the District attributes to the increase in awareness and a growing change in attitude about stewardship, recycling and other land conservation practices, as opposed to population growth.

Generally, population within the District is expected to be modest and concentrated within the Urban Service Area of each city. Although not as dramatic, the land use and population outside the two Urban Service Areas is changing as well. Economics and changing demographics have generated a trend from large agricultural enterprises to smaller operations, such as three to five-acre farms, small horse ranches and vineyards. The need for landowner services will increase in order to maintain environmental quality and adequate soil/water conservation.

Present capacity of public facilities and adequacy of public services that the agency provides or is authorized to provide

The District does not own or maintain facilities to provide services. LPRCD appears to have the capacity to handle present demand for services. Any increase in demand would require additional funding and staffing to address. The District is providing adequate services given financial constraints, based on the breadth and quality of services provided and professional management practices.

Existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the agency

LPRCD serves the rural area of southern Santa Clara County, including a portion of the Cities of Gilroy and Morgan Hill and the unincorporated San Martin community. The residents and landowners within southern Santa Clara County have an economic interest in the programs and services provided by the District as a portion of the property tax funds district services. Presently, the Cities of Morgan Hill and Gilroy are divided, as only a portion of the population in these cities is within the District's bounds. The SOl update will promote the inclusion of these communities of interest, in their entirety, within the bounds of the District.

CITIES

10. CITY OF GILROY

AGENCY OVERVIEW

The City of Gilroy was incorporated on March 12, 1870 and became a charter city on February 8, 1960. Gilroy provides a range of services including: community development (planning, building inspection, and housing); police protection; fire protection (including emergency medical and emergency preparedness); public works (engineering, parks and landscape maintenance, street maintenance, storm drainage, street trees, traffic, sewer, and water); and recreation (sports, aquatics, cultural arts, museum, senior center, and youth center). The City contracts for library services, solid waste disposal, curbside recycling, and street sweeping. Regional waste water treatment and disposal is provided by a joint powers agency which includes Gilroy and Morgan Hill. City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the August 2006 South Santa Clara County Service Review.

Water services to the City are provided through the Water System Division of the Public Works Department. Water conservation is part of the Environmental Programs Section of the Community Services Department. Recycled water is provided by the South County Regional Wastewater Authority (SCRWA). Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water System Division provides drinking water to residential, commercial, and industrial customers within the City. The Engineering Division of the Public Works Department oversees water project planning, design, engineering, and construction. The Water System Division is responsible for water quality, municipal wells, distribution and storage, leak detection, and is responsible for monitoring public and private backflow devices. Gilroy is also supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The City of Gilroy utilizes local groundwater as its sole source of water supply. Recycled (non-potable) water for irrigation purposes is produced by SCRWA.

Service Area

The City's water service area includes all water service customers within the city limits, consisting of approximately 16.2 square miles. The City does not serve any properties outside the city limits.

Services to Other Agencies

The City of Gilroy does not provide services to other agencies.

Contracts for Water Services

The City does not contract with other agencies or water purveyors for water services.

Collaboration

The City collaborates with the SCVWD, and is a member of a joint powers authority with the City of Morgan Hill on the SCRWA.

Boundaries

The Gilroy water service boundary is the same as the city limits. The present bounds encompass approximately 16.2 square miles. Gilroy overlies the Llagas groundwater Sub-basin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city administrator form of government with a seven-member City Council elected at-large and a City Administrator appointed by the City Council.

The Mayor is directly elected for a four-year term. The Mayor Pro Tempore is selected by the Council at the first meeting after the November General Election for a two-year term. Council Members are elected to overlapping four-year terms. Current member names, positions, and term expiration dates are shown in Figure 10-1.

Figure 10-1: City of Gilroy City Council

City of Gilroy				
Public Works Department Contact Information				
Contact:	David Stubchaer, Senior Civil Engineer			
Address:	7351 Rosanna Street, Gilroy, CA 95020			
Telephone:	408-846-0275			
E-mail/Website:	david.stubchaer@cityofgilroy.org/www.cityofgilroy.org			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Peter Arellano	Council Member	November 2014	Elected At-large	4 years
Dion Bracco	Council Member	November 2014	Elected At-large	4 years
Bob Dillon	Council Member	November 2012	Elected At-large	4 years
Peter Leroe-Muñoz	Council Member	November 2014	Elected At-large	4 years
Al Pinheiro	Mayor	November 2012	Elected At-large	4 years
Cat Tucker	Mayor Pro Tempore	November 2012	Elected At-large	4 years
Perry Woodward	Council Member	November 2012	Elected At-large	4 years
Meetings				
Date:	First and Third Mondays at 6:00 PM			
Location:	City Council Chambers, City Hall, 7351 Rosanna Street, Gilroy			
Agenda Distribution:	Posted on the 'City Meetings' page of the City website.			
Minutes Distribution:	Available on the 'City Meetings' page of the City website; along with agendas and reports.			

The City Council meets the first and third Monday at 6:00 PM in the City Council Chambers. Meeting which fall on recognized holidays are held the following Monday. Agendas are posted on the City website. Complete agenda packets, including minutes and reports, are available for review on the City website. City Council minutes from 1868 are also available on the City Council webpage.

Council meetings are broadcast live on Government Access Television Channel 17. Meetings are also available for viewing as searchable video, and are archived on the City Council webpage.

The City of Gilroy does not have a water-related advisory commission or committee.

Basic information on Water is currently on the Community Services Department webpage. Detailed information regarding water supply and water distribution is not provided; however links are readily accessible to the Annual Water Quality Reports and the Water Conservation program.

The 2010 Urban Water Management Plan (UWMP) is available at www.cityofgilroy.org/files/uwmp.

A detailed contact list of personnel is not provided, however inquiries/complaints/questions can be made to basic department telephone numbers listed on the City website under the 'Contact Us' link.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Operations Manager of the Water Systems Division, or contact the Public Works Department as indicated above. The City does not have an electronic complaint form for water-related issues. In calendar year 2010 there were a total of five water-related complaints; three for odor/taste, none for color, none for turbidity, two for pressure, and none for water outages. These complaints accounted for 0.04 percent of the 12,905 customers served.

The City of Gilroy demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water System Division responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Engineering Division and the Water System Division are under the direction of the Director of Public Works-City Engineer, who reports directly to the City Manager. The Water Billing Division is under the Direction of the Director of Finance. As an integrated operation, the Public Works Department has a total of 47.32 full time equivalent (FTE) positions organized into six major functions: Landscape Maintenance; Street Maintenance; Engineering; Wastewater Collection; Water System; and Backflow Prevention. A total of 16.23 FTE positions are dedicated to the Water Enterprise Fund, as detailed in Figure 10-2.

Figure 10-2: Water Service Staff Allocation

Position	FTE	Position	FTE
Water Billing		Water System	
Finance Director	0.25	Public Works Director/City Engineer	0.40
Assistant Finance Director	0.25	Budget Analyst	0.40
Revenue Officer	0.33	Engineering Tech/Inspector II	0.90
Budget Analyst	0.25	Senior Civil Engineer	0.20
Accountant II	0.25	Operations Services Supervisor	0.70
Purchasing Coordinator	0.25	Senior Maintenance Worker	0.70
Supervising Accounting Assistant	0.50	Maintenance Worker I/II	6.70
Accounting Technician	0.25	Administrative Secretary	0.33
Accounting Assistant I/II	2.00	Office Assistant II	0.27
		Backflow Prevention	
		Operations Services Supervisor	0.30
		Senior Maintenance Worker	0.30
		Maintenance Worker II	0.30
		Office Assistant II	0.40
		Total	16.23

Performance evaluations of all employees are conducted annually. The probation period for new employees is twelve months, with evaluations at six and twelve months. The agency tracks the employees' workload through work logs, service requests, and performance and benchmarking measures that are included in the annual budget.

Efficiencies have been gained recently with the installation and operability of a new Supervisory Control and Data Acquisition (SCADA) System; and by utilizing 'off peak' pumping of municipal wells, flushing 20 percent of hydrants each year, reduction in the number of water leaks, use of water meters for construction water, and replacement of 600 water meters per year with 'radio read' meters. The City has exceeded its water use reduction goal.

The City adopted the 2010 Urban Water Management Plan on May 16, 2011. A Water System Emergency Response Plan was prepared in August of 2011. The City updated its Water Master Plan in May of 2004.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Gilroy is 48,821. The average household size is 3.39 per the United States Census.

ABAG projects that the population of Gilroy will increase to 69,600 by 2035, a 42.6 percent increase over the twenty-five year period.

Gilroy, along with San Jose, Santa Clara and Milpitas are expected to experience the highest growth rates between 2010 and 2035. Gilroy in fact, will have the second highest percentage of growth at 42.6 percent, exceeded only by Milpitas at 58.7 percent.

The City 2002-2020 General Plan was updated in June of 2002. The Public Facilities and Services Element briefly addresses water as part of the Infrastructure Section. It contains one general goal, two policies related to water supply, and three action items related to infrastructure improvements, coordination with SCVWD, and updating the Water Master Plan.

FINANCING

Financial Adequacy

The Water Fund is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. The Water Fund is dedicated to water service including administration, operations, capital improvements, maintenance, backflow prevention, and billings and collections. For budget purposes, capital improvements are treated separately. The City of Gilroy adopts a biennial budget to better plan for revenues and expenditures.

Revenue Sources

In FY 08-09, the Water Fund generated $8.1 million, in FY 09-10 the Fund generated $8.3 million, and in FY 10-11 the Fund was projected to generate $7.5 million. The reductions in revenue are attributed to the lingering economic recession, cooler and wetter weather conditions, and water conservation.

In FY 10-11, the Water Fund was projected to generate almost $7.5 million in direct revenue from the following sources:

User Fees	$7,043,630	94.0%
Connection/Installation Charges	$184,260	2.5%
Bank and Interfund Interest	$222,298	3.0%
Interfund Transfers In	$42,420	0.6%
Miscellaneous Revenues	$2,260	‹0.1%
Total	$7,494,868	100%

As indicated above, significant revenues are derived from water sales.

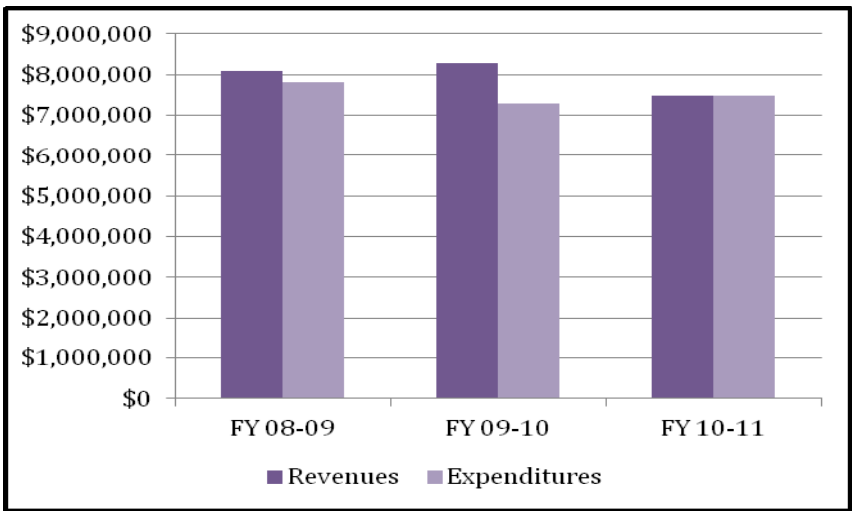
Rates

The current water rate structure became effective on January 1, 2009. Monthly residential rates are based on a tier structure to encourage water conservation. Tier 1 (0 to 5,000 gallons) costs are $0.88 per 1,000 gallons; Tier 2 (5,001 to 15,000 gallons) costs are $1.73 per 1,000 gallons; Tier 3 (15,001 to 30,000 gallons) costs are $4.65 per 1,000 gallons; and Tier 4 (more than 30,0001 gallons per month) costs are $6.78 per month. In addition, customers pay a monthly meter fee based on meter size. A three-quarter inch meter costs $6.02 per month.

A new rate study is currently underway and is being prepared by HDR Engineers.

Expenditures

Figure 10-3: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)



For FY 11-12, the Water Fund expenditure is expected to total almost $7.2 million, which is 6.4 percent of the City total expenditure (all funds) of $112.9 million.

In FY 08-09, the Water Fund spent a total of $7.8 million, in FY 09-10 the Fund spent $7.3 million, and in FY 10-11 the Fund was projected to spend

$7.5 million. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 10-3.

Primary expenses in FY 10-11 were:

Salaries and Benefits	$534,071	6.9%
Materials and Services	$1,372,351	18.7%
Capital Outlay	$525,074	6.8%
SCVWD Pumping Charges	$2,887,837	38.5%
Interfund Charges/Allocations	$744,143	9.7%
Depreciation	$1,419,139	19.4%
Total	$7,482,615	100%

Capital Outlays

The current budget includes 19 capital improvement projects scheduled over the six-year planning period (2012-2017), seven of which are funded for FY 11-12 as follows:

- Tapping Machine, D-5 $1,472
- Fire Hydrant Meters $1,339
- Office Furniture $2,060
- Pipe Threader $5,974
- Bench Meter Tester $6,695
- Chlorinators $5,335
- Water Meter Replacements $100,000

Total $122,875

Particular focus is being placed on water meter conversions to 'radio read' meters. Over the six-year CIP period, the City will expend $3,283,769 million on water-related improvements.

In FY 15-16 and FY 16-17, the City plans to reconstruct the First Street water main ($892,000) and paint and repair water storage tanks ($1,675,000).

Long-term Debt

The Water Fund does not have any long-term debt.

Reserves

The City of Gilroy has two general reserve funds; one is a General Fund Reserve at a minimum of 25 percent of General Fund expenditures, and the other is an Economic Stability Reserve at 15 percent of General Fund expenditures. The City has been able to maintain these reserves. There are no specific reserve funds dedicated to water. As of June 30, 2011, the fund balance for the Water Enterprise Fund stood at $15,161,572. This fund balance can be considered Water Fund Reserves and would be sufficient to fund water operations for 24.3 months.

WATER SUPPLY

The City currently uses local groundwater as the sole source of potable water supply. The City also makes use of recycled water primarily for landscape and agricultural irrigation purposes.

The City's municipal water system extracts groundwater from underground aquifers through nine active wells located throughout the City. The municipal water system receives only light chlorination for water quality purposes, and the City routinely tests the wells. The water quality of the active wells is generally considered to be good.

Santa Clara Valley Water District (SCVWD) is the principal groundwater management agency in the Santa Clara Valley, and the City currently pays a groundwater production service charge to SCVWD. The fee serves as a source of funding for operating costs associated with the District's groundwater recharge program, as well as the District's imported water program, which contributes water to the recharge program in the South County.

Gilroy overlies the Llagas Sub-basin and shares this groundwater resource with the other water providers in the South County. SCVWD estimates the storage capacity of the Llagas Subbasin to be between 150,000 and 165,000 acre feet.

The City's nine wells have a firm capacity of 15.5 million gallons per day or 17,369 acre feet per year (AFY). In 2010, the City pumped 7,322 AFY of groundwater for use within the City.

Drought Allocations

The City has adopted a Phase 1 Voluntary Water Conservation Program, and a Phase 2 Mandatory Water Conservation Program. These programs, which were adopted in 2003, establish rules and protocol for conserving water during periods of water shortage.

Recycled Water

Wastewater from Morgan Hill and Gilroy is treated to a tertiary level at the South County Regional Wastewater Authority (SCRWA) facility in southeast Gilroy. SCVWD owns the distribution system. Water is distributed to ten irrigation customers in the Gilroy area with a combined usage of 700 acre feet per year. Current users include the Gilroy Golf Course and Sports Park, Obata Farms, and three residential areas. The City anticipates that the use of recycled water will increase by 22 percent by 2015, and will remain the same through 2035. For more information on SCRWA, refer to Chapter 26.

Emergency Preparedness

Water Supply Hazards

The Water System Division is on call 24/7 and is prepared to respond to any leaks or breaks in a timely manner, and is able to be on site within 30-minutes of dispatch.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 13.0 million gallons. This storage capacity can provide one day of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

Gilroy does not have interties to any other water purveyor in the area.

WATER DEMAND

The City's projected water demands to 2030 are shown in Figure 10-4.

Figure 10-4: City of Gilroy Water Demands

Planning Horizon (Past and Future)	Water Demands (AFY)
2010	7,322
2015	8,465
2020	8,296
2025	9,036
2030	9,776

Source: Adapted from 2010 City of Gilroy UWMP, Table 3-4 Existing and Projected Supply versus Demand Comparison, 2010 Urban Water Management Plan, City of Gilroy, page, 3-6.

Based on the projected increase to supply capacity and standby production, the City can adequately meet the maximum day demand, as well as standby production needs for the projected future demands. Figure 10-5 illustrates the anticipated available supply versus demand comparisons for the next 20 years.

Figure 10-5: City of Gilroy Existing and Projected Supply versus Demand Comparison (AFY)

	2010	2015	2020	2025	2030	2035
Existing and Projected Water Supply						
Average	23,000	23,000	23,000	23,000	23,000	23,000
Wet	33,500	33,500	33,500	33,500	33,500	33,500
Single Dry	19,700	19,700	19,700	19,700	19,700	19,700
Multiple Dry	21,000	21,000	21,000	21,000	21,000	21,000
Existing and Projected Water Demand						
Average Annual	7,312	8,465	8,296	9,036	9,776	-
Existing and Projected Water Demand As a Percent of Supply by Hydrologic Condition						
Average	32%	37%	36%	39%	43%	-
Wet	22%	25%	25%	27%	29%	-
Single Dry	37%	43%	42%	46%	50%	-
Multiple Dry	35%	40%	40%	43%	47%	-

Source: 2010 City of Gilroy UWMP, Table 3-4 Existing and Projected Supply versus Demand Comparison, 2010 Urban Water Management Plan, City of Gilroy, page, 3-6.
Notes:
1. Assumes that water supply is made available at the natural groundwater recharge rate noted in the SCVWD 2010 UWMP Table 3-4.
2. Assumes that water supply is to remain constant for respective hydrologic conditions as noted in the SCVWD 2010 UWMP Chapter 10.

From Figure 10-5, it is evident that groundwater supplies are more than adequate to meet projected demand needs into the future, regardless of hydrologic condition. Even by

2030, demands are not expected to exceed 50 percent of the assumed groundwater supplies available to the City.

WATER INFRASTRUCTURE AND FACILITIES

The Gilroy water system is a comprehensive water supply, storage and delivery system. The system consists of three pressure zones. A total of nine wells located throughout the City are capable of producing 17.6 million gallons per day (MGD), with a pump capacity of 13,000 gallons per minute. The City does not plan to drill another well until 2018.

Water Treatment Facilities

Gilroy does not have any water treatment facilities. Groundwater is lightly chlorinated for water quality purposes.

Water Storage Facilities

The City has 11 active storage tanks with a combined storage capacity of 13 MG.

Conveyance and Distribution Facilities

The water distribution system is composed of over 120 miles of distribution lines. The distribution system also consists of six pump stations, each with three pumps, two of which are on standby for emergency purposes. The system also features zero pressure reducing valves, 1,550 fire hydrants, 1,312 backflow prevention devices, and 12,905 water service connections. The system also includes an automated Supervisory Control and Data Acquisition (SCADA) System that control distribution of water throughout the system.

The City reported that in calendar year 2010 there were four main line breaks or leaks, and six service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies 19 capital improvement projects scheduled over the six-year planning period. Particular focus is being placed on replacing water meters ($100,000 each year). In FY 16-17, the City plans to reconstruct the First Street water main and paint and repair water storage tanks. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

According to CDPH's Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, Well No 1 and Well No. 2 are vulnerable to the following activities associated with contaminants detected in the water supply: metal plating/refinishing/fabricating, automobile repair shops and gas stations, machine ships, and dry cleaners. The City reports that these wells are tested monthly to monitor the presence of these contaminants.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

The City of Gilroy does not treat water derived from the City's municipal wells. Groundwater is lightly chlorinated for water quality purposes.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Gilroy did not have any health based violations or monitoring and reporting violations during the 2000-2010 period.

The City's 2010 Water Quality Report indicates that the City's potable water supply from groundwater sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment. Of the parameters tested, none were found to be higher than the California Department of Public Health (CDPH) allows. The City continues to test for perchlorate (salts derived from perchloric acid)

resulting from a perchlorate plume originating at the Olin Site in Morgan Hill. The City has tested for perchlorate since February of 2003, with all results showing non-detectible.

The CDPH Annual Water System Sanitary Survey was conducted in January and February of 2011, with the following items identified for follow-up action:

- Conduct additional sampling and testing for synthetic organic chemicals (SOC) on eight wells in the first and second quarter of 2011.

The required testing was completed by March 30 and June 20, 2011, as required.

The survey also identified minor deficiencies at four storage tanks and three wells. These deficiencies have been remedied by the City.

CITY OF GILROY
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Gilroy is 48,821.
- ABAG estimates that Gilroy will grow by 42.6 percent over the next 25 years to an estimated population of 69,600.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Groundwater supplies are more than adequate to meet projected demand needs into the future, regardless of hydrologic condition.
- The Gilroy water supply and distribution system has sufficient capacity to serve all water customers within its service area.
- An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 13.0 million gallons. This storage capacity can provide approximately 24 hours of emergency water under a maximum daily demand scenario.
- The Water Systems Division has a modest Capital Improvement Program, but does include $100,000 per year for water meter replacement.
- The City provides high quality water based on city compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough city response to California Department of Public Health infrastructure and operational concerns.
- The City continues to test for perchlorate (salts derived from perchloric acid) resulting from a perchlorate plume originating at the Olin Site in Morgan Hill. The City has tested for perchlorate since February of 2003, with all results showing non-detectible.
- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates

and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Gilroy water system has sufficient financial resources to provide an adequate level of service. Gilroy has not revised its water rates since January of 2009. A rate study is currently being conducted to determine whether water rates need to be raised.

- The City has a modest capital improvement program that includes upgrading of water meters. Extensive improvements to the water system are not yet necessary due the relatively young age of the system. The City does not plan to drill another well until 2018.

Status and Opportunities for Shared Facilities

- The City water system is a stand-alone enterprise, without any connections or interties to any other water system. The City does utilize recycled water from the South County Regional Wastewater Authority.

- The City collaborates with the Santa Clara Valley Water District, and partners with the City of Morgan Hill on the South County Regional Wastewater Authority.

- The City has not identified further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- Efficiencies have been gained recently with the installation and operability of a new SCADA system, utilizing 'off peak' pumping of municipal wells, flushing 20 percent of hydrants each year, reduction in the number of water leaks, use of water meters for construction water, and replacement of 600 water meters per year with 'radio read' meters. The City has exceeded its water use reduction goal.

- No alternative government structure options have been identified for Gilroy.

11. CITY OF MILPITAS

AGENCY OVERVIEW

The City of Milpitas was incorporated as a General Law city on January 26, 1954. Milpitas is a full service city providing a range of services including: community development and neighborhood services (planning, housing, child care services, graffiti abatement, and neighborhood improvement); building inspection; redevelopment; economic development; police protection; fire protection; public works (engineering, traffic and streets, flood protection, capital improvement projects, city buildings and facilities, fleet maintenance, trees and landscaping, street lights and signals, and utilities); library; and parks and recreation (recreation, parks, cultural arts and theater, community center, senior center, teen center, and sports center). City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the August 2006 South Central Santa Clara County Service Review.

Water services to the City are provided through the Utility Engineering and Utility Maintenance sections of the Public Works Department, which also includes sewer, recycled water, storm drainage and solid waste. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Program of the City's Utility section provides drinking water to residential, commercial, industrial and institutional customers within the City. The Utility section oversees water project planning, design, engineering and construction; water quality; system maintenance and operation; backflow prevention; and leak detection. Milpitas also participates in the South Bay Water Recycling (SBWR) Program, has a water conservation program, and is supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The City has two sources of potable water and one recycled water source. Potable water is derived from imported water from the State Water Project (SWP) and the federal Central Valley Project (CVP) through the SCVWD; and from the San Francisco Public Utilities Commission (SFPUC) Regional Water System. Recycled (non-potable) water for irrigation and industrial purposes is produced at the San Jose-Santa Clara Water Pollution Control Plant (WPCP) and distributed by SBWR.

Service Area

The City's water service area includes all water service customers within the city limits, consisting of approximately 13.6 square miles.

Services to Other Agencies

The City does not provide services to other agencies.

Contracts for Water Services

The City contracts with SCVWD and SFPUC for treated potable water, and with SBWR for recycled water.

Collaboration

The City is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA), and serves on the BAWSCA Technical Advisory Committee, the Long-Term Reliable Water Supply Strategy Committee, the Drought Implementation Plan Committee, the Water Quality Committee, and the Water Resource Committee. Milpitas also collaborates with SCVWD and serves on the following SCVWD Subcommittees: Water Conservation; Emergency Preparedness; Finance; Groundwater; Recycled Water; Water Quality; Water Retailers; Water Supply; Treated Water; and the Water Commission.

Boundaries

The Milpitas water service boundary is the same as the city limits. The present bounds encompass approximately 13.6 square miles. Milpitas is located within the Santa Clara Groundwater Sub-basin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government with a five-member City Council elected at-large and a City Manager appointed by the City Council.

The Mayor is elected for a two-year term. Councilmembers are elected to overlapping four-year terms. The Vice Mayor is selected by the Council to serve a two-year term. Current member names, positions, and term expiration dates are shown in Figure 11-1.

Figure 11-1: City of Milpitas City Council

City of Milpitas				
Water and Sewer Utilities Department Contact Information				
Contact:	Christopher de Groot, Director of Water and Sewer Utilities			
Address:	1500 Warburton Avenue, Santa Clara, CA 95050			
Telephone:	408-247-0784			
E-mail/Website:	cdegroot@santaclaraca.gov/http://santaclara.gov			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Jamie L. Matthews	Mayor	November 2014	Elected At-large	4 years
Pat Kolstad	Councilmember Seat No. 2	November 2014	Elected At-large	4 years
Will Kennedy	Councilmember Seat No. 3	November 2012	Elected At-large	4 years
Kevin Moore	Councilmember Seat No. 4	November 2012	Elected At-large	4 years
Patricia Mahan	Vice Mayor Seat No. 5	November 2014	Elected At-large	4 years
Lisa M. Gillmor	Councilmember Seat No. 6	November 2012	Elected At-large	4 years
Jamie McLeod	Councilmember Seat No. 7	November 2012	Elected At-large	4 years
Meetings				
Date:	Tuesdays at 7:00 PM (Meets at least two times per month.)			
Location:	Council Chambers, City Hall, 1500 Warburton Avenue, Santa Clara			
Agenda Distribution:	Posted on the City website, and available at the City Clerk's Office and other locations. Agendas can be faxed, mailed or e-mailed by request on the day they are posted.			
Minutes Distribution:	Available on the 'City Council Meetings on Line' page of the City website, along with agendas and reports. A Summary of Council Actions is available at the City'Clerk's Office and online.			

The City Council meets on the first and third Tuesday at 7:00 PM in the City Council Chambers. Agendas are posted on the City website, and are available at the City Clerk's Office and the Library on the Friday before a meeting. Complete agenda packets, including minutes and reports, are available for review on the City website.

Council meetings are broadcast live on Milpitas Cable Channel 15. Meetings are also webcast as live streaming video, and are archived on the City website.

The City does not have a water-related advisory commission or committee. The Finance Subcommittee (two Councilmembers) meets as needed to review City financial matters, including water rate adjustments. The Subcommittee's agendas, reports and minutes are posted on the City website.

The Public Works Department and Engineering Division webpages offer basic information on the Utility section's primary functions of water, sewer, recycled water, and storm drainage. Detailed information regarding the water supply and the water distribution system is not provided; however links are readily accessible to the 2010 Urban Water Management Plan, the 2009 Water Master Plan Update, Annual Water Quality Reports, Rates and Charges, and the Water Conservation program. A detailed contact list of

personnel is not provided, but inquiries can be submitted by e-mail to the Public Works Director, or by calling the Public Works Director or the Public Works Department general number listed on the City website under the 'Contact the City' link.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Public Works Director, or contact the Public Works Department as indicated above. The City does not have an electronic complaint form. In calendar year 2010 there were a total of 79 water-related complaints; three for odor/taste, 21 for color, one for turbidity, 42 for pressure, and 12 for water outages. These complaints accounted for 0.48 percent of the 16,351 customers served.

The City demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Program responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Program are under the direction of the Director of Public Works-City Engineer, who reports directly to the City Manager. As an integrated operation, the Public Works Department has a total of 115.0 full time equivalent (FTE) positions organized into eleven major functions: Utility Engineering; Land Development; Design and Construction; Traffic; Engineering Administration; Public Works Administration; Utility Maintenance; Fleet Maintenance; Facility Maintenance; Street Maintenance; and Trees and Landscape Maintenance. The Utility Maintenance section consists of water, sewer, recycled water, and storm drainage. A total of 15.62 FTE positions are dedicated to the Water Enterprise Fund, as detailed in Figure 11-2. The Recycled Water Fund has 2.1 FTE positions.

Figure 11-2: Water Program Staff Allocation

Position	FTE	Position	FTE
Public Works		Engineering	
Director of Public Works/City Engineer	0.20	Acting Assistant City Engineer	0.50
Office Specialist	0.50	Associate Civil Engineer	0.95
Senior Maintenance Supervisor	0.62	Assistant Civil Engineer	0.40
Water System Operator	0.90	Public Information Specialist	0.25
Assistant Water System Operator	0.90	Administrative Analyst II	0.20
Equipment Maintenance Worker III	0.54	Administrative Analyst I	0.50
Equipment Maintenance Worker II	0.47	Engineering Aide	0.50
Maintenance Worker III	1.62		
Maintenance Worker II	2.03	Finance	
		Senior Accountant	0.75
		Fiscal Assistant	2.25
		Water Meter Reader	1.54
		Total	15.6

Performance evaluations of all employees are conducted annually. The probation period for new employees is twelve months, with evaluations quarterly. The agency tracks the employees' workload through work logs, service requests, and performance measures that are included in the annual budget. The Department will be adding 'Maintenance Connection' software to track workload, billings, permitting, and department activities on a single platform.

To increase efficiency, 'Radio read' water meters are being installed along medians and landscape areas that are difficult to access.

The City adopted its 2010 Urban Water Management Plan on June 7, 2011. A Utility Rate Analysis for Water and Sewer with Rate Recommendations was adopted May 3, 2011. A Water and Sewer Master Plan Environmental Impact Report (EIR) was adopted May 4, 2010. The City updated its Water Master Plan in 2009. A Water Emergency Response Plan was prepared in September of 2004. A Financial Utility Master Plan was prepared in April of 2003. Capital improvements are considered over a five-year planning period as part of the budget process.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Milpitas is 66,790. The average household size is 3.34 per the United States Census.

ABAG projects that the population of Milpitas will increase to 106,000 by 2035, a 58.7 percent increase over the twenty-five year period.

Milpitas, along with San Jose, Santa Clara and Gilroy are expected to experience the highest growth rates between 2010 and 2035. Milpitas will have the highest percentage of growth at 58.7 percent, followed by Gilroy at 42.6 percent and San Jose at 30.7 percent.

A comprehensive update of the City's General Plan was completed in 1994. Further amendments have been made every few years after. A January 2002 Update incorporated the Midtown Specific Plan and included revisions to the General Plan land use map and text for consistency between these documents. A 2008 Update incorporated the Transit Area Specific Plan for transit-oriented development around the VTA Light Rail and BART transit hub near the Great Mall. A 2010 Update revised planning estimates and coordinated boundaries between the specific plans.

The Land Use Element briefly addresses water as part of Public Utilities and Services in Section 2.6. It contains one general guiding principal and two general implementation policies.

FINANCING

Financial Adequacy

The Water Utility Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. The Water Fund is dedicated to water service including administration, operations, maintenance, and billings and collections. The Water Fund is a parent fund with four related funds: Capital Improvement Program (CIP), Water Line Extension Fund; Water Infrastructure Fund; and Recycled Water Fund. The CIP Fund holds funding for the design and construction of approved water CIP projects. The Water Line Extension Fund holds developer connection fees and is used to fund the CIP. The Water Infrastructure Fund is a reserve fund for future water infrastructure replacement projects. The Recycled Water Fund is used for recycled water operation, maintenance and capital improvements.

Revenue Sources

In FY 08-09, the Water Fund generated $4.6 million, in FY 09-10 the Fund generated $12.8 million, and in FY 10-11 the Fund was projected to generate $13.5 million.

In FY 10-11, the Water Fund generated in excess of $13.5 million in direct operating revenue from the following sources:

Pooled Interest Allocation	$50,000	0.4%
Water Service Agreements	$15,000	0.1%
Water Meter Sales	$15,040,000	111.4%
Construction Water	$20,000	0.1%
Miscellaneous Other Revenue	$130,000	1.0%
Transfer in from Recycled Water	$879,000	6.5%
Transfer out to General Fund (for indirect expenditures)	($1,788,178)	(13.2%)
Transfer out to CIP Fund	($845,000)	(6.3%)
Total	$13,500,822	100%

As indicated above, significant revenues are derived from water sales. These revenues are expected to increase each year as the City passes on the increased costs for wholesale water.

Rates

Beginning July 1, 2011, the City raised its water rates by an average of 19.2 percent over the FY 10-11 rates. These increases are due to the increase in wholesale costs for water from both of the City's wholesale water suppliers (SFPUC and SCVWD), plus the impact of reduced water sales due to the slow economy. The rate increase translates to an average of $6.63 per month for a single-family residence using 23 CCF (hundred cubic feet) per month, where each CCF is equal to 748 gallons. The City expects water rates to increase by 7 percent to 8 percent each year for the next several years, primarily due to the SFPUC's $4.6 billion in seismic improvements to the Hetch Hetchy water delivery system, and lagging water sales (due to the slow economy and water conservation) which are 12.5 percent lower than projected.

The City also revamped its water rate structure, going from two residential tiers to four in order to better coordinate the costs for service and improve water conservation. Tier 1 (0 to 10 CCF) would remain at $1.77 per CCF per month; a new Tier 2 (11-20 CCF) would be $2.76 per CCF per month; Tier 3 (21-30 CCF) would remain at $3.72 per CCF per month; and a new Tier 4 (more than 31 CCF) would be $4.17 per CCF per month.

Expenditures

For FY 11-12, the Water Fund expenditure is expected to total over $19.1 million (which includes funding for CIP), and is 13.6 percent of the City total expenditure (all funds) of $140.8 million.

In FY 08-09, the Water Fund spent a total of $10.9 million, in FY 09-10 the Fund spent $10.7 million, and in FY 10-11 the Fund was projected to spend $9.6 million. Primary expenses totaling $9.6 million in FY 10-11 were:

Receivables	$300,000	3.1%
Utilities	$300,000	3.1%
Non-Departmental	$6,600,000	68.8%
Utility Maintenance	$1,400,000	14.6%
Utility Engineering	$600,000	6.2%
Miscellaneous	$400,000	4.2%

The non-departmental expenses were primarily for purchasing wholesale water from SFPUC and SCVWD.

Figure 11-3: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)

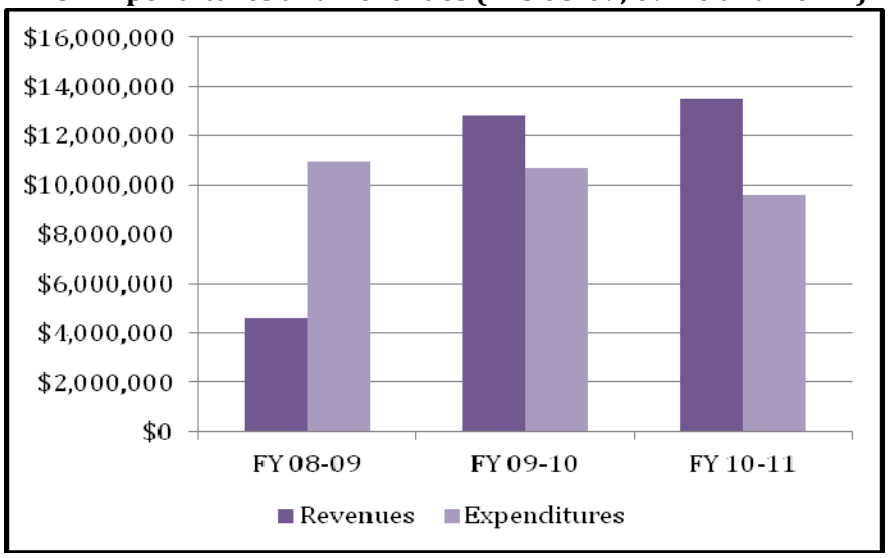


Figure 11-3 provides a comparison of revenues and expenses for the last three fiscal years. General accounting practices typically show "transfers out" as revenues. For example, in FY 08-09, there was an $8.7 million transfer to the CIP fund, which reflects an atypical low revenue value in the graph.

Capital Outlays

The current budget includes 27 capital improvement projects scheduled over the five-year planning period, six of which are funded for FY 11-12 as follows:

- Curtis Well pump station upgrade $1,600,000
- Water System 'backbone' seismic improvements $200,000
- Abel Street/Carlos Street main line extension $350,000
- Reservoir Cleaning $50,000
- Turnout improvements; valve testing/replacement $150,000
- Water Meter Replacement, medians $75,000

Total $2,425,000

Particular focus is being placed on water line extensions; and well and pump upgrade, rehabilitation and maintenance. Over the five-year CIP period, the City will expend $33.1 million on water-related improvements.

Long-term Debt

The Water Fund does not have any long-term debt.

Reserves

The City has two reserve fund policies relating to water: maintain an annual operating and maintenance reserve of 30 percent of operating and maintenance expenses; and deposit $2 million annually into the water infrastructure fund. As of June 30, 2011, the fund balance for the Water Enterprise Fund stood at $4,996,623, or 52 percent of operating and maintenance expenses for FY 10-11. This fund balance can be considered to be the Operating and Maintenance Reserve and would be sufficient to fund water operations for 6.2 months.

For FY 11-12, $2,075,000 of the Water Fund reserves will be utilized to fund capital improvement projects.

WATER SUPPLY

The City of Milpitas receives wholesale potable water directly from two supply sources—SFPUC and SCVWD. In addition to these two potable supply sources, the City receives non-potable recycled water from South Bay Water Recycling (SBWR) for landscape irrigation and industrial uses in selected areas west of Interstate 680. The City's emergency water supply consists of two local groundwater wells and three emergency interties—one with the San Jose Water Company and two with the Alameda County Water District.

The City's water supply is treated surface water provided by SFPUC (55 percent) and SCVWD (40 percent). The remaining five percent is recycled water provided by SBWR. The City does not provide any water treatment or groundwater recharge. All water is pre-treated by the wholesaling agencies. The City's available and projected water supplies are shown in Figure 11-4.

Figure 11-4: City of Milpitas Retail Agency Supply Projections (AFY)

Source	Contracted Volume	2010	2015	2020	2025	2030	2035
SFPUC	10,340	6,744	7,920	8,614	9,242	9,858	9,858
SCVWD	Varies	3,484	3,697	4,380	5,769	7,169	9,186
SBWR	No Limit	807	1,109	1,333	1,546	1,759	1,983
Total		11,034	12,726	14,328	16,557	18,786	21,027

Source: Master Agreement Supply Assurance for SFPUC;
2010 City of Milpitas UWMP, Table 3-13 for SCVWD & SBWR.

SFPUC Water

The City of Milpitas purchases water from SFPUC for a portion of its domestic surface water supply through its 2009 Master Agreement. The agreement between the City and SFPUC was negotiated by the Bay Area Water Supply and Conservation Agency (BAWSCA). Per the agreement, the 27 SFPUC wholesale customers have a combined supply assurance of 184 million gallons per day. The City's guaranteed portion of the supply assurance is referred to as the individual supply guarantee. Milpitas' individual supply guarantee is 9.23 million gallons per day (or approximately 10,340 acre feet per year (AFY). The City projects using 9,838 acre feet or 95 percent of its individual supply guarantee in 2035. Water from SFPUC is delivered to the City through Bay Division Pipelines 3 and 4.

SCVWD Water

Water from SCVWD is delivered to the City from the Penitencia or Santa Teresa Water Treatment Plants via the Milpitas Pipeline. Water purchased from SCVWD is governed by a contract between SCVWD and the City. The actual contract amount is adjusted periodically based on an annual delivery schedule request that the City submits every three years. However, there is no maximum supply guarantee. This schedule is binding for the subsequent three-year period, and the City's annual purchase must be at least 90 percent of the maximum year contained in the schedule. The City's monthly "supply guarantee" is at least 15 percent of the total estimated yearly amount. In 2010, the City made use of 3,484 acre feet of water from SCVWD. The City anticipates nearly tripling its use of SCVWD water by 2035 at 9,186 acre feet.

The SFPUC and SCVWD potable water supply sources are not blended under normal operating conditions. Due to their different characteristics, the indiscriminate blending of these two supplies could lead to potential water quality problems such as the generation of undesirable taste and odors. Hence, the City's water system is physically separated via isolation valves in the distribution pipeline network. These isolation valves can be manually opened to allow emergency backup of SFPUC supply for the SCVWD zones and vice versa.

Drought Allocations

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies.

The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

Recycled Water

In 1998, the South Bay Water Recycling (SBWR) facility and pipeline was constructed to provide recycled water from the San Jose-Santa Clara Water Pollution Control Plan to wholesale water providers for irrigation, landscape and industrial uses. SBWR is a joint powers authority that consists of the Cities of San Jose, Milpitas and Santa Clara, West Valley Sanitation District, and Cupertino Sanitation District.

SBWR currently provides recycled water to San Jose Municipal Water System customers in the City of San Jose, the City of Milpitas, the City of Santa Clara, and the San Jose Water Company. Recycled water from SBWR is delivered through a connection at the Milpitas' western edge. Service began in October of 1997 and provides recycled water primarily to business and retail areas in the City's western and southern areas. The City's recycled water distribution system consists of approximately 20 miles of mainline and approximately 180 service connections. Recycled water purchase is governed by contract with SBWR. There is no maximum supply allocation, as recycled water supply is unrestricted for the foreseeable future. In 2010, the City purchased 807 acre feet. The City anticipates making greater use of recycled water in the future with projected use more than doubling between 2010 and 2035.

Emergency Preparedness

Water Supply Hazards

The Water Utility is on call 24/7 and is prepared to respond to any leaks or breaks in a timely manner.

The City is currently upgrading its 'backbone' water delivery system to withstand a seismic event. This is an ongoing project that is part of the five-year capital improvement program.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 16.27 million gallons. This storage capacity can provide one day of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

The City currently has interties to the San Jose Water Company and the Alameda County Water District through service connections for use during emergency situations. At present, no proposed transfers are anticipated.

The City has one existing groundwater well (Pinewood) for emergency supply, with one future well (Curtis) to be constructed in early 2012.

WATER DEMAND

The City's projected water demands based on the total of single family, multi-family, commercial, industrial, institutional, potable irrigation, recycled irrigation, and unaccounted for water losses for five-year time periods to 2035 are shown in Figure 11-5. By 2035, water use (through water sales) is projected to amount to 21,027 AFY with 8.1 percent assumed for system losses of the total projected water use. Figure 11-5 also shows the projected water demands in acre-feet per year (AFY) with active conservation assumed (and as projected by SCVWD).

Figure 11-5: City of Milpitas Projected Water Demands

Planning Horizon	Total Projected Water Demands (AFY)	Projected Demand after Conservation Savings (AFY)
2010	11,034	
2015	12,726	15,280
2020	14,328	16,240
2025	16,557	17,220
2030	18,786	18,240
2035	21,027	19,320

Sources: 2010 City of Milpitas, Urban Water Management Plan, Chapter 3, Table 3-11, page 11 and SCVWD Urban Water Management Plan, 2010, Table 4-1, Retailer Demand Projects after Conservation Savings

When accounting for dry and multiple dry-year sequences, the City's supplies, even when shorted, is adequate to cover projected demand increases to 2030, as shown in Figure 11-6. However, during multiple dry-year sequences, supplies would be curtailed below projected demands for that time. Shortages, based on existing entitlements, would likely occur in those years. Although the City has diversified its sources of supply between the two wholesalers, it is still vulnerable to shortages caused by successive dry years.

Figure 11-6: Water Supply Availability and Reliability across Water Year Types (MGD)

	Normal Year		Single Dry Year		Multiple Dry Third Year		
	Supply	Demand	Supply	Demand	Supply	Demand	Difference
2015	13.52	11.36	11.95	11.36	10.94	11.36	-0.42
2020	14.33	12.79	12.76	12.79	11.75	12.79	-1.04
2025	15.76	14.78	14.19	14.78	13.18	14.78	-1.60
2030	17.20	16.77	15.63	16.77	14.62	16.77	-2.15
2035	19.20	18.77	17.63	18.77	16.62	18.77	-2.15
Source: 2010 City of Milpitas UWMP, Tables 5-11, 5-12 and 5-13.							

WATER INFRASTRUCTURE AND FACILITIES

The Milpitas water system is a comprehensive water storage and delivery system. The City is divided two service areas. The SFPUC service area is divided into five pressure zones and is supplied by four turnouts. The SCVWD service area is divided into two pressure zones and is supplied by one turnout.

The City's has one local groundwater well (Pinewood) and one future well (Curtis) for emergency water supply purposes.

Water Treatment Facilities

Milpitas does not have any water treatment facilities.

Water Storage Facilities

The City has five active storage tanks (Gibraltar SF, Gibraltar SC, Ayer, Tularcitos, and Minnis) with a combined storage capacity of 16.27 MG.

Conveyance and Distribution Facilities

The water distribution system is composed of approximately 213 miles of distribution lines. The distribution system also consists of five pump stations. The system also features 4,858 isolation valves, 1,840 fire hydrants, 1,766 backflow prevention devices, and 16,351 water service connections.

The City reported that in calendar year 2010 there were 173 main line breaks or leaks, and 69 service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies 27 capital improvement projects scheduled over the five-year planning period. Particular focus is being placed on extending water lines and rehabilitation of pumps. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns. The City's water wholesalers, SFPUC and SCVWD, conduct their own testing.

The City does not treat its water supply. Treated water is received from the SFPUC Hetch Hetchy system and the SCVWD water treatment plants. According to the EPA Safe Drinking Water Information System, neither SFPUC nor SCVWD had health or monitoring violations within the last 10 years with regard to its treatment systems.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Milpitas did not have any health based violations during the 2000-2010 period. The City had one monitoring and reporting violation in October of 1999, with State compliance achieved in March 2000.

The City's 2010 Water Quality Report indicates that the City's potable water supply from all sources met all state and federal drinking water health standards. In order to verify that water quality standards are met, drinking water samples are collected weekly throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by a contracted certified laboratory. Of the parameters tested, none were found to be higher than the California Department of Public Health (CDPH) allows.

The CDPH Annual Water System Sanitary Survey conducted in October of 2010 identified the following items for follow-up action (with status in parentheses):

- Provide a timetable to implement cross connection control surveys; (submitted to CDPH on July 15, 2011);
- Apply for and obtain an amended water supply permit (including a Facility Operations Plan) from CDPH for installation of a chloramine boosting station at the Gibraltar Booster Pump Station (in progress);
- Submit the completed amended permit applications for the completed chloramination treatment facility at the Pinewood Well, and for the development and construction of the Curtis Well (in progress);
- Monitor the Pinewood Well for asbestos and two quarters of synthetic organic chemicals (SOC) or request a monitoring waiver (asbestos waiver approved by CDPH on December 3, 2010; SOC monitoring completed December 2010);

- Make corrections to the draft Nitrification Action Plan (NAP) as identified by CDPH including a flushing and valve maintenance program (in progress);
- Provide updated data sheets for those facilities which have undergone changes, including the Gibraltar Pump Station (submitted to CDPH on July 15, 2011); and
- Submit a revised Groundwater Rule Triggered Source Monitoring Plan for the Pinewood Well (submitted to CDPH on July 11, 2011 and approved by CDPH on August 2, 2011).

The survey also identified minor deficiencies related vent screens on tanks and booster pumps, and rust on the interior of the Minnis Tank. These deficiencies will be remedied by early fall 2011.

CITY OF MILPITAS
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Milpitas is 66,790.
- ABAG estimates that Milpitas will grow by 58.7 percent over the next 25 years to an estimated population of 106,000.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- By the year 2020, Milpitas will experience water supply shortfalls in drought years, with up to a 2,400 acre foot per year shortfall in the third year of consecutive drought by 2035.
- Milpitas will rely on groundwater pumping from its two municipal wells, increased use of recycled water, and more stringent water conservation programs to make up for any drought-related shortfalls.
- Continued emphasis on water conservation, use of recycled water, and higher water rates are expected to curtail the City's demand for water.
- The Milpitas water supply and distribution system has sufficient capacity to serve all water customers within its service area.
- Emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 16.27 million gallons. This storage capacity can provide one day of emergency water under a maximum daily demand scenario.
- The City's capital improvement program is placing particular focus on water line extensions and well and pump upgrade, rehabilitation and maintenance. Over the five-year capital improvement plan period, the City will expend $33.1 million on water-related improvements.
- The City provides high quality water based on city compliance with drinking water regulations. The City did not have any health based violations during the 2000-2010 period.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Milpitas Water Utility Fund has sufficient financial resources to provide an adequate level of service. However, rate increases will be required to insure that revenues exceed expenditures.

- The City utilizes its Water Utility Fund to "transfer out" revenues for water-related capital improvement projects, resulting in a lower revenue amount in the budget than is actually the case.

- Beginning July 1, 2011, the City raised its water rates by an average of 19.2 percent over the FY 10-11 rates. The City expects water rates to increase by 7 percent to 8 percent each year for the next several years.

- The City revamped its water rate structure, going from two residential tiers to four in order to better coordinate the costs for service, and to improve water conservation.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system and the SCVWD distribution system.

- The City has interties with the San Jose Water Company and the Alameda County Water District for use during emergency situations.

- South Bay Water Recycling currently provides recycled water to the City of Milpitas for use in landscape irrigation and industrial uses.

- The City a member of the Bay Area Water Supply and Conservation Agency and serves on a number of BAWSCA committees. Milpitas also collaborates with the Santa Clara Valley Water District and serves on a number of subcommittees.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- To increase efficiencies, the Public Works Department will be adding 'Maintenance Connection' software to track workload, billings, permitting, and department activities on a single platform. In addition, 'radio read' water meters are being installed along medians and landscape areas that are difficult to access.

- The City's water rate structure is designed as an 'inclining block tier' which charges proportionally higher water rates for higher water users and promotes more efficient use of water.

- No government structure options have been identified for Milpitas.

12. CITY OF MORGAN HILL

AGENCY OVERVIEW

The City of Morgan Hill was incorporated as a General Law city on November 10, 1906. Morgan Hill provides a range of services including: community and economic development (engineering, planning, building inspection, economic development, redevelopment, and housing); police protection (including emergency services and animal control); community services (recreation, park and field maintenance, street maintenance, stormwater, lighting and landscape maintenance, sports, aquatics, community and cultural center, recreation center, senior center, teen center, and water conservation); and engineering and utilities (wastewater operations, water operations, utility billing, and building maintenance). The City contracts for fire protection (including emergency medical); library services; street sweeping; and solid waste disposal and recycling. Regional waste water treatment and disposal is provided by a joint powers agency which includes Morgan Hill and Gilroy. City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the August 2006 South Central Santa Clara County Service Review.

Water services to the City are provided through the Water Operations Division of the Engineering and Utilities Department, which is part of the Community Development Agency. Water conservation is part of the Maintenance Services Division of the Community Services Department. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Operations Division provides drinking water to residential, commercial, and industrial customers within the City. The Water Operations Division is responsible for water quality, supply wells, distribution and storage, pump stations, pressure regulating stations, and leak detection. Through the Community Services Department, Morgan Hill also works cooperatively with the Santa Clara Valley Water District (SCVWD) water conservation program.

The City of Morgan Hill utilizes local groundwater as its sole source of water supply.

Service Area

The City's water service area includes all water service customers within the city limits, consisting of approximately 12.9 square miles. The City also serves 296 properties outside the city limits, which comprise 2.4 percent of the total water service connections. Of the 296 out-of-agency water service connections, 199 service connections are for homes within the Holiday Lake Estates Subdivision. Holiday Lake Estates is located within the City's urban service area and as an unincorporated island less than 150 acres, is eligible for annexation without protest proceedings under Government Code Section 56375.3.

Government Code Section 56133 requiring cities to seek LAFCO approval prior to providing service extensions outside city boundaries became effective on January 1, 1994. Based on a review of City water service records, the City believes that all out-of-agency water service connections occurred between 1968 and 1989. City records do not indicate any out-of-agency water service connections after 1993 that were not approved by LAFCO.

Services to Other Agencies

The City of Morgan Hill does not provide services to other agencies.

Contracts for Water Services

The City does not contract with other agencies or water purveyors for water services.

Collaboration

The City collaborates with the SCVWD and participates in the Groundwater Basin Group, the Retailers Group, and the Conservation Group. Morgan Hill is a member of a joint powers authority with the City of Gilroy regarding the South County Regional Wastewater Authority (SCRWA).

Boundaries

The Morgan Hill water service boundary is the same as the city limits, but also extends beyond the city limits to serve water and sewer customers outside the City. The present bounds encompass approximately 12.9 square miles. Morgan Hill overlies both the Llagas Groundwater Subbasin and the Coyote Valley Subarea of the Santa Clara Groundwater Subbasin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government with a Mayor and four Council Members elected at-large and a City Manager appointed by the City Council.

The Mayor is elected for a two-year term. Council Members are elected for four-year overlapping terms. The Mayor Pro Tempore is selected by the Council at the first meeting after the November General Election (or the second regular meeting in November) for a one-year term. Current member names, positions, and term expiration dates are shown in Figure 12-1.

Figure 12-1: City of Morgan Hill City Council

City of Morgan Hill				
Engineering and Utilities Department Contact Information				
Contact:	Mario Iglesias, Utility Systems Manager			
Address:	100 Edes Court, Morgan Hill, CA 95037			
Telephone:	408-776-7333			
E-mail/Website:	mario.iglesias@morganhill.ca.gov/www.morgan-hill.ca.gov			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Larry Carr	Mayor Pro Tempore	November 2012	Elected At-large	4 years
Rich Constantine	Council Member	November 2014	Elected At-large	4 years
Marilyn Librere	Council Member	November 2012	Elected At-large	4 years
Gordon Siebert	Council Member	November 2014	Elected At-large	4 years
Steve Tate	Mayor	November 2012	Elected At-large	2 years
Meetings				
Date:	First, Third and Fourth Wednesdays at 7:00 PM			
Location:	City Council Chambers, City Hall, 17555 Peak Avenue, Morgan Hill			
Agenda Distribution:	Posted on the 'Public Meeting Agendas & Minutes' page of the City website; posted on City Hall bulletin boards, and available for review at the City Clerk's Office and the Morgan Hill Public Library.			
Minutes Distribution:	Available on the 'Public Meeting Agendas & Minutes' page of the City website; along with agendas and reports.			

The City Council meets the first, third and fourth Wednesdays in the City Council Chambers. Agendas are posted on the City website. Complete agenda packets, including minutes and reports, are available for review on the City website.

Council meeting are broadcast live on Channel 17. Meetings are also available for viewing as searchable video on the City website.

The City of Morgan Hill does not have a water-related advisory commission or committee.

Basic information regarding water is currently on the Public Works Department webpage, along with a video on Morgan Hill's water. Detailed information regarding water supply and water distribution is not provided; however links are readily accessible to the Annual Water Quality Reports, the 2010 Urban Water Management Plan, water rates and fees, and the Perchlorate program. Information on Water Conservation is available on the Environmental Programs webpage.

A list of Engineering and Utilities Department personnel is provided, along with some e-mail addresses. Inquiries can be made by calling the telephone numbers listed on the Staff Directory page of the City website.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Utility Systems Manager of the Water Operations Division, or by contacting the Engineering and Utilities Department as indicated above. The City has an electronic 'general inquiry/request for service/comment/complaint' form, as well as a 'report a water leak' form, and a 'water waste' report form and hotline telephone number. In calendar year 2010 there were a total of five water quality-related complaints; three for odor/taste, two for color, none for turbidity, none for pressure, and none for water outages. These complaints accounted for 0.04 percent of the 12,132 customers served.

The City of Morgan Hill demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Engineering and Utilities Department responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Operations Division are under the direction of the Utility System Manager, who reports to the Engineering Deputy Director, who reports to the Assistant City Manager for Community Development, who reports to the City Manager. Water conservation is overseen by the Program Administrator of the Environmental Services Section of the Maintenance Services Division of the Community Services Department. Water billing is under the Director of Finance. As an integrated operation, the Engineering and Utilities Department has a total of 32.41 full time equivalent (FTE) positions organized into five major functions: Water Operations; Sewer Operations; Utility Billing; Water Conservation; and Building Maintenance. A total of 14.92 FTE positions are dedicated to the Water Enterprise Fund, as detailed in Figure 10-2.

Figure 10-2: Water Service Staff Allocation

Position	FTE	Position	FTE
Water Billing		Water Operations (Continued)	
Assistant Finance Director	0.15	Utility Systems Manager	0.50
Administrative Services Director	0.125	Program Administrator	0.05
Budget Manager	0.175	Senior Civil Engineer	0.18
Account I	0.015	Associate Engineer	0.15
Accounting Assistant I/II	1.125	Assistant Engineer	0.05
		Engineering Aide I/II	0.56
Water Conservation		Associate Planner	0.15
Director of Recreation and Community Services	0.05	Public Works Inspector Supervisor	0.10
Program Administrator	0.20	Senior Public Works Inspector	0.04
Municipal Services Assistant	0.05	Public Works Inspector	1.00
		Electrician	0.55
Water Operations		Utility Systems Supervisor	1.10
Assistant City Manager for Community Development	0.05	Confidential Support Services Supervisor	0.15
City Engineer	0.20	Senior Utility Worker	1.8
Utilities Business Manager	0.50	Utility Worker I/II	5.5
Office Assistant I/II	0.40	**Total**	**14.92**

Performance evaluations of all employees are conducted annually. The probation period for new employees is six months, with evaluations at three and six months. The agency tracks the employees' workload through work orders, time card reports, and budget-related performance measures.

Efficiencies have been gained recently by utilizing scheduling software to monitor preventative maintenance, including well pumps on a quarterly basis. The meter calibration program has reduced water wastage by 200,000 gallons per month. Well water pumping occurs during off peak hours from 12:00 to 6:00 AM.

The City adopted the 2010 Urban Water Management Plan on June 1, 2011. A Water System Emergency Response Plan was prepared in February of 2004... The City updated its Water System Master Plan in January of 2002. The City also collaborated with SCVWD on the December 2007 Groundwater Conditions Report and the July 2010 South County Water Supply Planning Project.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Morgan Hill is 37,882. The average household size is 3.04 per the United States Census.

ABAG projects that the population of Morgan Hill will increase to 47,900 by 2035, a 26.4 percent increase over the twenty-five year period.

The City's 2001 General Plan contains seven Water Resource policies and nine action items. The Plan also contains 22 policies related to Water Quality, along with 5 action items.

The City has stated that in the next five years the City anticipates submitting three annexation requests to LAFCO including: the southeast quadrant of Highway 101 and Fisher Avenue (760 acres); the South Monterey Road area (43 acres); and the northeast quadrant of Edmundson Avenue and De Witt Avenue (35 acres).

Measure E (originally approved by the voters in 1977, and extended to 2010 by Measure P, and again to 2020 by Measure C) established the Residential Development Control System (RDCS) which allocates residential building allotments on an annual basis. A maximum of 250 dwelling units can be approved in any one year. For FY 10-11, the Council allocated 221 units; for FY 11-12 the Council allocated 213 units; for FY 12-13 the Council allocated 225 units; and for FY 13-14, the Council allocated 197 units.

FINANCING

Financial Adequacy

The Water Operations Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services; however, beginning in FY 09-10, the City's Water Fund expenditures have exceeded revenues. No General Fund monies are utilized by the Fund. The Water Fund is dedicated to water service including administration, engineering, operations, capital improvements, maintenance, and billings and collections. For budget purposes, capital improvements are treated separately.

Revenue Sources

In FY 08-09, the Water Fund generated $8.6 million, in FY 09-10 the Fund generated $7.5 million, and in FY 10-11 the Fund was projected to generate $7.2 million. The reductions in revenue are attributed to the lingering economic recession, cooler and wetter weather conditions, and water conservation. With continued water conservation offset by

rate increases scheduled to go into effect on January 1, 2012, the Water Fund is expected to generate $7.2 million in FY 11-12.

In FY 10-11, the Water Fund was projected to generate $7.25 million in direct revenue from the following sources:

Water Sales	**$6,015,125**	**83%**
User Account Maintenance, Meter Installations, Inspections, and a Perchlorate Surcharge	$1,232,013	17%
Total	$7,247,138	100%

As indicated above, significant revenues are derived from water sales.

Rates

The City Council adopted new water rates on July 27, 2011 which call for a 10.0 percent increase in 2012, and a 3.5 percent increase per year for 2013, 2014, 2015, and 2016.

Monthly consumption charges are based on a tier structure to encourage water conservation. The City also charges a monthly base rate (meter charge), plus a three percent surcharge for perchlorate removal. The City also provides a 60 percent low income customer discount for the meter charge; and charges customers outside the City a 50 percent surcharge (1.5 times higher than In-City customers). The City currently has 11,827 In-City water customers and 296 Outside City water customers.

Changes in consumption charges for a single family residential service are as follows:

Water Use per Month in hundred cubic feet (CCF)	**FY 10-11 Rates**	**FY 11-12 Rates**
Tier 1 (1 to 10 CCF)	$1.17 per CCF	$1.287 per CCF
Tier 2 (11 to 30 CCF)	$2.34 per CCF	$2.574 per CCF
Tier 3 (Over 31 CCF)	$3.51 per CCF	$3.861 per CCF

A typical In-City residential water customer with a 5/8 inch meter will see a monthly water bill increase from $20.06 to $22.07, a $2.01 increase.

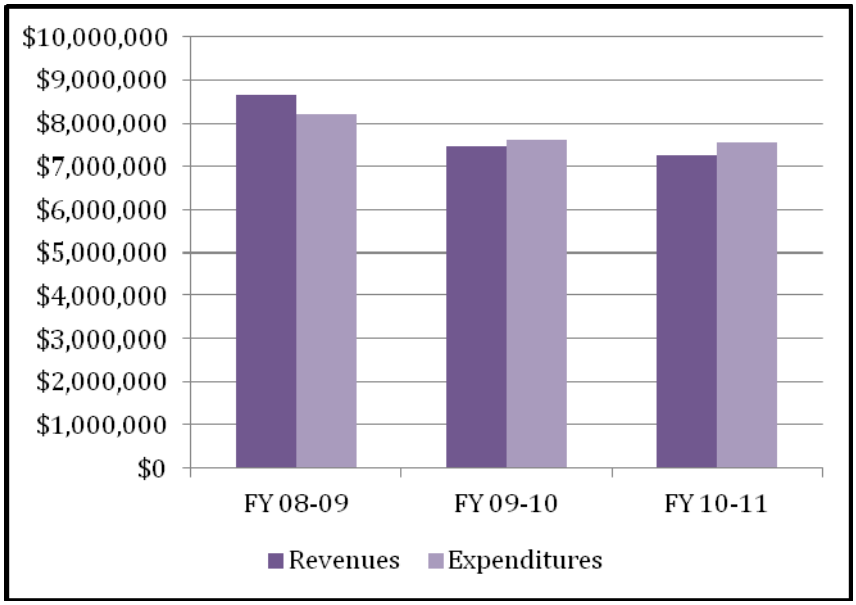
Expenditures

For FY 11-12, the Water Fund expenditure is expected to total $8.56 million, which is 9.7 percent of the City total expenditure (all funds) of $88.66 million. Depending on the amount of additional revenues generated by the rate increase scheduled to go into effect on January 1, 2012, it may be necessary to utilize the Rate Stabilization Fund to make up any shortfall, similar to FYs 09-10 and 10-11.

In FY 08-09, the Water Fund spent a total of $8.24 million, in FY 09-10, the Fund spent $7.60 million, and in FY 10-11, the Fund was projected to spend $7.54 million. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 12-3. Primary expenses in FY 10-11 were as follows:

Salaries and Benefits	**$2,006,443**	**26.6%**
Materials and Supplies	3,833,276	50.9%
Capital Outlay	315,445	4.2%
Interfund Charges/Allocations	387,054	5.1%
Transfer to General Fund	457,155	6.1%
Debt Service	538,266	7.1%
Total	$7,537,639	100%

Figure 12-3: Expenditures and Revenues (FYs 08-09, 09-10, and 10-11)



Capital Outlays

A total of seven water-related capital improvement projects (CIPs) are scheduled over the five-year planning period (2012-2016), only one of which is funded for FY 11-12. This is the Main Avenue Water Main Replacement project at an estimated cost of $925,000 in FY 11-12 and $250,000 in FY 13-14.

Other projects over the remaining four-year CIP period include: new well property acquisition ($250,000); new water mains ($745,000); booster pump rehabilitation ($675,000); water well rehabilitation ($545,000); water tank re-coating ($310,000); and updating the water master plan ($55,000) for a total of $3,755,000.

Long-term Debt

The Water Operations Fund has three debt instruments as follows:

- 2003 Water Facilities Bond — Matures in 2017, annual payment of $148,388, outstanding principal of $769,169;
- 1999 Water Certificates of Participation — Matures in 2021, annual payment of $383,453, outstanding principal of $2,980,000; and
- 2004 Water Bond — Matures in 2034, annual payment of $351,125, outstanding principal of $7,740,000.

Reserves

The City of Morgan Hill tracks fund balances at the end of each Fiscal Year for specific funds. As of July 1, 2011, the following balances were available:

- Water Operations Fund $224,089;
- Water Rate Stabilization Fund $1,523,783; and
- Water System Replacement Fund $743,500.

The Water Operations fund balance can be considered to be the Water Operations Reserve and would be sufficient to fund water operations for 0.4 months.

WATER SUPPLY

The City of Morgan Hill relies on groundwater extracted from the Llagas Sub-Basin and has no connections to other systems or sources of supply. The City of Morgan Hill shares this groundwater resource with the other water providers in the South County. It pumps its water from the Llagas Subbasin and the Coyote Valley subarea of the Santa Clara Valley Subbasin. These two subbasins are each part of different basins in Santa Clara County. The City operates 17 municipal wells on the valley floor with a current pumping capacity of 18,054 acre feet. The City adds disinfectant to the water at the wellhead prior to distribution. Groundwater recharge is performed by SCVWD, and the City pays a groundwater production service charge to cover its share of those costs. The City's water supplies are shown in Figure 12-4. The City plans to construct an additional well that will give a total pumping capacity of 18,422 acre feet per year, as shown in the additional supply capacity starting in 2015.

Figure 12-4: City of Morgan Hill Water Supplies Current and Projected Capacities (AFY)

Water Supply Sources	2010	2015	2020	2025	2030
Wholesale Water	0	0	0	0	0
Supplier - Produced Groundwater - Coyote Valley	2,476	2,476	2,476	2,476	2,476
Supplier - Produced Groundwater – Llagas	15,578	15,946	15,946	15,946	15,946
Total Supplies	18,054	18,422	18,422	18,422	18,422

Source: Adapted from City of Morgan Hill, 2010 Urban Water Management, Table 4.1.1, page 4-2.

The 2003 Bulletin 118 update did not identify the Santa Clara Valley Basin as being in a condition of overdraft. Furthermore, reports on the water quality and level released by the Santa Clara Valley Water District as recently as January 2011, do not suggest that the basin is in a condition of overdraft. Groundwater levels are not expected to drop based on the precautions taken by the City of Morgan Hill, as well as the Santa Clara Valley Water District. However, it should be noted that the groundwater level in the both the Llagas Subbasin and the Coyote Valley subarea have been recorded to be strongly dependent on the annual rainfall. Groundwater levels drop sharply and recover quickly during dry and wet periods. Precautions taken by the City and SCVWD to manage groundwater levels include constant groundwater level monitoring, groundwater quality monitoring, and water conservation efforts throughout the District.

Recycled Water

Wastewater from Morgan Hill and Gilroy is treated to a tertiary level at the South County Regional Wastewater Authority (SCRWA) facility in southeast Gilroy. SCVWD owns the distribution system. Recycled water is distributed to ten irrigation customers in the

Gilroy area with a combined usage of 700 acre feet per year. At this point, there are no recycled water distribution lines to serve Morgan Hill.

Emergency Preparedness

Water Supply Hazards

The Water Operations Division is on call 24/7 and is prepared to respond to any leaks or breaks in a timely manner, and is able to be on site within 30-minutes of dispatch.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 10.23 million gallons (MG). This storage capacity can provide 20 hours of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

Morgan Hill does not have interties to any other water purveyor in the area.

WATER DEMAND

The City of Morgan Hill water system currently serves approximately 37,950 people within its service area. In the recent past, the population of Morgan Hill increased dramatically, with growth rates between 1975 and 1980 approaching 15 percent per year. However, population growth in Morgan Hill has since been controlled by the "Residential Development Control System" (RDCS) that limits the number of residential building allotments in any given year. Due to the RDCS, the City's population is expected to grow at a more modest rate through the UWMP's planning horizon.

Usage of water per capita per day has shown significant fluctuation during the last fifteen years. Consumption has ranged from a low 155 gallons per capita per day (gpcd) in 1991 at the height of a drought to a maximum of 265 gpcd in 1987. The average use per day during the period from 2000 through 2010 was 194 gallons per person.

In 2010, the City used 6,778 acre feet of water from the Llagas and Coyote Valley Subbasins as measured at metered locations throughout the City. The City of Morgan Hill projected water demands to 2030 are set out in Figure 12-5 below. The City anticipates a dip in demand in 2020 and then continued growth in demand through 2030.

Figure 12-5: Total Water Demands- Projected (AFY)

Water Demand	2005	2010	2015	2020	2025	2030
Total Water Deliveries and Projected	7,240	6,778	8,340	7,922	8,365	8,908
Sales to Other Agencies	n/a	n/a	n/a	n/a	n/a	n/a
Additional Uses/Demands and Losses	656	555	683	648	685	729
Total Use/Demands	7,896	7,333	9,023	8,571	9,049	9,637

Source: Adapted from City of Morgan Hill, 2010 Urban Water Management, Table 3.2.9, pages 3-13.

The City has anticipated solely using groundwater to provide water for its customers. Although the supplies are great enough to be met for the next three years in the event of a drought, continuing to pump such quantities from the basins outweighs the water replenished by rainfall and groundwater recharge. This could potentially result in overdraft conditions of the basins. In this event, the City would have to reduce demand by implementing water conservation measures to prevent overdraft. Implementation of such measures would be determined by monitoring the groundwater recharge and groundwater levels. The City would also work closely with the Santa Clara Valley Water District to ensure that the basins are not over pumped, resulting in overdraft conditions.

WATER INFRASTRUCTURE AND FACILITIES

The Morgan Hill water system is a comprehensive water supply, storage and delivery system. The system consists of 23 pressure zones. A total of 17 wells located throughout the City are capable of producing a current Summer volume of 15.7million gallons per day (MGD), with a pump capacity of 10,903 gallons per minute (gpm). A new well was placed into service in 2010. There is one standby well with high levels of nitrate that can be utilized for emergency purposes.

Water Treatment Facilities

Morgan Hill does not have any water treatment facilities. Groundwater is lightly chlorinated for water quality purposes.

Water Storage Facilities

The City has 13 active storage tanks with a combined storage capacity of 10.23 MG. There are three large tanks with a capacity of 7.0 MG, and nine smaller tanks with a combined capacity of 3.23 MG.

Conveyance and Distribution Facilities

The water distribution system is composed of approximately 165 miles of distribution lines. The distribution system also consists of 10 booster stations each with at least two pumps, 120 pressure reducing valves, 1,796 fire hydrants, 2,109 backflow prevention devices, and 12,132 water service connections. The system also includes an automated Supervisory Control and Data Acquisition (SCADA) System that controls distribution of water throughout the system.

The City reported that in calendar year 2010 there were 10 main line breaks or leaks, and 127 service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies seven capital improvement projects scheduled over the five-year planning period. Particular focus is being placed on water mains and booster pumps. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment which evaluates the vulnerability of water sources to contamination, the City's municipal wells are vulnerable to the following activities associated with contaminants detected in the water supply: irrigated crops; animal feeding operations; and low density septic systems. The City reports that wells are tested monthly to monitor the presence of these contaminants.

The City continues to test for perchlorate (salts derived from perchloric acid) resulting from a perchlorate plume originating at the Olin Site in Morgan Hill. The City has tested for perchlorate since February of 2003. For 2010, perchlorate testing by the City indicated that the maximum contaminant level (MCL) of 6 parts per billion (ppb) had not been exceeded.

The City also has well sites with detected levels of hexavalent chromium. While there is no current drinking water standard for hexavalent chromium, the City may be required to implement additional treatment facilities in the future.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

The City of Morgan Hill does not treat water derived from the City's municipal wells. Groundwater is lightly chlorinated for water quality purposes.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Morgan Hill did not have any health based violations or monitoring and reporting violations during the 2000-2010 period.

The City's 2010 Water Quality Report indicates that the City's potable water supply from groundwater sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected weekly throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment. Of the parameters tested, none were found to be higher than CDPH allows.

The CDPH Annual Water System Sanitary Survey was conducted in June and July 2011, with the following items identified for follow-up action (with status in parentheses):

- Provide engineering report for current demand and capacity of the water system (report being prepared by Akel Engineering for completion in November 2011);
- Complete the cross-connection control program by taking steps to resolve delinquent assembly tests (City will test delinquent assemblies and charge customers beginning in November 2011);

- Reduce the number of Disinfection By-product samples taken (in progress); and
- Provide Bacti tests for all water main breaks that require the water pressure in the water main to be reduced to less than five pounds per square inch (this has been implemented).

The survey also identified minor deficiencies at five storage tanks. These deficiencies have been remedied by the City.

CITY OF MORGAN HILL
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Morgan Hill is 37,882.
- ABAG estimates that Morgan Hill will grow by 25 percent over the next 25 years to an estimated population of 47,900.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Groundwater supplies are adequate to meet projected needs into the future; however in the event of a drought, the City would have to reduce demand by implementing water conservation measures to prevent overdraft.
- The City has anticipated solely using groundwater to provide water for its customers. If continued pumping of planned quantities from the basins outweighs the water replenished by rainfall and groundwater recharge, overdraft conditions of the basins may occur. In this event, the City would have to reduce demand by implementing water conservation measures to prevent overdraft.
- The Morgan Hill water supply and distribution system has sufficient capacity to serve all water customers within its service area.
- An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 10.23 million gallons. This storage capacity can provide approximately 20 hours of emergency water under a maximum daily demand scenario.
- The City provides high quality water based on city compliance with drinking water regulations. The City did not have any health based violations during the 2000-2010 period.
- The City plans to construct an additional well that will increase total pumping capacity by 388 acre feet per year (AFY) to 18,442 AFY starting in 2015. This pumping capacity will then be sufficient to serve the community until 2035.
- The City continues to test for perchlorate (salts derived from perchloric acid) resulting from a perchlorate plume originating at the Olin Site in Morgan Hill. The

City has tested for perchlorate since February of 2003. For 2010, perchlorate testing by the City indicated that the maximum contaminant level (MCL) of 6 parts per billion (ppb) had not been exceeded.

- The City also has well sites with detected levels of hexavalent chromium. While there is no current drinking water standard for hexavalent chromium, the City may be required to implement additional treatment facilities in the future.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Morgan Hill water system has had higher expenditures than revenues over the past two fiscal years, as a result of lower water sales revenue.

- The City Council adopted new water rates on July 27, 2011 which call for a 10.0 percent increase in 2012, and a 3.5 percent increase year for 2013, 2014, 2015, and 2016. These annual increases are intended to allow the City to generate sufficient revenues to maintain the Water Operations Fund with a positive balance.

- The City has a capital improvement program that is designed to maintain the water system. These include well, tank and booster pump upgrades.

Status and Opportunities for Shared Facilities

- The City water system is a stand-alone enterprise, without any connections or interties to any other water system.

- The City collaborates with the Santa Clara Valley Water District on groundwater issues, and is a member of a joint powers authority with the City of Gilroy on the South County Regional Wastewater Authority.

- The City does not receive any recycled water from the South County Regional Wastewater Authority.

- The City has not identified further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- Efficiencies have been gained recently by utilizing scheduling software to monitor preventative maintenance, including well pumps on a quarterly basis. The meter calibration program has reduced water wastage by 200,000 gallons per month. Well water pumping occurs during off peak hours from 12:00 to 6:00 AM.

- It is recommended that the City initiate annexation of the Holiday Lakes Estates Subdivision which is an unincorporated island located within the City's urban service area. This area currently receives city water service.

13. CITY OF MOUNTAIN VIEW

AGENCY OVERVIEW

The City of Mountain View was incorporated on November 7, 1902, and became a charter city on January 15, 1952. Mountain View is a full service city providing a range of services including: community development (planning and zoning, building inspection, economic development, and neighborhoods and housing); redevelopment; police protection, fire protection; public works (transportation, property management, engineering, environmental sustainability, water, wastewater, solid waste and streets); community services (performing arts center, recreation, parks and trails, senior programs and services, Shoreline golf links and regional wildlife area, youth and teen services, and community gardens); library services; and public art. City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the October 2007 Northeast Santa Clara County Service Review.

Water service for the City is provided through the Public Services Division of the Public Works Department. This Division also includes Safety, Engineering and Environmental Compliance, Utilities Maintenance (water and wastewater systems) and Streets, and Landfill Maintenance. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Operations Section of the Public Services Division provides drinking water to residential, commercial, industrial and institutional customers within the City. The Water Operations Section oversees water quality, water distribution, system maintenance including water meters, backflow prevention, leak detection, and a recycled water system. Mountain View also has its own water conservation program (including residential, business, landscape, and classroom materials and presentations), and is supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The City's water service area includes all water service customers within the City Limits except for isolated pockets in the southern portion of the City served by the California Water Service Company. There is one outside connection, an 8-inch meter service to the Shenandoah Housing complex used for military family housing, and located within a 19.3 acre unincorporated island surrounded by the City of Mountain View. Title to this property is held in the name of the United States. The City of Mountain View has informed LAFCO that they have deferred annexation of the island until such time as the property is

converted to private ownership. Water service from the City began in 1987 and provides service to approximately 126 residential dwellings.

The City of Mountain View has three different sources of potable water, and one recycled water source. Potable water is derived from seven municipal wells; from imported water from the State Water Project (SWP) and the federal Central Valley Project (CVP) through SCVWD; and from the San Francisco Public Utilities Commission (SFPUC) Regional Water System. Recycled (non-potable) water for irrigation purposes is produced at the Palo Alto Regional Water Quality Control Plant (RWQCP).

Service Area

The City serves the entirety of the area within its bounds except for nine pockets (with approximately 600 service connections including Mountain View High School and Huff Elementary School and Park) served by the California Water Service Company (Cal Water). The City provides water to approximately 98 percent of the water customers in the city, with Cal Water providing service to the other 2 percent.

Services to Other Agencies

Mountain View does not provide water services to other agencies.

Contracts for Water Services

The City contracts with SCVWD and SFPUC for treated potable water, and purchases recycled water from the Palo Alto RWQCP.

Collaboration

The City is a member of the Bay Area Water Supply and Conservation Agency (BAWSCA), participated in the development of the BAWSCA Water Conservation Implementation Plan, and participated in the SCVWD Integrated Water Resource Plan.

Boundaries

The Mountain View water service boundary is the same as the City Limits. The present bounds encompass approximately 12.3 square miles. Mountain View is located within the Santa Clara Groundwater Sub-basin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government with a seven-member City Council elected at-large and a City Manager appointed by the City Council.

Councilmembers are elected to four-year overlapping terms. The City Charter limits Councilmembers to serving no more than two consecutive terms. The Mayor and Vice Mayor are selected by the Council to serve one-year terms. Current member names, positions, and term expiration dates are shown in Figure 13-1.

The City Council meets on the second and fourth Tuesday of each month in the City Council Chamber. Agendas are posted on the City website, and are available at the City Clerk's Office and the Library. Agendas, minutes and reports are available on the City website. Council meetings are televised live and webcast on City Cable Channel 26. Meeting videos are also available for review on the City website. Meeting archives are available from March 2008. The City does not have a water-related advisory commission or committee.

Figure 13-1: City of Mountain View City Council

City of Mountain View				
Public Services Division Contact Information				
Contact:	Gregg Hosfeldt, Assistant Public Works Director			
Address:	231 N. Whisman Road, Mountain View, CA 94043			
Telephone:	650-903-6205			
E-mail/Website:	gregg.hosfeldt@mountainview.gov/www.mountainview.gov			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Margaret Abe-Koga	Councilmember	January 2015	Elected At-large	4 years
Ronit Bryant	Councilmember	January 2015	Elected At-large	4 years
John Inks	Councilmember	January 2013	Elected At-large	4 years
Mike Kasperzak	Vice Mayor	January 2013	Elected At-large	4 years
Laura Macias	Councilmember	January 2013	Elected At-large	4 years
Tom Means	Councilmember	January 2013	Elected At-large	4 years
Jac Siegel	Mayor	January 2015	Elected At-large	4 years
Meetings				
Date:	Second and Fourth Tuesday at 6:30 PM			
Location:	Council Chamber, City Hall, 500 Castro Street, Mountain View			
Agenda Distribution:	Posted on the City website, and available at the City Clerk's Office and the Mountain View Public Library. Subscriptions available my mail or e-mail.			
Minutes Distribution:	Available on the 'Council Agenda and Public Records' page of the City website, along with Agendas, Reports, Resolutions, and Ordinances.			

The Public Services Division webpage offers a variety of information on the Division's primary functions of safety, engineering, water, wastewater, streets and landfill maintenance. A basic explanation of water supply and distribution is provided on the Water Conservation webpage and in the Annual Water Quality Report, along with water service information through a 'frequently asked question' (FAQ) format on the Public Services Division webpage. Links are readily accessible to the 2010 Urban Water Management Plan, Annual Water Quality Reports, current projects, utility billings and rates, conservation programs, and recycled water. A detailed contact list of personnel is not provided, but inquiries can be phoned in to the Public Services Division. An electronic complaint form is available from the City website home page under 'Ask Mountain View.'

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Assistant Public Works Director or call the Public Services Division. In calendar year 2010, there were a total of 71 water-related complaints; 10 for odor/taste, 11 for color, 19 for turbidity, zero for pressure, and 31 miscellaneous (hardness, fluoride, source, or compliance). These complaints accounted for 0.41 percent of the 17,365 customers served.

The City of Mountain View demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Operations Section responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Operations Section are under the direction of the Assistant Public Works Director for Public Services, who reports to the Public Works Director, who reports directly to the City Manager. As an integrated department, the Public Works Department has a total of 116.5 full time equivalent (FTE) positions organized into four major functions: Transportation and Business Services; Engineering; Fleet and Facilities; and Public Services. The Water Operations Section has a total of 38.15 FTE positions dedicated to the Water Enterprise Fund, as detailed in Figure 13-2.

Figure 13-2: Water Service Staffing

Position	FTE		Position	FTE
Public Services			Administration and Safety	
Assist Public Works Director	1.0		Safety & Training Administrator	1.5
			Senior Administrative Analyst	1.0
Engineering			Customer Service Technician	0.5
Principal Engineer	1.0		Secretary	1.0
Senior Civil Engineer	0.7		Office Assistant III	1.25
Junior/Asst/Assoc Engineer	0.5		Administrative Analyst I/II	0.4
Senior Public Works Inspector	0.15			
			Water Operations	
Engineering & Enviro Compliance			Water Meters Supervisor	1.0
Engineering Assistant II	0.1		Water Resources Technician	1.0
Systems Coordinator/Technician	0.3		Cross-Connection Control Specialist	1.0
			Meter Service Worker III	1.0
Utility Systems			Meter Service Worker I/II	1.0
Deputy Public Works Director	0.1		Water Utility Worker I/II	5.0
Utilities Services Manager	0.5		Water Supervisor	1.0
Street & Landfill Closure Manager	0.05		Water Conservation Coordinator	1.0
Transportation/Business Manager	0.1		Water Quality Technician	1.0
Utilities Systems Supervisor	0.7		Senior Water System Operator	2.0
Senior Utilities Systems Technician	1.7		Water System Operator	2.0
Street Supervisor	0.15		Utilities Inspector/Locator	0.45
Street Maintenance Worker III	0.3		Heavy Equipment Operator	0.65
Street Maintenance Worker I/II	0.45		Water Utility Worker III	2.0
			Wastewater Utility Worker I/II	0.15
			Warehouse Worker	0.25
			Senior Systems Analyst	1.0
			IT Analyst II	1.0
			Buyer	0.5
			Account Tech	1.0
			Total	**38.15**

Performance evaluations of all employees are conducted annually. The probation period for new employees is twelve months, with evaluations at six and twelve months. The agency tracks the employees' workload through work logs, service requests, and construction management software.

Operational efficiencies are being improved by replacing water meters with AMR (automatic meter reading) water meters, allowing for more efficient recording of water use. Under this program, around 600 meters per year are being replaced.

The City adopted the 2010 Urban Water Management Plan on June 14, 2011, and updated its Water Master Plan in August 2010.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Mountain View is 74,066. The average household size is 2.31 per the United States Census.

ABAG projects that the population of Mountain View will increase to 90,600 by 2035, a 22.3 percent increase over the twenty-five year period.

The City's 1992 General Plan is currently being updated with approval expected in the Spring of 2012. The 2030 General Plan Strategy contemplates growth to occur in four areas: North Bayshore; East Whisman; San Antonio, and El Camino Real. These areas will provide a mix of commercial and residential uses including increased density for office buildings, 'village centers' with retail, office and residential uses, and entertainment facilities, hotels and/or conference centers.

The Environmental Management Element of the 1992 General Plan contains policies and action items to address water supply, water conservation, water distribution, and water quality.

FINANCING

Financial Adequacy

The Water Supply and Distribution Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services. The Water Enterprise Fund accounts for the revenues and expenditures associated with the provision of retail water service to water customers within the city limits except for Cal Water customers. No General Fund monies are utilized by the Fund. The primary costs associated with the water service include purchase of water, staffing to operate and maintain the water distribution system, ongoing maintenance and major capital replacement and improvement projects, and an adequate reserve.

Revenue Sources

In FY 08-09, the Water Fund generated $19.8 million, in FY 09-10 the Fund generated $20.7 million, and in FY 10-11 the Fund was projected to generate $20.3 million.

In FY 10-11, the Water Fund generated in excess of $20 million in revenues from the following sources:

Investment Earnings	$530,000	2.6%
Water Sales	$18,182,000	89.7%
Recycled Water Sales	$633,000	3.1%
Other	$936,000	4.6%
Total	$20,281,000	100%

As detailed above, significant revenues are derived from water sales. However, in FY 10-11, water purchases were $865,000 below the budget estimate, requiring a reduction in expenditures of $498,000. (Refer to Figure 13-3.) Water sales for FY 11-12 are estimated to be $1.1 million below budget, while recycled water revenue is expected to be $173,000 higher than budget. The City's water capital improvement program also comprises $1.7 million of funding. 'Other' revenues are associated with 'development costs' for new construction.

Rates

A significant portion of the Water Fund's total costs are related to the cost of purchased water. With the SFPUC rate increase of 38.4 percent for FY 11-12, and the SCVWD rate increase of 7.9 percent for treated water and 9.4 percent for a well water pumping fee, the City has implemented an overall 20 percent rate adjustment effective July 1, 2011. Based on wholesale water rate projections by SFPUC, costs will increase an average of 10 percent per year over the next 10 years. SCVWD is projecting an 8 percent annual increase over the next 10 years. The City plans to conduct a rate study during FY 11-12 to review the costs associated with maintaining the water system and possible update of the rate structure.

As part of its current rate structure, the City charges an 'inclining block tier' rate which charges proportionally higher water rates for higher water users. One objective of this rate structure is to promote the reduction in water use. New rates adopted by the City Council, and the percentage change from FY 10-11 for residential customers are as follows:

Water Use per Month	Cost per Unit[105]	Percent Change
Tier 1 (up to 3 units per month)	$1.98	19.7%
Tier 2 (3 to 25 units per month)	$4.09	20.0%
Tier 3 (Over 25 units per month)	$8.12	19.7%

[105] One unit = 25 gallons per day.

Based on the anticipated costs for wholesale water, it is expected that monthly water bills for Mountain View will continue to increase in the foreseeable future.

Expenditures

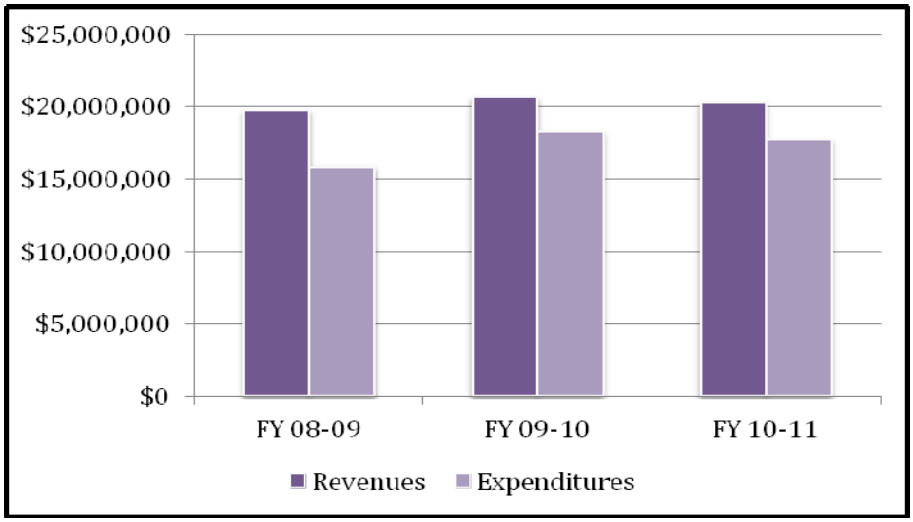
For FY 11-12, the Water Fund expenditure is expected to total $22.9 million which is 11.9 percent of the City total expenditure (all funds) of $191.7 million.

In FY 08-09, the Water Fund spent a total of $15.9 million, in FY 09-10 the Fund spent $18.3 million, and in FY 10-11 the fund was projected to spend $17.8 million. Reduced costs are attributed to reduced water purchases and lower operating costs. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 13-2.

Primary expenses in FY 10-11 were:

Operations	$7,700,000	43.3%
Purchased Water	$9,200,000	51.6%
Debt Service	$600,000	3.4%
Loan Payment	$300,000	1.7%
Total	$17,800,000	100%

Figure 13-3: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)



Capital Outlays

Annual capital project funding is included in the annual rate calculation and is reflected in the City's five-year Capital Improvement Program (CIP). Water-related projects are budgeted based on a three-year rolling average of available funds and have been increased approximately $100,000 each year. For FY 10-11, $1.53 million was budgeted, and increased to $2.07 million for FY 11-12. The current budget includes two capital improvement projects: Water Main and Service Line Replacement at $1,415,000; and Annual Water System Improvements at $314,000.

On-going projects include replacing current water meters with remote-read capable meters and the water line replacement program. Consideration is being given to accelerate the water line replacement program by $1.0 million per year.

Long-term Debt

Annual payments of $634,000 pay down debt service for the Water Fund (loan for start-up costs for the water recycling program). The total long-term obligation for the Water Fund is $7.7 million, which is repaid with future revenue.

Reserves

Estimated reserves for the Water Fund were $6,177,000 as of July 1, 2011. Of this amount, 10 percent is designated for emergencies, 5 percent for contingencies, and 10 percent for rate stabilization. This provides 75 percent (or $4,632,750) for operational reserves, which at the current reserve level would be sufficient to fund water operations for 3.1 months.

WATER SUPPLY

The City of Mountain View purchases the majority of its drinking water from SFPUC and SCVWD. These sources are supplemented by water pumped from seven active groundwater wells owned and operated by the City. Beginning in 2009, Mountain View also began receiving non-potable recycled water from the RWQCP to help meet irrigation needs, saving potable water for domestic use and offsetting groundwater pumped by a local irrigation well. In 2010, water supplies used by the City (both potable and non-potable) included 84 percent SFPUC water, nine percent SCVWD treated water, four percent groundwater and three percent recycled water.

SFPUC

The City of Mountain View receives water from the City and County of San Francisco's Regional Water System, operated by SFPUC. Approximately 85 percent of the regional system supply comes from the Tuolumne River through Hetch Hetchy Reservoir. The

remaining 15 percent comes from local watersheds through the San Antonio, Calaveras, Crystal Springs, Pilarcitos, and San Andreas Reservoirs.

In 2010, SFPUC water comprised 84 percent of the City's total water supply. The agreement between the City and SFPUC was negotiated by the Bay Area Water Supply and Conservation Agency (BAWSCA). Per the agreement, the 27 SFPUC wholesale customers have a combined supply assurance of 184 million gallons per day. The City of Mountain View's guaranteed portion of the supply assurance is referred to as the individual supply guarantee. Although the supply agreement and contract expire in 2034, the individual supply guarantee (which quantifies San Francisco's obligation to supply water to its individual wholesale customers) survives their expiration and continues indefinitely. Mountain View's individual supply guarantee is 13.46 million gallons per day (or approximately 15,077 acre feet per year (AFY)). The Mountain View contract also includes a minimum purchase amount of 8.93 million gallons per day (10,003 AFY), which the City of Mountain View agrees to buy, regardless of whether sales drop below this level. The City met this minimum purchase amount in 2010, and anticipates continued growth in its SFPUC purchases through 2035, as shown in Figure 13-3.

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies. The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

SCVWD

SCVWD supplies the City of Mountain View with treated surface water through an entitlement of imported Central Valley Project water and the State Water Project, as well as surface water from local reservoirs. The current contractual agreement between the City and SCVWD sunsets in 2054, and allocates 1.2 mgd annual use (or 1,325 acre feet per year) and 2.46 mgd maximum daily use. The City anticipates making use of the entire SCVWD contractual amount through 2035.

Groundwater

Figure 13-4: City of Mountain View Potable Water Supplies

Supply Source	Total Water Supplies (MGD)
SFPUC (58%)	13.46
SCVWD (5%)	1.2
Groundwater (37%)	8.5*
Total	23.16

Source: 2010 City of Mountain View, Water System Master Plan, Table 8-6, Existing Groundwater Well Data
Notes: *From individual maximum pumping rates from 7 active wells.

Groundwater pumping provides up to half of the County's water supply during normal years. Total groundwater pumping from the Santa Clara Subbasin in 2009 was approximately 113,000 acre feet. Of this, the City of Mountain View extracted approximately 436 acre feet, or less than one percent.

The City of Mountain View has seven active municipal wells and one inactive well. The seven production wells have an average flow rate of 3,100 gallons per minute.

Combined with existing groundwater pumping capabilities, Figure 13-4 shows the City's total available water supplies.

Figure 13-5 shows the City's water supply production over the past three years, along with the last five-year average.

Figure 13-5: Historical Water Supply Production

Year	Supply Source (AFY)					
	SFPUC	SCVWD Treated	Total Imported	Groundwater	Recycled Water	Total
2010	9,476	1,007	10,484	476	389	11,348
2009	10,696	1,190	11,886	436	134	12,456
2008	11,505	1,330	12,635	569	0	13,404
5-Year Average	10,950	1,227	12,117	479	NA	12,656

Source: From 2010 City of Mountain View, UWMP, Table 5-4, Historical Water Supply Production, page 5-20.

In the future, based on numerous factors including contractual limits, natural hydrology, anticipated demands, etc., the City's anticipated or projected water supply production is provided in Figure 13-6.

Figure 13-6: Projected Water Supply Production

	Projected Water Supply Production (AFY)				
	2015	2020	2025	2030	2035
SFPUC Treated	11,036	11,097	11,581	12,105	12,645
SCVWD Treated	1,325	1,325	1,325	1,325	1,325
Groundwater	252	254	263	274	285
Potable Supply	12,613	12,675	13,169	13,704	14,255
Recycled Supply	1,026	1,610	1,610	1,610	1,610
Total	13,639	14,285	14,779	15,314	15,865

Source: From 2010 City of Mountain View, UWMP, Table 5-6, Projected Water Supply Production, page 5-22.

Recycled Water

The City of Mountain View uses recycled water from the Palo Alto RWQCP for irrigation of public and private landscapes in the North Bayshore Area (currently 389 AFY). For more information on the Palo Alto Regional Water Quality Control Plan, refer to Chapter 26.

The "Regional Water Recycling Facility Planning Study for the Mountain View/Moffett Field Area Water Reuse Project" included a market assessment to estimate potential recycled water use within the project area (considered 'near-term' customers) and potential recycled water use in an expanded feasibility plan service area (considered 'long-term' customers). The market assessment estimated that 1,480 to 1,860 AFY of recycled water could be used within the Mountain View/Moffett Field area near-term, and that an additional 1,830 to 3,970 AFY of recycled water could be used in other areas of Mountain View, Palo Alto, East Palo Alto and Los Altos long-term. The potential demand for the near-term uses within the City of Mountain View's water service area represents approximately 10 percent of the City's total water demand.

Emergency Preparedness

Water Supply Hazards

The Public Services Division is prepared to respond to any leaks or breaks in a timely manner, and is able be on site within 30 minutes of dispatch.

In 2010, a seismic vulnerability assessment of Mountain View's water system was prepared. Recommendations from the study include restraining emergency generators, upgrading of the Whistman and Miramonte Reservoirs roofs, valve vault improvements, and upgrading the interconnections with Sunnyvale, Palo Alto, SFPUC, and SCVWD.

As part of its 2010 Urban Water Management Plan, the City has prepared a Water Shortage Contingency Plan and a Catastrophic Supply Interruption Plan.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 17.3 million gallons (MG). This storage capacity can provide 22 hours of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

Regarding transfer opportunities, the City is currently connected to the Cities of Palo Alto and Sunnyvale for use during emergency situations.

WATER DEMAND

The City of Mountain View's water system is expected to be able to meet projected water demand during normal and single dry-year scenarios. Anticipated future demands will be met through a combination of potable supply sources, recycled water, water conservation, and water shortage contingency measures. During multiple dry year periods, however, Mountain View anticipates potable supply shortfalls (see Figure 13-7). Projected shortfalls are expected to increase during the later years of a drought, and reach 14 and 18 percent during the fifth successive dry year in 2015 and 2025, respectively.

Figure 13-7: Multiple Dry-Year Supply and Demand Comparisons

Supply Source	Projected Water Supply and Demand through 2025 (AFY)								
	2015			2020			2025		
	Years 1 & 2	Years 3 & 4	Year 5	Years 1 & 2	Years 3 & 4	Year 5	Years 1 & 2	Years 3 & 4	Year 5
SPFUC	11,036	10,938	9,498	11,097	10,938	9,498	11,581	10,938	9,498
SCVWD Treated	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,060	1,060
Groundwater	252	252	252	254	254	254	254	263	263
Potable Supply	12,348	12,251	10,810	12,410	12.252	10,811	12,904	12,262	10,821
Potable Demand	12,613	12,613	12,613	12,675	12,675	12,675	13,169	13,169	13,169
Surplus/ Deficit	-2%	-3%	-14%	-2%	-3%	-15%	-2%	-7%	-18%

Source: From 2010 City of Mountain View, UWMP, Table 6-4, Multiple Dry Year Supply and Demand Comparison, page 6-15.

WATER INFRASTRUCTURE AND FACILITIES

The Mountain View water system is a comprehensive water storage and delivery system. The City is divided into three pressure zones. Zones 1 and 2 comprise the northerly three-fourths of the City and are supplied by three SFPUC turnouts (No. 5, 7 and 14) along the Bay Division Pipelines No. 3 and 4. Zone 3 comprises the southerly one-fourth of the City and are supplied by one SCVWD turnout (Miramonte Road). The City's seven production wells are located in the southerly half of the City.

Water Treatment Facilities

Mountain View does not have any water treatment facilities. Fluoride treatment is added to the wells, and to the SCVWD treated water. SFPUC fluoridates its water before delivery to the City.

Water Storage Facilities

The City has four active storage reservoirs (Graham, Miramonte No. 1, Miramonte No. 2, and Whisman), with a combined capacity of 17.3 MG. Graham and Wishman have an associate pump station; the Miramonte reservoirs are gravity fed.

Conveyance and Distribution Facilities

The water distribution system is composed of approximately 172 miles of pipe.. Over 63 percent of the distribution pipes were installed in the 1950's and 1960's. The City utilizes cast iron pipe (CIP), with asbestos concrete pipe (ACP) used north of Middlefield Road due to its resistance to corrosive soils. Replacement pipes are polyvinyl chloride. The Water Master Plan estimates that 28,844 lineal feet of pipe will need to be replaced, primarily because of deficiencies in fire flow demands.

The system only requires 13 pressure reducing valves because the overall operating pressure is well below 100 pounds per square inch (psi). The City has 1,993 fire hydrants, 2,512 backflow prevention devices, and 17,365 water service connections. The system also includes the automated Supervisory Control and Data Acquisition (SCADA) System that controls distribution of water throughout the system.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies two capital improvement projects scheduled over the five-year planning period. Particular focus is being placed on replacement of water lines and water meter upgrades. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

The City of Mountain View does not treat water derived from the City's municipal wells, but does provide fluoride treatment. Treated water is received from the SFPUC Regional Water System and the SCVWD water treatment plants. The City's water wholesalers, SFPUC and SCVWD, conduct their own testing. Of the parameters tested, none were found to be higher than the California Department of Public Health (CDPH) allows.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Mountain View did not have any health based violations or monitoring and reporting violations during the 2000-2010 period.

The City's 2010 Water quality Report indicates that the City's potable water supply from all sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment.

The CDPH Annual Water System Sanitary Survey conducted in July of 2011 identified three deficiencies: cleaning the interior walls of the Miramonte reservoir; screening the air release valves on pumps at Graham Station; and adjusting and screening air release valves on the SFPUC No. 5 and 7 turnouts. Reservoir cleaning will occur during the winter months; all other deficiencies have been addressed.

CITY OF MOUNTAIN VIEW
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Mountain View is 74,066.
- ABAG estimates that Mountain View will grow by 22.3 percent over the next 25 years to an estimated population of 90,600.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- The City anticipates being able to purchase sufficient water to meet its needs under its current contracts with the San Francisco Public Utilities Commission and the Santa Clara Valley Water District.
- Minor supply deficiencies may occur beginning in 2015, and will be exacerbated should drought conditions occur. The City would be able to increase the amount of groundwater pumped to meet this deficiency, thus supply is projected to be sufficient to meet demand out to 2035.
- The Mountain View water supply and distribution system has sufficient capacity to serve all water customers within its service area, and has planned for eventually serving the Cal Water parcels should that be necessary.
- Continued emphasis on water conservation, use of recycled water, and higher water rates are expected to lessen the City's demand for water.
- The City anticipates utilizing recycled water to make up about ten percent of its total water supply between 2010 and 2035.
- An emergency backup water supply is provided by existing storage reservoirs, with an effective capacity of 17.3 million gallons (MG). This storage capacity can provide approximately 12 hours of emergency water under a maximum daily demand scenario.
- Capital improvement funding is provided for an aggressive program to replace the City's aging water lines. The project schedule calls for replacement of approximately one mile of pipe per year. Consideration is being given to accelerate the water line replacement program by $1.0 million per year.

- The City provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough district response to California Department of Public Health infrastructure and operational concerns.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Mountain View water system has sufficient financial resources to provide an adequate level of service. The Fund has been able to generate sufficient revenues to stay ahead of the rising expenditure curve.

- Water rate increases will be required over the next several years to finance SFPUC Regional Water System seismic improvements, increased pumping fees from SCVWD, and reduced retail water sales.

- The City has an ongoing multi-year capital improvement program that includes repair, replacement and rehabilitation projects that are designed to improve the overall water storage and distribution system, including the replacement of substandard water lines.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system and the SCVWD distribution system.

- The City shares emergency water line interties with Palo Alto and Sunnyvale for use during emergency situations.

- The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), serves on several Santa Clara Valley Water District Subcommittees, and participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- Future opportunities may present themselves with respect to the City serving the water service pockets currently served by the California Water Service Company.

- Operational efficiencies are being improved by replacing water meters with AMR (automatic meter reading) water meters, allowing for more efficient recording of water use. Under this program, around 600 meters per year are being replaced.

- No government structure options have been identified for Mountain View.

14. CITY OF PALO ALTO

AGENCY OVERVIEW

The City of Palo Alto was incorporated on April 23, 1894, and became a charter city on July 1, 1909. Palo Alto is a full service city providing a range of services including: planning and community environment (planning, transportation, building inspection and code enforcement); police protection including animal control; fire protection; libraries; community services (arts and sciences, human services, community centers, art in public places, open space, parks, golf course, and recreation); and public works (public facilities, streets, sidewalks, street trees, parking lots, and storm drainage). City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and libraries) were studied in the October 2007 Northwest Santa Clara County Service Review.

The City has an integrated Utilities Department, and is the only city owned utility in California that operates its own electric, fiber optic, natural gas, water, and wastewater services. Palo Alto has been providing utility services to residential and business customers within the City since 1896. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Division of the Utilities Department provides drinking water to residential, commercial, industrial and institutional customers within the City. The Water Division oversees water quality, water conservation, system maintenance, water distribution system extensions for new development, and backflow prevention. The recycled water program is the responsibility of the Public Works Department and is presently in collaboration with the Utilities Department who are spearheading the efforts in pursuing an EIR to expand the recycled water service. Palo Alto has a water conservation program for both residential and commercial customers, is a signatory to the California Urban Water Conservation Council (CUWCC) best management practices, and is supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The City of Palo Alto has two sources of potable water, and one recycled water source. Potable water is obtained from the San Francisco Public Utilities Commission (SFPUC) Regional Water System, and from emergency stand-by wells. Recycled (non-potable) water for irrigation purposes is produced at the Palo Alto Regional Water Quality Control Plant (RWQCP).

Service Area

The City's water service area includes all water service customers within the city limits with the exception of the open space areas (Arastradero Preserve, Foothills Park, Foothill Open Space Preserve, Los Trancos Open Space Preserve, and Monte Bello Open Space Preserve). Stanford University, adjacent to the City, has its own water system. There are no water service connections outside the city limits.

Services to Other Agencies

Palo Alto does not provide potable water to any other agency. The Palo Alto RWQCP provides recycled water to the RWQCP itself, the Palo Alto Golf Course, the Palo Alto Duck Pond, Emily Renzel Marsh, Greer Park, and the North Bayshore Area in Mountain View. Recycled water is also provided via water trucks to construction sites for dust suppression.

Contracts for Water Services

The City contracts with City and County of San Francisco for treated potable water.

Collaboration

The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA); serves on the SFPUC-BAWSCA Water Quality Committee, the SCVWD-San Jose Water Company Emergency Management Sub-committee, the Northern California Pipe Users Group (PUG), the Water System Distribution Roundtable, the SCVWD Groundwater Committee, and the BAWSCA Technical Advisory Committee.

Boundaries

The Palo Alto water service boundary is the same as the City Limits. The present bounds encompass approximately 25.8 square miles. Palo Alto is located within the Santa Clara Groundwater Sub-basin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government, with a nine-member City Council elected at-large and a City Manager appointed by the City Council.

Council Members are elected to four-year terms. The City Charter limits Council Members to serving no more than two consecutive terms. The Mayor and Vice Mayor are selected by the Council to serve one-year terms. Current member names, positions, and term expiration dates are shown in Figure 14-1.

The City Council meets on the first three Mondays of each month in the City Council Chamber. Agendas are posted on the City website, at King Plaza in front of City Hall, and published in the 'Palo Alto Weekly.' Agendas, minutes and reports are available on the City website.

Figure 14-1: City of Palo Alto City Council

City of Palo Alto				
Utilities Department Contact Information				
Contact:	Romel Antonio, Senior Project Engineer			
Address:	1007 Elwell Court (P.O. Box 10250) Palo Alto, CA 94303			
Telephone:	650-566-4518			
E-mail/Website:	romel.antonio@cityofpaloalto.org/www.cityof paloalto.org			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Pat Burt	Council Member	December 2012	Elected At-large	4 years
Sid Espinosa	Mayor	December 2012	Elected At-large	4 years
Karen Holman	Council Member	December 2014	Elected At-large	4 years
Larry Klein	Council Member	December 2014	Elected At-large	4 years
Gail A. Price	Council Member	December 2014	Elected At-large	4 years
Greg Scharff	Council Member	December 2014	Elected At-Large	4-years
Greg Schmid	Council Member	December 2012	Elected At-Large	4 years
Nancy Shepherd	Council Member	December 2014	Elected At-large	4 years
Yiaway Yeh	Vice Mayor	December 2012	Elected At-large	4 years
Meetings				
Date:	First three Mondays of each month at 7:00 PM			
Location:	City Council Chamber, City Hall, 250 Hamilton Avenue, Palo Alto			
Agenda Distribution:	Posted on the City website and at King Plaza in front of City Hall, and published in the 'Palo Alto Weekly.'			
Minutes Distribution:	Available on the Agendas/Minutes/Reports page of the City website; along with agendas and reports.			

The Utilities Advisory Commission (UAC) is charged with providing advice to the City Council with respect to acquisition and development of electric, gas and water resources; review of joint projects with other public or private entities which involve electric, gas or water resources; environmental implications of electric, gas or water projects; and conservation and demand management. The Commission is composed of seven members appointed by the City Council for three year terms. The UAC meets at 7:00 PM on the first Wednesday of each month.

The Utilities Department webpage offers a variety of information on the Department's primary functions of electric, water, gas, and wastewater collection. Water utility information is presented through a 'frequently asked question' (FAQ) format on the Utilities Department webpage. Links are readily accessible to the 2010 Urban Water Management Plan, Annual Water Quality Reports, current projects, and the Water Conservation programs. A detailed contact list of personnel is not provided, but inquiries can be phoned in to the Utilities Operations Division or Customer Support Services. An electronic complaint form is not available on the website.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Assistant Director of Utility Operations or call the Customer Support Services office. In calendar year 2009, there were a total of 40 water-related complaints; 17 for odor/taste, 12 for color, zero for turbidity, nine for pressure, and two for suspended solids. These complaints accounted for 0.20 percent of the 20,238 metered customers served.

The City of Palo Alto demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Division responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Utilities Department are under the direction of the Director of Utilities, who reports directly to the City Manager. As an integrated electric-water-gas-wastewater operation, the Utilities Department has a total of 251.11 full time equivalent (FTE) positions organized into five major functions: Utilities Administration; Electric and Water-Gas-Wastewater Engineering; Electric and Water-Gas-Wastewater Operations; Customer Support Services; and Resource Management. The Water Division has a total of 45.65 FTE positions dedicated to the Water Enterprise Fund, as detailed in Figure 14-2.

Figure 14-2: Water Division Staff Allocation

Position	FTE	Position	FTE
Administration		Utility Account Rep	1.0
Director of Utilities	0.3	Senior Resource Planner	0.3
Communications Manager	0.3		
Compliance Manager	0.3	Electric and WGW Operations	
Administrative Assistant	0.3	Assistant Director Utility Operations	0.3
Senior Administrator	0.3	Manager of Utility Operations – WGW	0.3
Senior Business Analyst	0.6	Coordinator – Utility Safety & Security	0.3
Program Assistant	0.6	Administrative Associate II	0.3
		Heavy Equipment Operator	2.0
Electric and WGW Engineering		Utility Locator	0.5
Assistant Director Utility Engineering	0.3	Coordinator Utility Projects	1.0
Engineering Manager - WGW	0.3	Supervisor – WGW	1.6
Utility Engineering Estimator	0.5	Supervisor Water Transmission	1.0
Engineering Tech III	0.3	Senior Water System Operator	2.0
Administrative Associate II	0.3	Restoration Lead	0.3
Business Analyst	0.5	Maintenance Mechanic – Welding	0.8
Senior Project Engineer	1.0	Utility Installer/Repairer	4.0
Project Engineer	2.0	Utility Installer/Repairer – Lead	1.25
Engineer	1.0	Water System Operator II	3.5
Inspector, Field Services	1.0	Water Meter Cross Connection Tech	3.0
		Inspector, Field Services	0.3
Customer Support Services		Field Service Representative	1.5
Asst Dir Utility – Customer Support	0.3	Senior Field Service Representative	0.5
Manager – Customer Services/MR	0.3		
Administrative Associate II	0.7	Resource Management	
Manager – Utility Market Services	0.3	Assistant Director Utility Resource Mgmt.	0.25
Senior Market Analyst	0.3	Senior Resource Planner	1.15
Customer Service Specialist - Lead	0.7	Resource Planner	0.2
Customer Service Rep	1.5	Administrative Associate II	0.2
Customer Service Specialist	0.7	Manager - Utility Rates	0.3
Utility Credit/Collection Specialist	0.3		
Meter Reader - Lead	0.3		
Meter Readers	2.0		
Utility Key Account Rep	0.5	**Total**	**45.6**

Formal performance evaluations of all employees are conducted annually, with less formal evaluations every four months. The probation period for new employees is six months, with evaluations at the end of probation. The agency tracks the employees' workload through the 'Microsoft Project' program, work logs, and service requests.

Operational efficiencies are being improved through the Geospatial Design and Management Solution project, which will place all data for electric, water, gas, wastewater,

fiber optic, traffic signal, and street light utilities on a single asset management platform using the existing GIS data base. This will allow the various utilities to interface a computer mapping system, including water system improvements and water line replacement project. In FY 10-11, the Utilities Department exceeded all of its electric, natural gas and water efficiency goals.

The City adopted the 2010 Urban Water Management Plan on June 13, 2011, and prepared a Recycled Water Facility Plan in March 2009. The Water Shortage Implementation Plan was adopted in January of 2010. Capital improvements are considered over a five-year planning period as part of the annual budget process.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Palo Alto is 64,403. The average household size is 2.41 per the United States Census. Adjacent to the City is the Stanford census designated place (CDP) which has a 2010 United States Census population of 13,809 and an average household size of 1.96 per the United States Census.

ABAG projects that the population of Palo Alto will increase to 84,000 by the year 2035, a 30.4 percent increase over the twenty-five year period.

The Palo Alto Comprehensive Plan (General Plan) 1998-2010 addresses policies and programs (including best management practices) for Water Resources as part of the Natural Environment Element. The City is currently amending its Comprehensive Plan to cover the period 2010-2020.

FINANCING

Financial Adequacy

The Water Fund is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. Because wholesale water rates have been increasing and water use has been declining (due to cooler weather and water conservation), recent revenues generated by the Water Fund have not equaled expenditures. The City has been utilizing its Rate Stabilization Reserve to make up the difference. The City's FY 11-12 budget narrative indicated that rate increases to water customers are expected to increase revenues so as to equal expenditures.

Revenue Sources

In FY 08-09, the Water Fund generated $27.1 million, in FY 09-10 the Fund generated $26.2 million, and in FY 10-11 the Fund was projected to generate $31.3 million. With a new rate increase in place, FY 11-12 revenues are expected to be in excess of $33 million.

In FY 10-11, the Water Fund generated in excess of $31 million in revenues from the sources shown in Figure 14-3.

Figure 14-3: Funding Sources

Net Sales	$ 27,248,635	86.9%
Interest Income	1,050,100	3.3%
Other Income	3,074,144	9.8%
Total	$ 31,372,879	100%

As indicated above, significant revenues are derived from water sales. The City's capital improvement program also contributes significant funds as described below.

Rates

A significant portion of the Water Fund's total costs are related to the cost of purchased water. Water supply costs increased by about 38percent in FY 11-12 and are expected to double by 2016. These increases are the result of the infrastructure projects undertaken by SFPUC to upgrade the regional water distribution system at a cost of $4.6 billion. Based on wholesale water rate projections by SFPUC, costs will increase an average of 10 percent per year over the next six years.

As a result of these wholesale price increases, the City is proposing to raise the water rate charge to its customers beginning October 1, 2011. For the nine month period (October-June) a system-wide increase of 20.9 percent is being proposed. An additional drawdown from the Rate Stabilization Reserve Fund of $2.8 million would also be required to cover the wholesale water price increase. The City has implemented an 'inclining block tier' rate structure which charges proportionally higher water rates for higher water users. One objective of this rate structure is to promote efficient water use.

Rates proposed by the City Council for residential customers for implementation effective on October 1, 2011 are shown in hundred cubic feet (CCF)106 in Figure 14-4.

[106] One hundred cubic feet (CCF) equals 748 gallons.

Figure 14-4: Water Use per Month

	Rates	Increase	% Increase
0 to 6 CCF	$3.60 per CCF	– $0.349 per CCF	– 8.8%
7 to 29 CCF	$6.08 per CCF	$0.456 per CCF	8.1%
Over 29 CCF	$7.64 per CCF	$2.016 per CCF	35.8%

In addition, the monthly meter charge for a residential 5/8 inch meter will increase from $5.00 to $10.00. A small residential customer with a 5/8 inch meter that uses 6 CCF per month will see a monthly water bill increase from $28.69 to $31.60, a $2.91 increase (10.1 percent). A medium residential customer who users 14 CCF will see an increase from $72.10 to $80.24, an $8.23 increase (11.4 percent); while a large residential customer who uses 35 CCF per month will see an increase from $190.12 to $217.28, a $27.17 increase (14.3 percent).

Based on the anticipated costs for wholesale water, it is expected that monthly water bills will continue to increase in the foreseeable future.

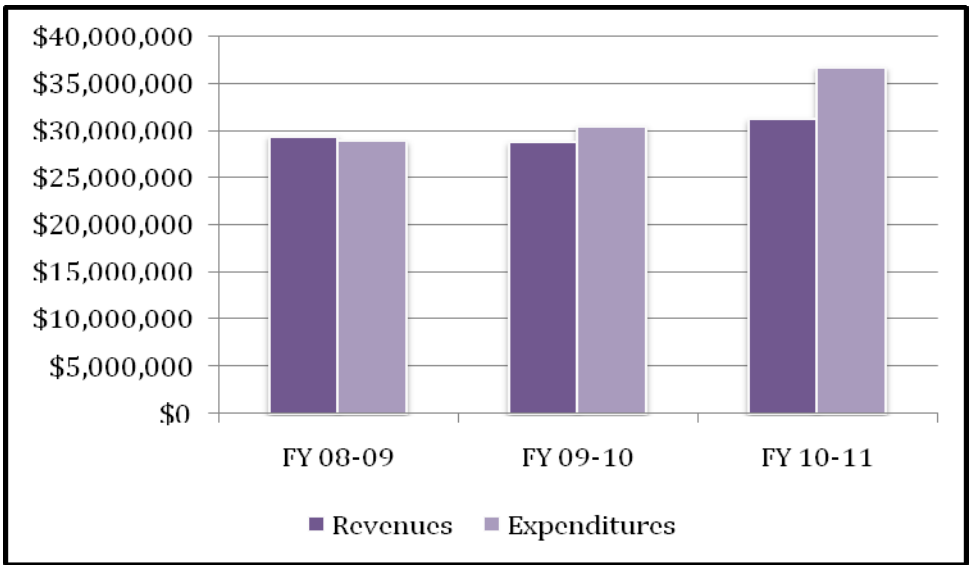
Expenditures

For FY 11-12, the Water Fund expenditure (including capital improvement projects) is expected to total $36.6 million, which is 8 percent of the City's total expenditures (all funds) of $450.2 million.

In FY 08-09, the Water Fund spent a total of $20.3 million, in FY 09-10 the Fund spent $21.0 million, and in FY 10-11 the Fund was projected to spend $36.8 million. Increased expenditures are attributed to increased costs for wholesale water and infrastructure projects. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 14-5.

Beginning in FY 10-11, Water Fund expenditures exceeded revenues. The City has been utilizing its Rate Stabilization Reserve (which stood at $17.2 million and is projected to be at $11.8 million at the end of FY 11-12) to make up the difference. The Rate Stabilization Reserve is used as a 'balancing account' to keep the Water Fund expenditures equal to fund revenues.

Figure 14-5: Expenditures and Revenues (FYs 08-10)



Primary expenses in FY 10-11 were:

Administration	**$2.7 million**	**7.3%**
Operations	6.0 million	16.3%
Purchased Water	12.0 million	32.6%
Capital Expenditures	8.9 million	24.2%
Customer Support Services	1.7 million	4.6%
Debt Service	2.9 million	7.9%
Rent	2.1 million	5.7%
Miscellaneous	0.5 million	1.4%
Total	$36.8 million	100%

Capital Outlays

The current budget includes seven capital improvement projects (CIP) totaling $4.4 million. Particular focus is being placed on replacement of aging water lines and seismic upgrades of water reservoirs (tanks). The water replacement line CIP has been ongoing since 1986 and funds approximately $3.1 million to replace 15,800 lineal feet of water mains each year. The seismic system upgrade CIP provides structural reinforcement for the Monte Bello, Corte Madera, Park, Boronda, and Dahl reservoirs, and funds $9.7 million over the next three years.

The Emergency Water Supply and Storage project is ongoing and involves a number of construction projects to enable the City to have an eight-hour supply of water available should the SFPUC go down. The project involves the rehabilitation of up to five of the City's existing stand-by wells, to construct three new wells, to construct a new 2.5 million gallon (MG) storage reservoir, and to augment the existing Mayfield Pump Station. Two new emergency stand-by wells have been completed, and the Mayfield Pump Station contract was awarded in July 2011. These improvements are funded by the $35 million revenue bond issued in 2009.

The Utilities Department also funds $215,000 annually for water meter replacement and upgrades, and $217,000 annually for fire hydrant replacements and upgrades.

Long-term Debt

A $35 million water revenue bond was issued on October 6, 2009 to finance the Emergency Water Supply project. Interest ranges from 1.80 percent to 4.65 percent, with annual payments of $825,000. Repayment will be made from net revenues of the Water Supply and Distribution Enterprise Fund and will be retired in 2035.

A $26 million utility revenue bond was issued on January 24, 2002 to finance improvements to the City's water and natural gas utility system. Interest ranges from 3.00 percent to 5.00 percent, with annual payments of $835,000. Repayment will be made from net revenues of the Water Services and Gas Services Funds and will be retired in 2026.

Reserves

The City maintains a Rate Stabilization Reserve which currently stands at $15.1 million, a Debt Service Reserve (currently $3.3 million), and an Emergency Plant Replacement Reserve (maintained at $1.0 million). The City's Rate Stabilization Reserve Policy requires that the City maintain a minimum of 20 percent of water sales revenue (currently $5,449,727) in the Rate Stabilization Reserve Fund. The current reserve is 277 percent of water sales revenues in FY 10-11. The City does not maintain a specific reserve fund for operations.

WATER SUPPLY

The City of Palo Alto depends on a combination of surface water and recycled water to meet the water needs of its customers. All surface water is pre-treated by SFPUC. The City also owns and maintains wells in order to make use of groundwater during emergency or drought conditions; however, groundwater has not been used since 1991.

The City of Palo Alto depends solely on SFPUC for domestic surface water supply through its 2009 Master Agreement. The agreement between the City and SFPUC was negotiated by the Bay Area Water Supply and Conservation Agency (BAWSCA). Per the agreement, the 29 SFPUC wholesale customers have a combined supply assurance of 184 million gallons per day. The City of Palo Alto's guaranteed portion of the supply assurance is referred to as the individual supply guarantee. Palo Alto's individual supply guarantee is 17.07 million gallons per day (or approximately 19,118 acre feet per year (AFY). As shown in Figure 14-6, the City anticipates that surface water supply requirements will not exceed 14,971 AFY through 2030, which is approximately 78 percent of the City's guaranteed supply from SFPUC.

Figure 14-6: Current and Planned Water Supply Sources

Water Supply Sources AFY	2010	2015	2020	2025	2030
SFPUC	12,263	14,253	14,157	14,353	14,971
Recycled Water	802	850	850	850	850
Total	13,065	15,103	15,007	15,203	15,821

Source: City of Palo Alto 2010 UWMP, June 2011; Table 5: Current and Planned Water Supply Sources.

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies. The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

The City's existing water well system consists of seven wells (Hale, Rinconada, Peers, Fernando, Matadero, Eleanor Pardee, and Main Library) with a combined total permitted capacity of 6,000 gallons per minute (gpm). Additionally, a new well at El Camino Park, which is currently under construction, will enhance production capacity by 1,000 gpm once completed in December 2012. Besides normal annual operational testing, these wells have not been used for City potable water since 1991. The City is in the midst of constructing and completing an emergency water supply and storage project to rehabilitate existing wells and construct additional wells and emergency storage. Upon completion of these enhancements, the City's wells would have the combined capacity to pump 11,000 gpm (or 15.8 mgd). In addition to enhancing the City's emergency water supply capabilities, the groundwater system may also be used to a limited extent for water supply during drought conditions (up to 1,500 AFY),[107] and would be capable of providing normal wintertime supply needs during extended shutdowns of the SFPUC system. Given the limitations identified for groundwater during drought conditions, and the City's sufficient available surface water supply, the City has no plans to use groundwater during a drought, at this time. Once the water supply and storage project is complete, the City will re-evaluate the feasibility of using groundwater as a supplemental supply during a drought.

Recycled Water

The City of Palo Alto operates the Palo Alto Regional Water Quality Control Plant (RWQCP), a wastewater treatment plant, for the East Palo Alto Sanitary District, Stanford University, the Town of Los Altos Hills, and the cities of Los Altos, Mountain View, and Palo Alto. Wastewater from these communities is treated by the Palo Alto RWQCP prior to discharge to the Bay.

The Palo Alto RWQCP provides recycled water to the RWQCP itself, the Palo Alto Golf Course, the Palo Alto Duck Pond, Emily Renzel Marsh, Greer Park, and the North Bayshore Area in Mountain View, including the Shoreline Golf Course. Recycled water is also provided via water trucks to construction sites for dust suppression. The Palo Alto RWQCP currently produces about 800 AFY of recycled water. Palo Alto is currently studying a potential extension of the recycled water distribution system by constructing a new recycled water line to serve the Stanford Research Park area, as well as commercial uses and public spaces along the backbone and lateral pipeline routes. For more details on the Palo Alto RWQCP, refer to Chapter 26.

[107] As specified in the EIR for the Emergency Water Supply and Storage Project, concern over prolonged groundwater pumping in the area resulted in a maximum production limitation of 1,500 AFY during a drought.

Emergency Preparedness

Water Supply Hazards

The City has undertaken a systematic program to replace aging water lines. While the water line replacement project has been on-going since 1986, it will be a number of years before all of the old lines have been replaced. The Water Division is prepared to respond to any leaks or breaks in a timely manner, and is able to be on site within 60 minutes of dispatch.

The City is addressing the vulnerability of its water storage reservoirs to seismic events. In 2009, the City Council approved an emergency water supply and storage project as described in the Capital Outlays section.

Emergency Water Supply

Once the emergency water supply and storage project is complete, the City's groundwater system would be capable of providing normal wintertime supply needs during extended shutdowns of the SFPUC system.

At the present time, the storage and water well supply capacity of the existing system can provide approximately three hours of emergency water under a maximum day demand plus fire scenario.

Interties and Back-up Supply

Palo Alto has interties with Stanford University (2), Mountain View (2), and East Palo Alto (1) for use during emergency situations.

WATER DEMAND

Water consumption has fluctuated over the last 25 years in the City. Water consumption peaked between 1985 and 1987, and then hit an all-time low in 1993 during a drought year. Consumption in 2010 was low compared to previous years, as a result of the drier than normal conditions from 2006 to 2009, conservation measures implemented during the drought, permanent water conservation measures implemented during the past 25 years, and the concurrent economic recession. Water use decreased by 27 percent during the past nine years, and by 16 percent from 2007 to 2010. The City's water consumption is forecast to remain relatively stable in the future, with a slight increase due to a rebound in the economy.

In 2010, the City sold 11,236 acre feet of surface water or 59 percent of the City's supply guarantee from SFPUC. The City of Palo Alto projected water demands, as forecasted sales to 2030, are set out in Figure 14-7. The City adjusts water sales

projections to account for its water conservation efforts, which are also called demand management measures. After incorporating the impact of demand management measures, total sales are expected to increase by 17 percent from the period 2010 to 2030. Based on these projections, the City of Palo Alto's water demand (13,702 AFY) will be well within the City's SFPUC supply guarantee (19,118 AFY) in 2030.

Figure 14-7: Past, Current and Projected Water Sales AFY

Actual Sales Data		Projected Forecast			
2005	**2010**	**2015**	**2020**	**2025**	**2030**
12,217	11,236	14,201	14,970	14,970	15,949
Demand Management Incorporated		– 1,083	– 1,651	– 1,810	– 2,247
Projected Net Water Requirements		13,118	12,986	13,160	13,702

Source: Adapted from City of Palo Alto 2010 UWMP, June 2011; Table 10: Past, Current, and Projected Water Sales, page 41.
Note: These numbers exclude recycled water usage.

The water sales projections shown in Figure 14-7 do not include sales of recycled water, which are anticipated to increase by only six percent to 850 AFY in 2030. The City projected minimal growth in the use of recycled water, as the City has not made a commitment to expand the recycled water system or its use.

Residential water use per capita in Palo Alto is one of the highest among the BAWSCA member agencies. Of the 24 cities and water districts who are members of BAWSCA, Palo Alto ranks fourth at 120 gallons per capita per day. Over the past three calendar years, the Utilities Department has exceeded its annual water reduction goal of 0.34 percent per year (as a percentage of total retail sales). In 2008, retail sales were reduced by 0.72 percent, in 2009 by 0.98 percent, and in 2010 by 1.35 percent.

WATER INFRASTRUCTURE AND FACILITIES

The Palo Alto water system is a comprehensive water delivery system. The City is divided into nine pressure zones. Zones 1, 2 and 3 are located in the lower elevations of the City (generally northwest of the Foothill Expressway), while Zones 4, 5, 6, 7, 8, and 9 extend south into the higher elevations and the open space areas.

The City receives its potable water from SFPUC at five connection points (Lytton, California, Page Mill, Arastradero, and Sand Hill). Water received from SFPUC is treated and fluoridated.

Water Treatment Facilities

Palo Alto does not have any water treatment facilities.

Water Storage Facilities

The City has six water storage reservoirs with a combined storage capacity of 10.5 million gallons (MG); with a new 2.5 MG storage tank, plus an additional emergency well currently under construction. The existing reservoirs are in the process of being seismically retrofitted to further stabilize the City water supply system and ensure reliability. These tanks are currently utilized to maintain optimum water pressure between zones, and are a source for normal potable water use and for emergency purposes.

Conveyance and Distribution Facilities

The City's water system is composed of approximately 50 miles of 12-inch to 30-inch diameter transmission lines and over 160 miles of 4-inch to 10-inch diameter distribution mains. There are still remaining approximately 15 miles of 4-inch diameter pipes, which are being replaced with 8-inch diameter lines, which is the City's current minimum standard.

The City's water system also consists of seven booster pump plants (Lytton, Mayfield, Quarry, Corte Madera, Boronda, and Dahl) each with two to three pumps, one of which is on standby for emergency purposes. The system also features eight pressure regulating stations, 1,944 fire hydrants, 287 City-owned backflow prevention devices, and 20,238 water service connections. The system also includes the automated Supervisory Control and Data Acquisition (SCADA) System that controls distribution of water throughout the system.

When the City's water main replacement program was first incepted in the mid 1980's, over 60 percent of the water main pipelines were constructed prior to the 1960's. The 1960's vintage pipes are approaching their estimated 50-year useful service life and are in need of replacement. The City's annual water capital improvement project replaces structurally deficient water mains and appurtenances. Some mains are inadequate in size to supply required flows and pressures for fire protection, and others are subject to recurring breaks. Mains are selected by researching the maintenance history of the system and identifying those that are undersized, corroded, and subject to breaks. The rate of main replacement was increased from one mile per year to three miles per year in Fiscal Year 93-94. In addition, an analysis of cost effective system improvements was initiated in the same year. This analysis helped determine the best materials and construction methods to use with a goal of reducing the accelerated main replacement program's cost.

The City reported that in calendar year 2010 there were 23 main line breaks or leaks, and 22 service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies seven capital improvement projects scheduled over the five-year planning period. Particular focus is being placed on replacement of water lines, rehabilitation and maintenance of water tanks, and replacement of water meters and fire hydrants. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations, with the exception of the emergency interties.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

The City of Palo Alto does not treat water derived from the City's stand-by wells other than adding disinfectant. Treated water is received from the SFPUC Hetch Hetchy system. The City's water wholesalers, SFPUC and SCVWD, conduct their own testing. Of the parameters tested, none were found to be higher than CDPH allows.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Palo Alto had one violation during the 2000-2010 period. This was a Health Based Violation in July 2010 for coliform which has been cleared by State Administrative Order without penalty.

The City's 2010 Water Quality Report indicates that the City's potable water supply from all sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment. Of the parameters tested, none were found to be higher than CDPH allows.

The most recent water system inspection by CDPH (December 2010 and January 2011) identified seven minor deficiencies which have been corrected by the City.

CITY OF PALO ALTO
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Palo Alto is 64,403.
- ABAG estimates that Palo Alto will grow by 30.4 percent over the next 25 years to an estimated population of 86,803.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- The City will be able to purchase sufficient water to meet its needs under its current contract with the San Francisco Public Utilities Commission.
- The Palo Alto water supply and distribution system has sufficient capacity to serve all water customers within its service area.
- Water use decreased by 27 percent during the past nine years, and by 16 percent from 2007 to 2010. The City's water consumption is forecast to remain relatively stable in the future.
- Continued emphasis on water conservation, rebates for water efficient appliances, and an 'inclining block tier' water rate structure are expected to result in static demand for water.
- The City is placing increased emphasis on utilizing recycled water for landscape irrigation. The Public Works Department and the Utilities Department are collaborating on a project to expand the recycled water service beyond the 850 acre feet per year currently projected. Recycled water currently makes up six percent of the City's water supply.
- The Palo Alto water system has seven emergency wells to address any water supply shortfalls and as backup should the SFPUC system be out of service. The City is currently implementing an Emergency Water Supply and Storage project to augment its emergency supply.
- The City currently has adequate water storage to provide three hours of water in an emergency. With the addition of water storage and improvements to the well

system under the Emergency Water Supply and Storage project, an eight hour emergency water supply will be available.

- The Utilities Department has an ongoing program to replace its aging water distribution system, water meters and fire hydrants. These replacements and upgrades will insure adequate fire flow for fire suppression.

- Existing water reservoirs (tanks) are being seismically retrofitted to further stabilize the City water supply system and ensure reliability.

- The City provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough district response to California Department of Public Health infrastructure and operational concerns.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- The Water Enterprise Fund for the Palo Alto water system has not had sufficient financial resources to maintain a positive fund balance. The Rate Stabilization Reserve Fund has been utilized to allow Water Fund revenues to equal expenditures.

- Increased costs to provide services (expenditures) have outpaced revenues since FY 09-10, necessitating the need to utilize the Rate Stabilization Reserve Fund and to implement a new rate structure which raises water rates 20.9 percent for the period October 2011 through June 2012.

- Water rate increases will be required over the next several years to finance SFPUC Hetch Hetchy water system seismic improvements.

- The City has an ongoing multi-year capital improvement program that includes repair, replacement and rehabilitation projects that are designed to improve the overall water storage and distribution system.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system, sharing emergency water line interties with Stanford University, Mountain View and East Palo Alto, and receiving recycled water from the Palo Alto Regional Water Quality Control Plant.
- The City collaborates with the Santa Clara Valley Water District, the Bay Area Water Supply and Conservation Agency, the Northern California Pipe Users Group, and the Water System Distribution Roundtable.
- The City has not identified further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.
- The City has a water advisory committee, the Utilities Advisory Commission, to provide advice and recommendations to the City Council regarding water resources, project review, environmental issues, and rate structure.
- Operational efficiencies are being improved through the use of an asset management system, by utilizing an 'inclining block tier' water rate structure which promotes more efficient use of water; and by carrying out an aggressive water conservation program.
- No governance structure options have been identified for Palo Alto.

15. CITY OF SAN JOSE

AGENCY OVERVIEW

The City of San Jose was incorporated on March 27, 1850, and became a charter city on May 4, 1965. San Jose is a full service city providing an extensive range of services including: planning (development review, zoning and environmental review); building inspection; code enforcement; housing; redevelopment; economic development; police protection; fire protection; public works (animal control, capital improvements, event services); transportation (streets, sidewalks, street lights, traffic, parking, trees and landscape, and sewer and storm drain collection); parks, recreation and neighborhood services (recreation, parks, trails, family camp, community center, and zoo); libraries; and international airport. City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the August 2006 South Central Santa Clara County Service Review.

Municipal water services for San Jose are part of the Environmental Services Department, which also includes solid waste (garbage), recycling, recycled water, storm water, and wastewater. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Resources Division of the Environmental Services Department provides drinking water to residential, commercial, and industrial customers in North San Jose, Alviso, Evergreen, Edenvale, and Coyote Valley. The Water Resources Division oversees water quality, water conservation, system maintenance, backflow prevention, leak detection, and a recycled water program for the San Jose Municipal Water System (SJMWS). SJMWS also has a comprehensive water conservation program which includes landscape education, 'Save 20 Gallons' program, Watershed Watch, and the H_2O use water saver program.

The City's water service area includes water service customers in the communities of North San Jose, Alviso, Evergreen, Edenvale, and Coyote Valley, all within the City of San Jose. San Jose is also served by the San Jose Water Company and the Great Oaks Water Company.

The Municipal Water System is comprised of two separate water systems: North San Jose-Alviso; and Evergreen-Edenvale-Coyote Valley. The Municipal Water System has three different sources of potable water, and one recycled water source. Potable water is derived from six municipal wells; from imported water from the State Water Project (SWP) and the federal Central Valley Project (CVP) through the SCVWD; and from the San Francisco Public Utilities Commission (SFPUC) Regional Water System. Recycled (non-potable) water for irrigation purposes is produced at the San Jose-Santa Clara Water Pollution Control Plant (WPCP) and distributed by South Bay Water Recycling (SBWR), a section of the City's Water Resources Division.

Service Area

The Municipal Water System serves customers within four service areas: North San Jose-Alviso, Evergreen, Edenvale, and Coyote Valley.

Services to Other Agencies

South Bay Water Recycling provides recycled water to Municipal Water System customers in North San Jose, Alviso, Evergreen, Edenvale, and Coyote Valley, as well as customers in the City of Milpitas, the City of Santa Clara, and the San Jose Water Company.

Contracts for Water Services

The City contracts with SCVWD and the City and County of San Francisco for treated potable water.

Collaboration

The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), serves on SFPUC and SCVWD Subcommittees, participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program, and jointly participates on the Recycled Water Liaison Committee with SCVWD.

Boundaries

The San Jose Municipal Water Service area consists of four sub-areas:

- North San Jose-Alviso – 5.3 square miles bounded by Alviso Slough on the north, Coyote Creek to the east, Trimble Road on the south, and the Guadalupe River on the west;

- Evergreen – 15.6 square miles bounded by Tully Road on the north, the foothills of the Mt. Diablo Range on the east, the City Limits on the south, and Highway 101 on the west;

- Edenvale – 0.9 square miles east of Coyote Creek and north of Silicon Valley Boulevard, and bisected by Hellyer Avenue; and

- Coyote Valley – 2.3 square miles located between Tulare Hill on the north and Palm Avenue on the south, and just east of Highway 101.

San Jose is located within the Santa Clara Groundwater Subbasin and the Coyote Subbasin.

ACCOUNTABILITY AND GOVERNANCE

The City of San Jose operates under a city council-city manager form of government with a ten-member City Council elected by district, a Mayor elected at large, and a City Manager appointed by the City Council.

Councilmembers are elected to numbered districts for four-year terms. The Mayor is elected to a four-year term by all the voters in the City. The City Charter limits the Mayor and Councilmembers to serving no more than two consecutive terms. The Vice Mayor is selected by the Council to serve a one-year term. Current member names, positions, and term expiration dates are shown in Figure 15-1.

Figure 15-1: City of San Jose City Council

San Jose Municipal Water System				
Water Resources Division Contact Information				
Contact:	Mansour Nasser, Deputy Director			
Address:	3025 Tuers Road, San Jose, CA 95121			
Telephone:	408-277-4218			
E-mail/Website:	mansour.nasser@sanjoseca.gov/www.sjmuniwater.com			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Xavier Campos	Councilmember, District 5	December 2014	Elected by District	4 years
Kansen Chu	Councilmember, District 4	December 2012	Elected by District	4 years
Pete Constant	Councilmember, District 1	December 2014	Elected by District	4 years
Rose Herrera	Councilmember, District 8	December 2012	Elected by District	4 years
Ash Kaira	Councilmember, District 2	December 2012	Elected by District	4 years
Sam Liccardo	Councilmember, District 3	December 2014	Elected by District	4-years
Madison Nguyen	Vice Mayor, District 7	December 2014	Elected by District	4-years
Pierluigi Oliverio	Councilmember, District 6	December 2012	Elected by District	4-years
Nancy Pyle	Councilmember, District 10	December 2012	Elected by District	4 years
Chuck Reed	Mayor	December 2014	Elected At Large	4 years
Donald Rocha	Councilmember, District 9	December 2014	Elected by District	4 years
Meetings				
Date:	Every Tuesday at 1:30 PM and the first and third Tuesdays at 7:00 PM			
Location:	City Council Chambers, City Hall, 200 E. Santa Clara Street, San Jose			
Agenda Distribution:	Posted on the City Clerk's page on the City website.			
Minutes Distribution:	Available on the City Clerk's page of the City website, along with agendas and reports.			

The City Council meets every Tuesday in the City Council Chambers at 1:30 PM, and on the first and third Tuesdays at 7:00 PM when most land use public hearings are held. Agendas are posted on the City website. Agendas, synopses of meetings, minutes, and reports are available on the website.

Council meeting are televised live on Civic Center TV (Cable Channel 26). Meetings are also webcast live and archived for review on the City website.

The City does not have a water-related advisory commission or committee. The City participated with the City of Santa Clara and SCVWD on a Joint Recycled Water Liaison Committee. The Committee consisted of the Mayor of Santa Clara, two Councilmembers from San Jose, and three Board Members from SCVWD. The purpose of the committee was to develop a long-term agreement amongst the parties on the use of recycled water and operations and maintenance of the South Bay Water Recycling system. The Committee completed it work in April 2009.

The Water Services Division website can be accessed directly at www.sjmuniwater.com. There is extensive information related to water, including an explanation of water supply and distribution, customer service, water quality, and water retail rates. Links are readily accessible to the 2010 Urban Water Management Plan, Annual Water Quality Reports, and the Water Conservation program. A detailed contact list of personnel is not provided, but inquiries/complaints/questions can be submitted in person to the Customer Contact Center at City Hall, by telephone to the Customer Contact Center, or by e-mail.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Deputy Director of Environmental Resources, visit or call the Customer Contact Center, or submit an e-mail. In calendar year 2010, the North San Jose-Alviso system had a total of 23 water quality-related complaints; two for odor/taste, 15 for color, zero for turbidity, three for pressure, and three for water outages. These complaints accounted for 0.98 percent of the 2,349 customers served. The Evergreen-Edenvale-Coyote Valley system had a total of 66 water quality-related complaints; six for odor/taste, seven for color, one for turbidity, and 52 for pressure. These complaints accounted for 0.28 percent of the 23,469 customers served.

The Water Resources Division of the Environmental Services Department demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Resources Division responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Resources Division are under the direction of the Deputy Director of Water Resources, who reports to the Director of Environmental Services, who reports directly to the City Manager. The Division has a total of 45.0 full-time equivalent (FTE) staff divided into three sections: Water Supply and Operations & Maintenance Engineering; South Bay Water Recycling; and Operations & Maintenance. These positions are detailed in Figure 15-2.

Figure 15-2: Water Resources Division Staff Allocation

Position	FTE	Position	FTE
Deputy Director	1.0	South Bay Water Recycling	
Senior Office Specialist	3.0	Associate Engineer	2.0
		Supervising ESS	1.0
Water Supply and O&M Engineering		Associate Engineering Technician	1.0
Senior Civil Engineer	1.0	Environmental Services Specialist	1.0
Associate Engineer	2.0	Associate ESS	1.0
Engineer II	2.0	Assistant ESS	1.0
Principal Construction Inspector	1.0		
Senior Construction Inspector	1.0	Operations and Maintenance	
Associate Construction Inspector	1.0	Maintenance Superintendent	1.0
Cross Connection Specialist	1.0	Maintenance Supervisor	2.0
Environmental Services Specialist (ESS)	2.0	Electrician	1.0
Senior Engineering Technician	2.0	Senior Water System Tech	3.0
Associate Engineering Technician	1.0	Water System Technician	9.0
Engineering Technician	1.0	Water Meter Reader	3.0
		Total	**45.0**

Performance evaluations of all employees are conducted annually. The probation period for new employees is generally six months, with evaluations at three and six months. The agency tracks the employees' workload through work logs, service requests, and performance targets.

Operational efficiencies are being improved by equipping water meters with remote meter reading transponders, allowing for more efficient collection of water use data. The Division has recently upgraded its Supervisory Control and Data Acquisition (SCADA) System to enable the system to operate more efficiently. The South Bay Water Recycling program now has over 600 customers, with summer recycled water use in excess of 14 million gallons per day (MGD).

The City adopted the 2010 Urban Water Management Plan on June 14, 2011, and completed a Water Conservation Plan in August of 2008. Work is underway in updating the Disaster Operations Plan. Capital improvements are considered over a five-year planning period as part of the budget process.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for the City of San Jose is 945,942, making it the largest city in Santa Clara County, the third largest city in California, and the 10th largest city in the United States. The average household size in the City of San Jose is 3.09 per the United States Census.

ABAG projects that the population of San Jose will increase to 1,380,900 by 2035, a 40.8 percent increase over the twenty-five year period.

The North San Jose-Alviso water system area has an estimated 2010 population of 14,645 based on State Department of Water Resources (DWR) methodology and United States Census block data. The Evergreen-Edenvale-Coyote Valley water system area has an estimated 2010 population of 100,329 based on DWR methodology and United States Census block data.

The City is currently updating its General Plan (called Envision Plan 2040), with adoption scheduled for October 2011. The Draft Update estimates that by the year 2040, North San Jose-Alviso will have an additional 21,757 residential dwelling units and 92,062 new jobs. For Evergreen, the estimate is 3,198 additional residential dwelling units and 19,976 new jobs. For Edenvale, the Draft Update estimates that there will be zero new residential dwelling units and 16,000 new jobs. For Coyote Valley, the estimate is for zero new residential units and 50,000 new jobs.

The current General Plan (San Jose 2020) contains water resources goals and policies. One 'benchmark' type service level for water supply and sewage treatment states ". . . prior to the approval of major new development, available water supply and sewage treatment capacity should be ensured and documented. The City should coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects."[108]

The August 15, 2011 draft of Envision Plan 2040 lists the following implementation measures related to water:

[108] General Plan 2020, page 93.

- Continuously improve water conservation efforts in order to achieve best in class performance. Double the City's annual water conservation savings by 2040 and achieve half of the District's goal for Santa Clara County on an annual basis.
- Reduce residential per capita water consumption by 25 percent by 2040.
- Achieve by 2040, 50 million gallons per day of water conservation savings in San Jose, by reducing water use and increasing water efficiency. Use the 2008 Water Conservation Plan as the data source to determine the City's baseline water conservation savings level.
- Recycle or beneficially reuse 100 percent of the City's wastewater supply, including the indirect use of recycled water as part of the potable water supply.[109]

FINANCING

Financial Adequacy

The Water Utility Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. Water Utility Fund revenues and expenditures are tracked by operational costs and by capital improvements.

Revenue Sources

In FY 08-09, the Water Fund generated $26.1 million, in FY 09-10 the Fund generated $24.7 million, and in FY 10-11 the Fund was projected to generate $25.7 million. This amount is expected to increase to $27.3 million in FY 11-12. The reduction between FY 08-09 and FY 09-10 is attributed to a 6.3 percent decrease in water sales driven by mandatory water rationing, the economic downturn, and a cooler spring and summer. Projected revenues for FY 11-12 will increase due to the recent rate hike. Revenues for the past three fiscal years are shown in Figure 15-3.

In FY 10-11, the Water Fund generated $25,650,000 in direct revenue from the following sources:

[109] Draft Envision Plan 2040, pages 7-11 and 7-12.

Potable Water Sales	**$23,300,000**	**90.8%**
Recycled Water Sales	$2,200,000	8.6%
Interest	$50,000	0.2%
Miscellaneous	$200,000	0.8%
Uncollectible Debt	($100,000)	(0.4%)
Total	$25,650,000	100%

As indicated above, significant revenues are derived from potable water sales.

Rates

System-wide, the water rates for FY 11-12 have increased by 5.9 percent effective July 1, 2011. The San Jose Municipal Water System has an 'inclining tiered' rate structure for residential users which charges proportionally higher water rates for higher water users. One objective of this rate structure is to promote the reduction in water use. Current bimonthly rates vary, depending on the usage and location. Higher rates relate to higher pressure zones.

Figure 15-3: Water Use

Water Use Bimonthly in hundred cubic feet (CCF)[110]	Rates based on Pressure Zones	Bimonthly Increase
Tier 1 (0 to 14 CCF)	$2.171 to $2.510 per CCF	$2.504
Tier 2 (15 to 28 CCF)	$2.499 to $2.817 per CCF	$2.588
Tier 3 (29 to 42 CCF)	$2.753 to 3.103 per CCF	$2.678
Tier 4 (more than 42 CCF)	$3.039 to $3.346 per CCF	$2.570

In addition to the water use charge, the System also charges a meter service charge depending on meter size. Under the new rates, a typical 5/8-inch residential meter costs $9.531 per month, an increase from $9.00 per month. In addition, all water bills include a

[110] One hundred cubic feet (CCF) equals 748 gallons.

service charge and a 5 percent utility tax. A typical monthly water bill for a customer that uses 15 CCF has increased by $2.57 from $43.60 to $46.17.

Expenditures

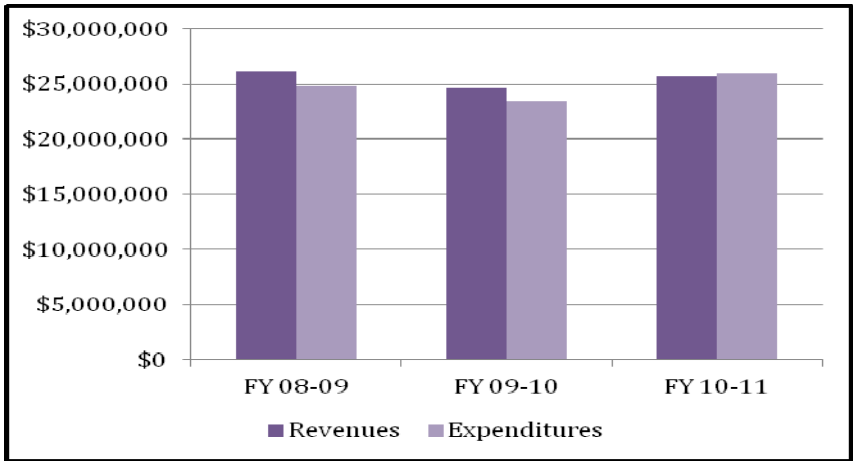
For FY 11-12, the Water Fund expenditure is expected to total $28.3 million, which is 2.6 percent of the City total expenditure (all funds) of $1.09 billion.

In FY 08-09, the Water Fund spent $24.9 million; in FY 09-10 the Fund spent $23.5 million; and in FY 10-11 the Fund was projected to spend $25.9 million. Expenditures for the past three fiscal years are shown in Figure 15-4.

Primary expenses in FY 10-11 were as follows:

Wholesale Water Purchases	**$17,300,000**	**66.7%**
Salaries and Benefits	$3,814,752	14.7%
Materials and Supplies	$54,999	0.2%
Commercial Paper Repayment	$159,661	0.6%
General Fund Overhead	$797,166	3.1%
Workers Comp Claims	$24,000	<0.1%
Transfer to City Hall Debt Service	$130,205	0.5%
Transfer to General Fund	$170,000	0.7%
Transfer to Water Capital Fund	$3,472,000	13.4%
Total	$25,922,783	100%

Figure 15-4: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)



Capital Outlays

The current budget includes two capital improvement projects: the Bon Bon Drive Water Main Replacement project budgeted at $935,000; and completion of the Nortech Parkway East Loop Water Main project budgeted at $674,000 with a total project budget of $749,000 over a two-year period.

Long-term Debt

The Water Utility Fund does not have any long-term debt.

Reserves

Pursuant to Ordinance No. 26903, the Water Fund is required to maintain a Rate Stabilization Reserve equivalent to 5 percent of annual operating revenue, and a Reserve for Operations and Maintenance equivalent to 7 percent of annual operating revenues. At the end of FY 10-11, these amounts were $1,283,000 and $4,378,437 respectively. Both reserve funds meet their statutory requirement, with the Rate Stabilization Reserve at 5.0 percent and the Reserve for Operations and Maintenance at 17.1 percent. The Reserve for Operations and Maintenance Reserve would be sufficient to fund water operations for 2.0 months.

The Water Fund also maintains for each Fiscal Year a Reserve for Workers Compensation Claims at $50,000, a Reserve for Encumbrances at $391,771, a Retirement Pre-Payment Reserve at $24,000, and an Unrestricted Reserve at $500,000.

WATER SUPPLY

The San Jose Municipal Water System (SJMWS) relies on four sources of water supply: surface water from the San Francisco Public Utilities Commission (SFPUC); local and imported surface water from Santa Clara Valley Water District (SCVWD); groundwater from the Santa Clara groundwater basin; and recycled water from the South Bay Water Recycling (SBWR) Program.

Figure 15-5 depicts the amount of supply from each source that was purchased in 2010 and is anticipated to be purchased through 2035 as determined by the City. As a water retailer, SJMWS depends heavily on water supply wholesalers to meet system demands. To meet future demand, SJMWS plans to rely on a portfolio of supplies. By utilizing different supply sources, the City may be able to reduce the impact of water shortage from each source.

Figure 15-5: City of San Jose Water Supplies- Current and Projected in a Normal Year

Water Supply Source	2010	2015	2020	2025	2030	2035
SFPUC	4,592	5,039	5,039	5,039	5,039	5,039
SCVWD	13,692	16,185	16,592	17,019	17,500	17,500
Groundwater	668	5,767	7,988	10,251	12,809	15,888
Recycled Water	3,339	5,148	5,609	6,150	6,770	7,351

Source: City of San Jose Municipal Water System 2010 UWMP, June 2011, Table 4-1: Water Supplies - Current and Projected in a Normal Year for SJMWS

SFPUC Water

The City of San Jose purchases treated water from the SFPUC system. The business relationship between SFPUC and its wholesale customers is largely defined by the 2009 Master Agreement between SFPUC and 29 wholesale customers in Alameda, San Mateo and Santa Clara Counties. The agreement addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers, in addition to addressing water supply and water shortages for the regional water system. The agreement has a 25 year term. The City of San Jose also has an individual agreement with SFPUC, which provides that the City will remain a temporary and interruptible customer with assurance of supply only until December 2018. The terms of the agreement state that the maximum amount SFPUC will deliver collectively to the City of San Jose and City of Santa Clara is 9.0 million gallons per day (mgd) or 10,082 acre feet per year (AFY). As shown in Figure 15-5, San Jose projects purchasing 5,039 acre feet of water, or 50 percent of the allocated water supply to the two cities, in any given year between 2015 and 2035.

By December 2018, SFPUC will make further decisions on future water supply beyond 2018, after completing necessary cost analyses and California Environmental Quality Act

(CEQA) evaluation/documentation. The supply is interruptible before December 2018, if the SFPUC determines that aggregate use by all wholesale customers will exceed 184 mgd in 2018. The supply cannot be interrupted until five years after the City has received notice of SFPUC's intention to reduce or interrupt deliveries.

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies. The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

The City may also purchase excess water supplies from other SFPUC wholesale customers. The City has emergency interties with the City of Santa Clara and San Jose Water Company for short-term transfers. However, there are no assurances that this excess water will be available and these emergency supply sources are not included in Figure 15-5.

SCVWD Water

Presently, the City receives a majority (61 percent) of its water from SCVWD. SCVWD supplies SJMWS with treated surface water through the East and Snell Piplines from the Santa Teresa and Penitencia water treatment plants. The current contractual agreement between SJMWS and SCVWD sunsets in 2051, and establishes a schedule of water deliveries based on a five-year planning period. SJMWS contracts annually for minimum deliveries, with restrictions based on peak demand and annual distribution. The contract currently allocates 17,500 AFY to SJMWS. By 2035, the City projects that it will purchase the full allocated amount from SCVWD.

In determining the long-range availability of water from SCVWD, consideration must be given to the vulnerability of imported supplies to the effects of prolonged state-wide drought and environmental impacts. Reductions by the Department of Water Resources or the US Bureau of Reclamation to SCVWD allocations of State Water Project or Central Valley Project-San Felipe Division water may result in a temporary supply shortfall for SJMWS and other SCVWD retailers. Although SJMWS has the facilities to pump additional groundwater, the Evergreen service area, for which current supplies are 100 percent imported water, could be faced with a supply deficiency, especially during the summer months. The City reported that water demands could be met with groundwater, additional imported water supply, water conservation measures, and with expanded recycled water use.

Groundwater

The Edenvale and Coyote Valley SJMWS service areas are supplied entirely by groundwater. SJMWS also utilizes groundwater as a source of supplemental and/or emergency supply for the North San Jose-Alviso and Evergreen service areas. SJMWS has 11 wells, which draw from the Santa Clara Valley Plain subarea, and three wells, which draw from the Coyote Valley subarea. In 2010, the well system accounted for 668 acre feet, or 3.5 percent of the potable water supply for the system. SJMWS plans to use groundwater to cover any shortfall in purchased surface water sources. Figure 15-5 shows that the City anticipates significantly increasing its use of groundwater over the next 25 years, with projected groundwater use increasing from 668 acre feet to 15,888 acre feet between 2010 and 2035.

Recycled Water

In 1998, the South Bay Water Recycling (SBWR) facility and pipeline was constructed to provide recycled water from the San Jose-Santa Clara Water Pollution Control Plan to wholesale water providers for irrigation, landscape and industrial uses. SBWR is a joint powers authority that consists of the Cities of San Jose, Milpitas and Santa Clara , West Valley Sanitation District, and Cupertino Sanitation District. SBWR was developed to protect the salt marsh habitat by reducing effluent flows from the plant into the wetlands of the South Bay. A further benefit of this program was the development of a drought-proof supply of water, which augments local and imported water supplies.

SBWR currently provides recycled water to SJMWS customers in North San Jose, Alviso, Evergreen, Edenvale, and Coyote Valley, as well as customers in the City of Milpitas, the City of Santa Clara, and the San Jose Water Company. At the present time, the system has over 600 customers, with summer recycled water use in excess of 14 mgd. In 2010, recycled water comprised 15 percent of SJMWS's total water sources. The City anticipates making greater use of recycled water in the future with projected use more than doubling between 2010 and 2035. This growth in recycled water use is projected to be entirely for irrigation purposes.

It is anticipated that there will be no significant new uses (wildlife habitat, wetlands, etc.) in the immediate future; however, there is the potential to use a significant amount of recycled water for groundwater recharge and streamflow augmentation in the long term. These uses are being evaluated by SCVWD.

Emergency Preparedness

Water Supply Hazards

The Operations & Maintenance Section of the Water Resources Division is on call 24-7 and is prepared to respond to any leaks or breaks in a timely manner; and is able to be on site within 30 minutes of dispatch.

Disasters such as earthquakes could threaten water delivery infrastructure. The wholesalers that provide SJMWS with water supply are taking steps to ensure water supply reliability. Both SFPUC and SCVWD have instituted significant infrastructure improvement plans.

Emergency Water Supply

Emergency backup water supply is provided by above-ground water storage tanks within each service area:

- North San Jose-Alviso – two three-million gallon tanks with the ability to provide 24 hours of emergency water under a maximum daily demand scenario;
- Evergreen – 13 storage tanks with a combined capacity of 25 million gallons with the ability to provide 30 hours of emergency water under a maximum daily demand scenario, and based on current maximum daily well production of 20 mgd;
- Edenvale – one three-million gallon tank with the ability to provide a minimum of 72 hours of emergency water under a maximum daily demand scenario; and
- Coyote Valley – one 3.6-million gallon tank with the ability to provide a minimum of 80 hours of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

Regarding emergency transfer opportunities, the SJMWS is currently connected to the City of Santa Clara and the San Jose Water Company through service connections located adjacent to the SJMWS service area for use during emergency situations.

WATER DEMAND

In, 2010, the City made use of 22,291 acre feet of water combined from all sources. A large majority of the water used (82 percent) was from purchased surface water from SFPUC and SCVWD. The City maximizes use of the available surface water supply. In 2010, SJMWS made use of approximately 78 percent of the amount available from SCVWD and 46 percent of the total SFPUC amount allocated to the Cities of San Jose and Santa Clara. The City reported that it is committed to purchasing the maximum amount of water available and reducing its reliance on groundwater due to the uncertainties regarding the availability and sustainability of the groundwater basin.

The City of San Jose's projected water supply and demand comparison to 2035 during a normal year are set out in Figure 15-5.

Figure 15-5: City of San Jose Supply and Demand Comparison- Normal Year (AFY)

Source	2015	2020	2025	2030	2035
SFPUC	5,039	5,039	5,039	5,039	5,039
SCVWD	16,185	16,592	17,019	17,500	17,500
Groundwater	5,767	7,988	10,251	12,809	15,888
Recycled Water	5,148	5,609	6,150	6,770	7,351
Supply Total	32,139	35,228	38,459	42,118	45,778
Demand Total	32,139	35,227	38,459	42,119	45,779
Difference	0	1	0	-1	-1

Source: Adapted from City of San Jose Municipal Water System 2010 UWMP, June 2011, Table 5-5: Supply and Demand Comparison - Normal Year (AFY), page 5-14

Based on the projections shown, the City will be using its full allocated amount from SFPUC in 2015 and the full available amount from SCVWD by 2030.

According to the recently completed SJMWS 2010 UWMP, the supply and demand totals for a single dry-year and each of the multiple dry-year sequences through 2035 show no difference between supply and demand. In the event of a decrease of local supplies, SJMWS would respond by pursuing demand reduction programs in accordance with the severity of the supply shortage. Any supply deficit would be compensated for by increased conservation levels, restrictions in consumption, and increased use of groundwater.

WATER INFRASTRUCTURE AND FACILITIES

The San Jose Municipal Water System is divided into four service areas: North San Jose-Alviso (which is a stand-alone system), and Evergreen, Edenvale and Coyote Valley (which are interconnected).

Conveyance, Storage and Distribution Facilities

North San Jose-Alviso is served through two turnouts from the SFPUC Bay Division Pipelines 3 and 4. These supply points are associated with a distribution system consisting of 51.4 miles of water lines and two water storage reservoirs (with a capacity of 3.0 MG each). Each reservoir has an associated pump station. This area has one pressure zone. The SFPUC supply is augmented by four wells with a pumping capacity of approximately 1,500 gallons per minute (GPM) each. Two wells can be utilized under normal conditions to supply water and the other two are for emergency use. North San Jose-Alviso currently has 2,349 service connections. For calendar year 2010, there were two main line breaks or leaks, and three service connection breaks or leaks. SJMWS did not issue any 'boil water' orders or report any water outages for the North San Jose-Alviso service area.

Evergreen is served through three turnouts from SCVWD's East Pipeline. These supply points are associated with a distribution system consisting of 265 miles of water lines and 13 water storage reservoirs (with a combined capacity of 25.0 MG). Each reservoir has an associated pump station. This area has five different pressure zones. There are four wells with a pumping capacity of approximately 1,500 gallons per minute (GPM) each that can be used for emergencies.

Edenvale is served within a single pressure zone by three wells with a combined pumping capacity of approximately 3,400 gpm. The wells are connected to a 6.2 mile distribution system and a single 3.0 MG storage tank.

Coyote Valley is served within a single pressure zone by four wells with a combined pumping capacity of approximately 5,500 gpm. The wells are connected to a 5.1 mile distribution system and a single 3.0 MG storage tank.

Evergreen, Edenvale and Coyote Valley currently have a total of 23,469 service connections. For calendar year 2010, there were four main line breaks or leaks, and 52 service connection breaks or leaks. SJMWS did not issue any 'boil water' orders or report any water outages for the Evergreen-Edenvale-Coyote Valley service areas.

Water Treatment Facilities

The San Jose Municipal Water System does not have any water treatment facilities.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies two capital improvement projects, one for water main replacement and the other for a new main line extension. Refer to the Financing Section for details.

The SCADA system was recently upgraded and the Division continues to replace water meters with AMR meters. Ongoing work includes turnout improvements, solar power installations, and reservoir seismic piping.

Shared Facilities

The San Jose Municipal Water System does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the

SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by CDPH as prioritized health concerns.

The San Jose Municipal Water System does not treat water derived from the System's municipal wells. Treated water is received from the SFPUC Regional Water System and the SCVWD water treatment plants. According to the EPA Safe Drinking Water Information System, neither SFPUC or SCVWD had health or monitoring violations within the last 10 years with regard to its treatment systems. SJMWS's water wholesalers, SFPUC and SCVWD, conduct their own testing of the water supplied. Of the parameters tested, none were found to be higher than CDPH allows.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the North San Jose-Alviso system had two violations during the 2000-2010 period. One was a Health Based Violation in April 2008 for coliform, which was cleared by State Administrative Order without penalty. The other was a minor monitoring and reporting violation in December 2005. The Evergreen-Edenvale-Coyote Valley system had one Health Based Violation in October 2010 for coliform, which was cleared by State Administrative Order without penalty.

The 2010 Water Quality Report indicates that the SJMWS's potable water supply from all operating sources met all state and federal drinking water health standards. One well in Coyote Valley exceeded several secondary drinking water standards and was taken out of service. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the System and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by SJMWS's staff and an independent certified laboratory using the latest testing procedures and equipment. Of the parameters tested, samples taken in Edenvale by SJMWS staff in October 2010 were found to be higher than the CDPH allows for coliform. This deficiency has been corrected by SJMWS.

The CDPH Annual Water System Sanitary Survey conducted in March and April of 2011 identified 18 minor deficiencies, primarily related to requested upgrades to metal screens at tank and pump station facilities. These deficiencies have been remedied by SJMWS.

SAN JOSE MUNICIPAL WATER SYSTEM SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of the City of San Jose is 945,942.
- The current estimated population within the San Jose Municipal Water System (SJMWS) service area is 114,974.
- The San Jose Municipal Water System serves 12.2 percent of the population of the City of San Jose. The remainder of the City is served by the San Jose Water Company and the Great Oaks Water Company.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- The SJMWS will meet its water needs by maximizing its use of allocated water from SFPUC and SCVWD, and by increasing its use of groundwater.
- SJMWS reported that it is committed to purchasing the maximum amount of water available from SFPUC and SCVWD, and reducing its reliance on groundwater due to the uncertainties regarding the availability and sustainability of the groundwater basin. However, SJMWS also plans to increase its groundwater pumping from 668 acre-feet per year (AFY) in 2010 to 15,888 AFY by 2035.
- SJMWS would respond to a decrease in water supplies by pursuing demand reduction programs, by increasing conservation levels, and by increased use of groundwater.
- The SJMWS water supply and distribution system has adequate capacity to serve all water customers within its service area, but would need to rely on increased groundwater pumping to meet this need.
- The SJMWS is placing significant emphasis on utilizing recycled water for landscape irrigation, almost doubling its recycled water use to 7,351 AFY by 2035, which will be 16 percent of its total water supply.
- The San Jose Municipal Water System has above ground water storage tanks for emergency supply: two tanks in North San Jose-Alviso with 24 hours of emergency supply; 13 tanks in Evergreen with 30 hours of emergency supply; one tank in

Edenvale with 72 hours of emergency supply; and one tank in Coyote Valley with 80 hours of emergency supply.

- The SJMWS water storage and distribution system is considered to be in good condition. Capital improvements are associated with main line extensions to eliminate 'dead end' lines.

- Water tank piping systems are being seismically retrofitted to further stabilize the water supply system and ensure reliability.

- While the SJMWS demonstrated compliance with drinking water regulations and timely thorough response to California Department of Public Health concerns, the City could improve upon the health and monitoring violations that they received over the last 10 years.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the San Jose Municipal Water System has sufficient financial resources to provide an adequate level of service. The rate increase which went into effect on July 1, 2011 will increase revenues so that revenues are greater than expenditures.

- The Rate Stabilization Reserve and the Reserve for Operations and Maintenance meet the statutory requirements under the City's Water Fund ordinance.

- Water rate increases over the next several years will be required due to the SFPUC Regional Water System seismic improvement project, increased SCVWD groundwater pumping fees, and reduced retail water sales.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system and the SCVWD distribution system.

- The City has emergency water line interties with the City of Santa Clara and the San Jose Water Company for use during emergency situations.

- South Bay Water Recycling (SBWR) currently provides recycled water to SJMWS customers in North San Jose, Alviso, Evergreen, Edenvale, and Coyote Valley, as well as to customers in the City of Milpitas, the City of Santa Clara, and the San Jose Water Company.

- The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), serves on SFPUC and SCVWD Subcommittees, participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program, and jointly participates on the Recycled Water Liaison Committee with SCVWD.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- The Water Services Division website contains extensive information related to water, including an explanation of water supply and distribution, customer service, water quality, and water retail rates.

- Operational efficiencies are being improved by equipping water meters with remote meter reading transponders to allow for more efficient collection of water use data, and by utilizing an 'inclining block tier' water rate structure which promotes more efficient use of water.

- No alternative government structure options have been identified for the San Jose Municipal Water System.

16. CITY OF SANTA CLARA

AGENCY OVERVIEW

The City of Santa Clara was incorporated on July 5, 1852, and became a charter city in 1862, and again in 1951. Santa Clara is a full service city providing a range of services including: planning and inspection (planning, building inspection and neighborhood improvement); redevelopment; housing; police protection; fire protection; public works (engineering and building maintenance); streets (sidewalks, storm drainage, street sweeping, street trees, median landscaping, and graffiti removal) electric service; libraries; and parks and recreation (recreation, parks, recreation center, performing arts center, senior center, teen center, and cemetery). City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the August 2006 South Central Santa Clara County Service Review.

Water services to the City are provided through the Water and Sewer Utilities Department, which also includes sewer, recycled water, and solar water. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Utilities Division has been providing drinking water to residential, commercial, industrial and institutional customers within the City since 1895. The Water Utilities Division oversees water project planning; design; engineering and construction; water quality; system maintenance and operation; backflow prevention; leak detection; and a recycled water program. Santa Clara also has a water conservation program, and is supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The Water Utilities Division also provides for the design, construction, distribution, metering, quality monitoring, and system maintenance for recycled water.

The City of Santa Clara has three different sources of potable water, and one recycled water source. Potable water is derived from 30 municipal wells; from imported water from the State Water Project (SWP) and the federal Central Valley Project (CVP) through the SCVWD; and from the San Francisco Public Utilities Commission (SFPUC) Regional Water System. Recycled (non-potable) water for irrigation purposes is produced at the San Jose-Santa Clara Water Pollution Control Plant (WPCP) and distributed by South Bay Water Recycling (SBWR).

Service Area

The City's water service area includes all water service customers within the city limits, consisting of approximately 18.4 square miles.

Services to Other Agencies

The City of Santa Clara does not provide services to other agencies.

Contracts for Water Services

The City contracts with SCVWD and SFPUC for treated potable water, and SBWR for distribution of recycled water. The San Jose-Santa Clara WPCP is jointly-owned with the City of San Jose.

Collaboration

The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), is involved with the Water System Distribution Roundtable, and participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program. The City is also represented on the Recycled Water Policy Advisory Committee, the San Francisco Bay Area Regional Water System Financing Authority, and the Santa Clara Valley Water Commission.

Boundaries

The Santa Clara water service boundary is the same as the city limits. The present bounds encompass approximately 18.4 square miles. Santa Clara is located within the Santa Clara Groundwater Sub-basin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government with a seven-member City Council elected at-large and a City Manager appointed by the City Council.

The Mayor is elected for a four-year term. Councilmembers are elected to numbered seats for overlapping four-year terms. The City Charter limits the Mayor and Councilmembers to serving no more than two consecutive terms. The Vice Mayor is selected by the Council to serve a one-year term. Current member names, positions, and term expiration dates are shown in Figure 16-1.

Figure 16-1: City of Santa Clara City Council

City of Santa Clara				
Water and Sewer Utilities Department Contact Information				
Contact:	Christopher de Groot, Director of Water and Sewer Utilities			
Address:	1500 Warburton Avenue, Santa Clara, CA 95050			
Telephone:	408-247-0784			
E-mail/Website:	cdegroot@santaclaraca.gov/http://santaclara.gov			
City Council				
Member Name	**Position**	**Term Expiration**	**Manner of Selection**	**Length of Term**
Jamie L. Matthews	Mayor	November 2014	Elected At-large	4 years
Pat Kolstad	Councilmember Seat No. 2	November 2014	Elected At-large	4 years
Will Kennedy	Councilmember Seat No. 3	November 2012	Elected At-large	4 years
Kevin Moore	Councilmember Seat No. 4	November 2012	Elected At-large	4 years
Patricia Mahan	Vice Mayor Seat No. 5	November 2014	Elected At-large	4 years
Lisa M. Gillmor	Councilmember Seat No. 6	November 2012	Elected At-large	4 years
Jamie McLeod	Councilmember Seat No. 7	November 2012	Elected At-large	4 years
Meetings				
Date:	Tuesdays at 7:00 PM (Meets at least two times per month.)			
Location:	Council Chambers, City Hall, 1500 Warburton Avenue, Santa Clara			
Agenda Distribution:	Posted on the City website, and available at the City Clerk's Office and other locations. Agendas can be faxed, mailed or e-mailed by request on the day they are posted.			
Minutes Distribution:	Available on the 'City Council Meetings on Line' page of the City website, along with agendas and reports. A Summary of Council Actions is available at the City'Clerk's Office and online.			

The City Council meets at least two Tuesdays per month at 7:00 PM in the City Council Chambers. Agendas are posted on the City website, as well as at the City Clerk's Office at City Hall, the Central and Mission Libraries, the Community Recreation Center, and the Senior Center. Agendas can be faxed, mailed or e-mailed to homes or businesses on the day they are posted. A summary of Council actions is available at the City Clerk's Office and online. Complete agenda packets are available for review at the City Clerk's Office and at both libraries. Agendas, minutes and reports are available on the City website.

Council meetings are broadcast live on Municipal Cable Channel 15. Meetings are also available for viewing on the City website. Agenda highlights and other municipal announcements appear weekly on Channel 15.

The City does not have a water-related advisory commission or committee.

The Water and Sewer Utilities Department webpage offers basic information on the Department's primary functions of water, sewer, recycled water, and solar water. More detailed information is provided on the Water Utility page, as well as a Fact Sheet on the Department's services. Links are readily accessible to the 2010 Urban Water Management Plan, Annual Water Quality Reports, Rates and Charges, and the Water Conservation

program. A detailed contact list of personnel is not provided, but inquiries can be submitted to the generic e-mail comment form on the 'About Us' page of the web site, or by telephone to specific services listed on the Department website under 'Who to Call.'

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Director of Water and Sewer Utilities, call the Water Utility Division office, or e-mail the City utilizing the electronic contact form. In calendar year 2010 there were a total of 25 water-related complaints; 10 for odor/taste, four for color, one for turbidity, 10 for pressure, and none for water outages. These complaints accounted for 0.10 percent of the 25,889 customers served.

The City of Santa Clara demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Utilities Division responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Utility Division are under the direction of the Director of Water and Sewer Utilities, who reports directly to the City Manager. As an integrated water-sewer-recycled water-solar water operation, the Water and Sewer Utilities Department has a total of 60.0 full time equivalent (FTE) positions organized into five major functions: Water Engineering; Water Construction, Maintenance and Operations; Sewer; Solar Construction and Maintenance; and Recycled Water Construction and Maintenance. The Water Division has a total of 43.7 FTE positions dedicated to the Water Enterprise Fund, as detailed in Figure 16-2. The Recycled Water Fund has 2.1 FTE positions.

Figure 16-2: Water Division Staff Allocation

Position	FTE	Position	FTE
Director of Water & Sewer Utilities	0.60	Water & Sewer Maintenance Worker I/II	11.70
Assistant Director of Water & Sewer Utilities	0.65	Senior Water Utility Engineer	0.90
Principal Engineer - Water	0.90	Water Utility Engineer	1.80
Water & Sewer Superintendent	0.75	Assistant Water Superintendent	1.80
Assistant Water & Sewer Superintendent	0.60	Utility Crew Supervisor	2.00
Compliance Manager	0.60	Utility Crew Supervisor - Water	3.00
Water Treatment Technician	1.00	Maintenance System Specialist	0.50
Pump Maintenance Tech - Solar	1.00	Senior Engineering Aide	2.00
Pump Maintenance Tech - Water	1.00	Time & Material Clerk	1.00
Equipment Operator	4.00	Code Enforcement Technician	0.15
Facilities Technician	1.00	Office Specialist II	1.00
Water Service Technician I/II	5.75	**Total**	**43.7**

Performance evaluations of all employees are conducted annually. The probation period for new employees is twelve months, with evaluations at six and twelve months. The agency tracks the employees' workload through work logs, service requests, and performance measures that are included in the annual budget. The Department will be adding 'INfOR 10 Public Sector Enterprise' software to track workload, billings, permitting, and department activities on a single platform.

In FY 10-11, the Water and Sewer Utilities Department was reorganized to efficiently handle new regulatory requirements without additional staffing, and with some minimal budget savings. The Department initiated a pilot project to read the City's 687 utility meters every other month, thereby saving two to two and a half staff days per month. A 'Maintenance System Specialist' position was added to coordinate with other City Departments on street and utility-related construction.

The City adopted the 2010 Urban Water Management Plan on May 24, 2011. The City updated its Emergency Operations Plan in May of 2006, and Water Master Plan in 2002. A Groundwater Rule Site Sampling Plan is currently being prepared. Capital improvements are considered over a five-year planning period as part of the budget process.

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for the City of Santa Clara is 116,468, making it the third largest city in Santa Clara County behind San Jose and Sunnyvale. The average household size is 2.63 per the United States Census.

ABAG projects that the population of Santa Clara will increase to 157,200 by 2035, a 35.0 percent increase over the twenty-five year period

The City General Plan 2010-2035 was updated in November 2010. It contains three general water-related goals and 12 general water-related policies.

FINANCING

Financial Adequacy

The Water Utility Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. The FY 10-11 budget included a number of changes from previous years, with salary reductions negotiated with employee bargaining groups offset by higher benefit costs and rate increases for wholesale water supplies.

Revenue Sources

In FY 08-09, the Water Fund generated $23.7 million, in FY 09-10 the Fund generated $24.2 million, and in FY 10-11 the Fund was projected to generate $26.6 million.

In FY 10-11, the Water Fund generated in excess of $26.5 million in direct operating revenue from the following sources:

Interest Income	**$300,000**	**1.1%**
Rents and Leases	$83,200	0.3%
Customer Service Charges	$25,642,505	96.5%
Solar Installation & Service Charge	$146,000	0.6%
Miscellaneous Charges	$390,000	1.5%
Total	$26,561,705	100%

As indicated above, significant revenues are derived from water sales. These revenues are expected to increase each year as the City passes on the increased costs for wholesale water.

Rates

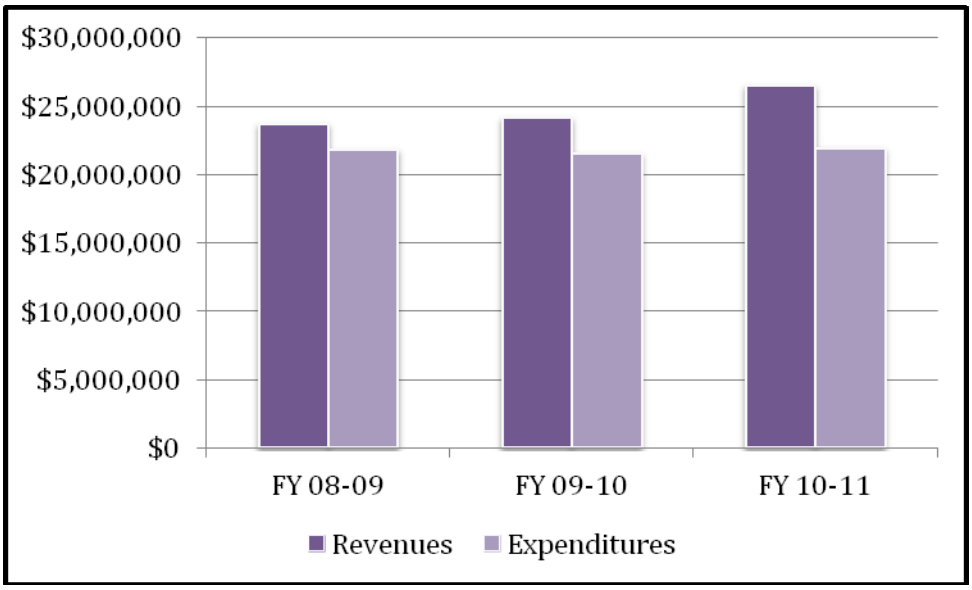
For FY 11-12, water rates have been raised by 9 percent for potable water and 6.5 percent for recycled water. These increases are due to the increase in wholesale costs for water from both of the City's wholesale water suppliers (SFPUC and SCVWD), plus the impact of reduced water sales and the escalating cost of infrastructure replacement. The rate increase (which went into effect on July 1, 2011) translates to an average increase of $3.00 per month for a single-family residence using 12 CCF (hundred cubic feet) per month, where each CCF is equal to 748 gallons.

Expenditures

For FY 11-12, the Water Fund expenditure is expected to total over $25.8 million, which is 5.2 percent of the City total expenditure (all funds) of $495.6 million.

In FY 08-09, the Water Fund spent a total of $21.9 million, in FY 09-10 the Fund spent $21.6 million, and in FY 10-11 the Fund was projected to spend $22.0 million. Increased expenditures for FY 10-11 and 11-12 are attributed to increased costs for wholesale water. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 16-3.

Figure 16-3: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)



Primary expenses in FY 10-11 were:

Salaries and Benefits	**$4,357,329**	**19.8%**
Other Operating Expenditures	$1,945,200	8.9%
Interfund Services	$2,503,715	11.4%
Solar System Maintenance	$202,340	0.9%
Resource and Production Costs	$12,964,000	59.0%
Total	$21,972,584	100%

Capital Outlays

The current budget includes 10 capital improvement projects scheduled over the five-year planning period, seven of which are funded for FY 11-12 as follows:

❖ Building and Grounds Maintenance	$80,000
❖ Distribution System Replacement/Restoration	$1,681,000
❖ Seismic Retrofit for Storage Tanks	$200,000
❖ Service and Development Improvements	$260,000
❖ Solar Pool Heating	$50,000
❖ Water Utility Asset Management System	$150,000
❖ Wells and Pumps	$468,000
Total	$2,889,000

Particular focus is being placed on water line replacement and well and pump rehabilitation and maintenance.

Long-term Debt

The Water Fund does not have any long-term debt.

Reserves

The City of Santa Clara maintains two city-wide reserve funds: the Working Capital (Emergency) Reserve; and the General Contingency Reserve for Capital Projects. Over the past nine years the City has utilized the Working Capital Reserve to meet its financial needs. Using the reserve helped sustain service levels, but depleted an important source of funding. The Working Capital Reserve stood at $2.5 million in FY 09-10, down from the high of $30.1 million in FY 01-02. The Capital Project Reserve has also been heavily utilized, going from $69.1 million in FY 00-01 to $2.5 million in FY 09-10.

The City does not maintain specific reserve funds for water operations or rate stabilization. Any surplus funds from the previous fiscal year are transferred to the General Contingency Reserve Fund, which are then allocated to the Working Capital Reserve and the General Contingency Reserve, and become available for emergencies and future capital project needs. At its current level of $2.5 million, the Working Capital

Reserve is $31.8 million underfunded and would only sustain emergency water operations for 1.4 months if all of the Fund reserves were allocated to the Water Utility Fund.

WATER SUPPLY

The sources of water supply for the City of Santa Clara are groundwater; imported treated water from the San Francisco Public Utilities Commission (SFPUC) Hetch-Hetchy system; imported treated water from the Santa Clara Valley Water District (SCVWD); and recycled water from South Bay Water Recycling (SBWR). The local groundwater basin currently provides about two-thirds of the City's potable water supply. It has been the primary source of water for domestic, industrial, and agricultural use in the City since the area was first settled. Figure 16-4 shows the City's current and projected water supplies through 2035.

Figure 16-4: City of Santa Clara Water Supplies- Current and Projected (AFY)

Water Supply Sources	2010	2015	2020	2025	2030	2035
SCVWD	4,372	4,570	4,570	4,570	4,570	4,570
SFPUC	2,454	5,040	5,040	5,040	5,040	5,040
Supplier Produced GW	13,980	23,048	23,048	23,048	23,048	23,048
Supplier Produced Surface Water	0	0	0	0	0	0
Transfers or Exchanges	0	0	0	0	0	0
Recycled Water	2,409	4,000	4,300	4,500	4,500	4,500
Desalinated Water	0	0	0	0	0	0
Conservation	0	694	795	874	930	930
Total	23,214	37,352	37,753	38,032	38,088	38,088

Source: City of Santa Clara 2010 UWMP, May 2011, Table 19A - Water Supplies - Current and Projected, page 24.

SFPUC Water

The City of Santa Clara purchases treated water from the SFPUC system. As of 2010, SFPUC water made up approximately 11 percent of the City's source water supply. The business relationship between SFPUC and its wholesale customers is largely defined by the 2009 Master Agreement between SFPUC and 27 wholesale customers in Alameda, San Mateo and Santa Clara Counties. The agreement addresses the rate-making methodology used by SFPUC in setting wholesale water rates for its wholesale customers, in addition to addressing water supply and water shortages for the regional water system. The agreement has a 25-year term. The City of Santa Clara also has an individual agreement with SFPUC, which provides that the City will remain a temporary and interruptible customer with assurance of supply only until December 2018. The terms of the agreement

state that the maximum amount SFPUC will deliver collectively to the City of Santa Clara and the City of San Jose is 9.0 million gallons per day (mgd) or 10,082 acre feet per year (AFY). The City's contract entitlement is for an expected average annual delivery of up to 5,040 acre feet per year (50 percent of the combined entitlement of the two cities). The current contract with SFPUC indicates that if certain conditions are met, Santa Clara may be required to reduce or eliminate its take from SFPUC. If the City was required to eliminate the usage of water from SFPUC, the City would consider increasing groundwater utilization, increasing imported surface water supply (SCVWD), or a combination of the two water sources. As shown in Table 16-1, Santa Clara projects purchasing its full allocated amount from SFPUC in any given year between 2015 and 2035.

By December 2018, SFPUC will make further decisions on future water supply beyond 2018, after completing necessary cost analyses and California Environmental Quality Act (CEQA) evaluation/documentation. The supply is interruptible before December 2018 if the SFPUC determines that aggregate use by all wholesale customers will exceed 184 mgd in 2018. The supply cannot be interrupted until five years after the City has received notice of SFPUC's intention to reduce or interrupt deliveries.

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies. The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

SCVWD Water

Water from SCVWD makes up approximately 19 percent of the City's total water supply. SCVWD supplies the City of Santa Clara with treated surface water through an entitlement of imported Central Valley Project (CVP) water and the State Water Project (SWP), as well as surface water from local reservoirs. The current contractual agreement between the City and SCVWD sunsets in 2051, and allocations are established every year by the City submitting a three year delivery schedule that the District approves. The contract currently allocates 4,570 AFY to the City of Santa Clara. The City anticipates reaching its maximum allocation of 4,570 acre feet of SCVWD water in 2015, with no additional allocation through 2035.

In the future additional imported supply will likely be required from the imported treated water purchased from the SCVWD. The City is investigating an additional turnout

from the SCVWD's wholesale supply of treated imported water. This would contribute approximately 4,800 acre feet of additional water to the City's portfolio. This additional turnout would also increase the flexibility of the water supply system, allowing the City the ability to increase treated surface water imports and decrease groundwater usage, if necessary.

Groundwater

Historically, the predominant source of water used to meet water demand in the City of Santa Clara has been groundwater. In 2010, groundwater represented approximately 60 percent of total water sales. Various areas within the City receive water from one or more sources depending on location. The zones of influence from the various water sources are dynamic and will change depending on changes in supply and the overall demands on the system.

As noted above, the local groundwater basin currently provides about two-thirds of the City's potable water supply through 27 production wells. The underlying Santa Clara Valley groundwater basin is not adjudicated and the most recent information from DWR indicates that neither the Santa Clara Valley Basin nor the Santa Clara Sub Basin are in over-draft.

The allowable withdrawal or safe yield of groundwater by the City of Santa Clara is dependent upon a number of factors including: withdrawals by other water agencies, quantity of water recharged and the carry over storage from the previous year. The City's wells are strategically distributed around the City. This distribution of wells adds to the reliability of the water system and minimizes the possibility of localized subsidence, due to localized over-drafting. To eliminate the possibility of long-term overdraft conditions, at all of the City's active production wells, the City monitors groundwater levels and meters the groundwater pumping.

The City plans to use groundwater to cover any shortfall in purchased surface water sources. The City anticipates using significantly (65 percent) more groundwater over the next five years. Projections show that the City anticipates groundwater use to plateau in 2015 at 23,048 acre feet per year, with no additional use anticipated through 2035.

Recycled Water

In 1998, the South Bay Water Recycling (SBWR) facility and pipeline was constructed to provide recycled water from the San Jose-Santa Clara Water Pollution Control Plan to wholesale water providers for irrigation, landscape and industrial uses. SBWR is a joint powers authority that consists of the Cities of San Jose, Milpitas and Santa Clara, West Valley Sanitation District, and Cupertino Sanitation District. SBWR was developed to protect the salt marsh habitat by reducing effluent flows from the plant into the wetlands of

the South Bay. A further benefit of this program was the development of a drought-proof supply of water, which augments local and imported water supplies.

SBWR currently provides recycled water to Santa Clara customers, as well as customers in the City of Milpitas, the City of San Jose, and the San Jose Water Company. At the present time, the system has over 600 customers, with summer recycled water use in excess of 14 MGD.

Over the last 15 years, the amount of recycled water used within the City has risen dramatically. In 2010, recycled water comprised 10 percent of Santa Clara's total water sources. The City anticipates making greater use of recycled water in the future with projected use increasing by 87 percent between 2010 and 2035.

Emergency Preparedness

Water Supply Hazards

The City of Santa Clara is dependent on three sources of potable water and one of recycled water; all of these supplies have some possibility of interruption and differing degrees of reliability. A major seismic event for example, could interrupt the delivery of water from the San Francisco Hetch-Hetchy system for up to 2 months. SCVWD's potable and raw water delivery systems could also be interrupted for up to two weeks. Current proposals include major capital improvements to both regional water systems for increased reliability. The long-term reliability of SCVWD's imported supplies (State and Federal water projects) is also threatened by possible failure of the Sacramento delta's levee systems, with interruptions possible for several months, or by depleted yield availability through ongoing litigation regarding CVP/SWP exports. Regional power supplies could also be interrupted; however, the City has sufficient back-up power generation capacity to provide the expected potable water demand from City-owned wells and water storage tanks. This groundwater source can sustain the entire City's water demand for a limited period of time: that is for months, but not years.

The Water Division is on call 24/7 and is prepared to respond to any leaks or breaks in a timely manner, and is able to be on site within 30-minutes of dispatch.

The City completed a seismic capital improvement program that increased the reliability of the City's water system in the event of an earthquake. All existing pipe connections to the City's water storage systems were retrofitted to allow for greater flexibility for movement. One elevated storage tank still needs to be removed from the system and replaced or an alternative needs to be implemented.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 27.3 million gallons. This storage capacity can provide approximately 24 hours of emergency water under a maximum daily demand scenario. In addition to the tank storage, the City has emergency generators or stationary engines on eight wells to provide back-up water supply in the event of a power failure.

Interties and Back-up Supply

Regarding transfer opportunities, the City is currently connected to the cities of San Jose, Cupertino, and Sunnyvale through service connections located within Santa Clara for use during emergency situations.

WATER DEMAND

The City of Santa Clara projected water demands to 2035 are set out in Figure 16-5. As shown in the table, without the SFPUC supply beyond 2018, the City anticipates a supply shortfall by 2020 with the cumulative shortfall reaching as much as 4,385 acre feet by 2035. However, if the total projected water supply includes SFPUC imported water beyond 2018, Santa Clara projects that it will be able to meet its anticipated demands to 2035.

Figure 16-5: City of Santa Clara Supply and Demand Comparison- Normal Year without SFPUC Supply Beyond 2018 (AFY)

	2015	2020	2025	2030	2035
Total Supply	37,352	32,713	32,992	33,048	33,048
Total Demand	31,259	33,053	34,605	36,071	37,433
Difference	6,093	(340)	(1,613)	(3,023)	(4,385)
Difference as % of Supply	16.3	−1.0	−4.9	−9.1	−13.3
Difference as % of Demand	19.5	−1.0	−4.7	−8.4	−11.7

Source: Adapted from City of Santa Clara 2010 UWMP, May 2011, Table 43B - Supply and Demand Comparison - Normal Water Year, page 83.

The sources of water supply for the City are susceptible to seasonal or climatic shortages due to droughts. Under a variety of single dry-year and multiple dry-year sequences, the ability to meet anticipated demands through 2035 changes significantly. Figure 16-6 reflects these limitations during a single dry year scenario. Based on the information provided by the City's water wholesalers regarding the availability of water supply during normal, single dry year, and multiple dry year scenarios, the City has projected shortages after 2020. The City has planned for several future water supply projects that are expected to provide between 5,000 and 6,000 acre-feet per year of additional supply. This additional supply will help to cover most expected water shortages

except after 2030 in the third year of a multi-year drought if the City loses the current SFPUC contracted Hetch-Hetchy water.

Figure 16-6: City of Santa Clara - Supply and Demand Comparison - Single Dry Year without SFPUC Supply Beyond 2018 (AFY)

	2015	2020	2025	2030	2035
Total Supply	34,313	32,713	32,992	29,392	29,392
Total Demand	31,259	33,053	34,605	36,071	37,433
Difference	3,054	(340)	(1,613)	(6,679)	(8,041)
Difference as % of Supply	8.9	−1.0	−4.9	−22.7	−27.4
Difference as % of Demand	9.8	−1.0	−4.7	−18.5	−21.5

Source: Adapted from City of Santa Clara 2010 UWMP, Table 43B - Supply and Demand Comparison - Normal Water Year, page 83.

WATER INFRASTRUCTURE AND FACILITIES

The Santa Clara water system is a comprehensive water storage and delivery system. The City is divided into three pressure zones. Zone 1 comprises the northerly three-fourths of the City and is supplied by two SFPUC turnouts and has 22 of the City's municipal wells. Zone 2 comprises the southerly one-fourth of the City except for a small area in the southwest corner of the City which is Zone 3. Zone 2 contains 10 municipal wells, while Zone 3 is supplied by one SCVWD turnout.

Water Treatment Facilities

Santa Clara does not have any water treatment facilities.

Water Storage Facilities

The City has six active storage tanks (Downtown, Northside No. 1, Northside No. 2, Serra No. 1, Serra No. 2, Serra No. 3, and Walsh) with a combined storage capacity of 27.3 MG. The Walsh Tank (0.5 MG) is scheduled to be replaced.

Conveyance and Distribution Facilities

The water distribution system is composed of approximately 334 miles of distribution lines. The distribution system also consists of 3 booster pump plants, each with 3 pumps, one of which is on standby for emergency purposes. The system also features 20 pressure

reducing valves, 3,300 fire hydrants, 3,410 backflow prevention devices, and 26,985 water service connections. The system also includes an automated Supervisory Control and Data Acquisition (SCADA) System that control distribution of water throughout the system.

The City reported that in calendar year 2010 there were 35 main line breaks or leaks, and 32 service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies 10 capital improvement projects scheduled over the five-year planning period. Particular focus is being placed on replacement of water lines and rehabilitation of hydrants and pumps. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by DPH as prioritized health concerns.

The City of Santa Clara does not treat water derived from the City's municipal wells. Treated water is received from the SFPUC Hetch Hetchy system and the SCVWD water treatment plants. According to the EPA Safe Drinking Water Information System, neither SFPUC nor SCVWD had health or monitoring violations within the last 10 years with regard to its treatment systems. The City's water wholesalers, SFPUC and SCVWD, conduct their own testing. Of the parameters tested, none were found to be higher than the California Department of Public Health (CDPH) allows.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Santa Clara did not have any health based violations or monitoring and reporting violations during the 2000-2010 period.

The City's 2010 Water Quality Report indicates that the City's potable water supply from all sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment.

According to CDPH's Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, Well No. 24 is susceptible to a known contaminant plume. Monitoring of this well shows persistent contamination at a trace level which is attributed to the Siemens-Intersil CERCLA (Superfund) site. Well No. 24 is monitored for contaminants on a quarterly basis and will continue to be monitored indefinitely.

The CDPH Annual Water System Sanitary Survey conducted in December of 2010 indicated that permitting for Well No. 32 and its associated iron and manganese filter treatment system is still pending. The City is pursuing this permit in order to utilize Well No. 32 for emergency conditions. The survey also identified minor deficiencies related to tank vent screens and corrosion and peeling paint on the interior of Serra Tanks No. 1 and No. 3. These deficiencies have been remedied by the City.

CITY OF SANTA CLARA
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 population of Santa Clara is 116,468.
- ABAG estimates that Santa Clara will grow by 35 percent over the next 25 years to an estimated population of 157,200.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- Based on information provided by the City's water wholesalers regarding the availability of water supply during normal, single dry year, and multiple dry year scenarios, the City has conservatively projected shortages after 2020 as the City is considered a temporary and interruptible customer of SFPUC with assurance of supply only through 2018.
- The City has planned for several future water supply projects that are expected to provide between 5,000 and 6,000 acre-feet per year of additional supply. This additional supply will help to cover most expected water shortages.
- The Santa Clara water supply and distribution system currently has sufficient capacity to serve all water customers within its service area.
- Continued emphasis on water conservation, use of recycled water, and higher water rates are expected to curtail the City's demand for water.
- The City is placing increased emphasis on utilizing recycled water for landscape irrigation. Recycled water currently makes up 10 percent of the City's total water sources. The City anticipates making greater use of recycled water in the future with projected use increasing by 87 percent between 2010 and 2035.
- An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 27.3 million gallons. This storage capacity can provide approximately 24 hours of emergency water under a maximum daily demand scenario.

- The Water Utilities Division has an ongoing program for replacement and rehabilitation of its water distribution system and to seismically retrofit water storage tanks.

- The City provides high quality water based on district compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely thorough district response to California Department of Public Health infrastructure and operational concerns.

- Well No. 24 is susceptible to a known contaminant plume. Monitoring of this well shows persistent contamination at a trace level which is attributed to the Siemens-Intersil CERCLA (Superfund) site. Well No. 24 is monitored for contaminants on a quarterly basis.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Santa Clara water system has sufficient financial resources to provide an adequate level of service. Rate increases that went into effect on July 1, 2011 will generate sufficient revenues to allow revenues to continue to exceed expenditures.

- Water rate increases will be required over the next several years to finance SFPUC Hetch Hetchy water system seismic improvements, increased pumping fees from SDVWD, and reduced retail water sales.

- The City has an ongoing multi-year capital improvement program that includes repair, replacement and rehabilitation projects that are designed to improve the overall water storage and distribution system.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system and the SCVWD distribution system. The City shares emergency water line interties with San Jose, Cupertino and Sunnyvale. The City utilizes recycled water distributed by South Bay Water Recycling.

- The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), is involved with the Water System Distribution Roundtable, and participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

- The City has not identified further opportunities for facility sharing.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- The Utilities Department webpage provides sufficient information about the water system.

- Operational efficiencies are being improved through a pilot project to read the City's 687 utility meters every other month, thereby saving two to two and a half staff days per month. A 'Maintenance System Specialist' position was added to coordinate with other City Departments on street and utility-related construction.

- No government structure options have been identified for Santa Clara.

17. CITY OF SUNNYVALE

AGENCY OVERVIEW

The City of Sunnyvale was incorporated on December 24, 1912, and became a charter city on May 18, 1949. Sunnyvale is a full service city providing a range of services including: community development (planning, building inspection and housing); redevelopment; public safety (police, fire and emergency medical services); public works (transportation planning, engineering, and streets,); and community services (recreation, parks, community theater and library). City services (including wastewater, solid waste, parks and recreation, storm water drainage, law enforcement, and library) were studied in the October 2007 Northwest Santa Clara County Service Review.

The City Manager recently reorganized city services by merging the Library and Community Services Departments; and by establishing an Environmental Services Department responsible for solid waste, water and wastewater operations, and recycling. These functions were formerly part of the Public Works Department. Water services were studied as part of the Countywide Water Service Review in June 2005.

Type and Extent of Services

Services Provided

The Water Division of the newly formed Environmental Services Department provides drinking water to residential, commercial, industrial, and institutional customers within the City. The Water Division oversees water quality, water conservation, system maintenance, backflow prevention, leak detection, and a recycled water program. Sunnyvale has also initiated a sustainability program which includes landscape education, has its own water conservation program, and is supported by the Santa Clara Valley Water District (SCVWD) water conservation program.

The City's water service area includes all water service customers within the City Limits. There are also a number of 'service area pockets within Sunnyvale that receive potable water from the California Water Service Company (Cal Water), a private water company.

The City of Sunnyvale has three different sources of potable water, and one recycled water source. Potable water is derived from eight municipal wells; from imported water from the State Water Project (SWP) and the federal Central Valley Project (CVP) through the SCVWD; and from the San Francisco Public Utilities Commission (SFPUC) Regional

Water System. Recycled (non-potable) water for irrigation purposes is produced at the Sunnyvale Water Pollution Control Plant (WPCP).

Service Area

The City serves the entirety of the area within its bounds with the exception of the Cal Water service area pockets.

Services to Other Agencies

Sunnyvale provides recycled water to Moffett Field, and has future plans to have recycled water interconnections with the City of Santa Clara and the City of Mountain View.

Contracts for Water Services

The City contracts with SCVWD and SFPUC for treated potable water.

Collaboration

The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), serves on several SCVWD Subcommittees, and participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Boundaries

The Sunnyvale water service boundary is the same as the City Limits. The present bounds encompass approximately 22.7 square miles. Sunnyvale is located within the Santa Clara Groundwater Subbasin.

ACCOUNTABILITY AND GOVERNANCE

The City operates under a city council-city manager form of government with a seven-member City Council elected at-large and a City Manager appointed by the City Council.

Councilmembers are elected to numbered seats for four-year terms. The City Charter limits Councilmembers to serving no more than two consecutive terms. The Mayor and Vice Mayor are selected by the Council to serve one-year terms. Current member names, positions, and term expiration dates are shown in Figure 17-1.

Figure 17-1: City of Sunnyvale City Council

City of Sunnyvale					
Environmental Services Department Contact Information					
Contact:	John Stufflebean, Environmental Services Department Director				
Address:	221 Commercial Street (P.O. Box 3707), Sunnyvale, CA 94088				
Telephone:	408-730-7565				
E-mail/Website:	bmccarthy@ci.sunnyvale.ca.us/http://sunnyvale.ca.gov				
City Council					
Member Name	**Position**		**Term Expiration**	**Manner of Selection**	**Length of Term**
Anthony Spitaleri	Councilmember	Seat No. 1	December 2013	Elected At-large	4 years
Christopher R. Moylan	Councilmember	Seat No. 2	December 2013	Elected At-large	4 years
Jim Griffith	Vice Mayor	Seat No. 3	December 2013	Elected At-large	4 years
David Whittum	Councilmember	Seat No. 4	December 2011	Elected At-large	4 years
Otto Lee	Councilmember	Seat No. 5	December 2011	Elected At-large	4 years
Vacant	Councilmember	Seat No. 6	December 2011	Elected At-large	4 years
Melinda Hamilton	Mayor	Seat No. 7	December 2011	Elected At-large	4 years
Meetings					
Date:	Tuesdays at 7:00 PM (Meets two to four times per month)				
Location:	Council Chambers, 456 W. Olive Avenue, Sunnyvale				
Agenda Distribution:	Posted on the City website, on the City hall bulletin board, and at the Senior Center, the Community Center, and the Public Safety lobby. Also available at the City Clerk's Office and the Library.				
Minutes Distribution:	Available on the 'Council Meeting' page of the City website, along with agendas and reports.				

The City Council meets at least two Tuesdays per month in the City Council Chambers. Agendas are posted on the City website, as well as the City bulletin board and other locations. Agendas, minutes and reports are available on the website.

Council meeting are televised live on KSUN-15, the City's government access cable television channel. Meetings are re-broadcast Wednesday evenings and Saturday afternoon. Meetings are also available online at webcast.insunnyvale.com, or on the City website.

The City does not have a water-related advisory commission or committee.

Water-related information is currently available from the Public Works Department web page. There is extensive information related to water, including an explanation of water supply and distribution. Links are readily accessible to the 2010 Urban Water Management Plan, Annual Water Quality Reports, the Sustainability program, and the Water Conservation program. A detailed contact list of personnel is not provided, but inquiries/complaints/questions can be submitted to the generic City 'Contact Us' page of the web site.

If a customer is dissatisfied with the City's water services, that customer may write a letter to the Environmental Services Department Director, call the Water Division office, or e-mail the City utilizing the electronic contact form. In calendar year 2010 there were a total of 60 water-related complaints; four for odor/taste, 16 for color, eight for turbidity, nine for pressure, and 23 for water outages. These complaints accounted for 0.20 percent of the 29,257 customers served.

The City of Sunnyvale demonstrated full accountability and transparency in its disclosure of information and cooperation with Santa Clara LAFCO. The Water Division responded to the questionnaires and cooperated with all document requests.

MANAGEMENT AND STAFFING

Daily operations of the Water Division are under the direction of the newly appointed Environmental Services Department Director, who reports directly to the City Manager. A total of 23.7 full time equivalent (FTE) positions are dedicated to the Water Enterprise Fund, as detailed in Figure 17-2.

Figure 17-2: Water Service Staff Allocation

Position	FTE	Position	FTE
Environmental Services Department Director	0.3	Water Distribution Crew Leaders	4.0
Water/Sewer/Storm System Manager	0.4	Senior Water Distribution Workers	5.0
Water Operations Manager	1.0	Water Distribution Workers	7.0
Water System Operators	2.0	Office Assistants	2.0
Senior Water Distribution Crew Leaders	2.0	**Total**	**23.7**

Performance evaluations of all employees are conducted annually. The probation period for new employees is six months, with evaluations at three and six months. The agency tracks the employees' workload through work logs, service requests, and periodic reports.

Operational efficiencies are being improved by replacing water meters with 'radio read' meters, allowing for more efficient recording of water use. Over 35 percent of the 28,000 meters have been replaced. The Division has also added a 'Hydro-excavator' at a cost of $285,000 to enable the utility crews to more efficiently replace water lines. The Division will soon implement a Maintenance Management System (including training) to better track projects.

The City adopted the 2010 Urban Water Management Plan on June 28, 2011, and updated its Water Utility Master Plan in November of 2010. Work is underway in updating the Recycling Master Plan and the Water Shortage Contingency Plan. Capital improvements are considered over a 20-year planning period as part of the budget process

POPULATION AND PROJECTED GROWTH

The 2010 United States Census population for Sunnyvale is 140,081, making it the second largest city in Santa Clara County behind San Jose. The average household size is 2.61 per the United States Census.

ABAG projects that the population of Sunnyvale will increase to 163,300 by 2035, a 16.6 percent increase over the twenty-five year period.

The Water Resources Sub-element of the General Plan was updated in 2008. It contains goals, policies and action strategies to address water supply, water conservation, water distribution, and water quality.

FINANCING

Financial Adequacy

The Water Supply and Distribution Fund (Water Fund) is an enterprise fund in which charges for services generate the necessary funds to provide the services. No General Fund monies are utilized by the Fund. The FY 10-11 budget included a number of changes from previous years due to a restructuring of employee classifications in water distribution and new state requirements for maintaining, monitoring, sampling, and reporting water quality. These requirements will increase fire hydrant, water valve, and water blow-off flushing and maintenance. Three new positions were added to address these new service requirements.

Revenue Sources

In FY 08-09, the Water Fund generated $25.7 million, in FY 09-10 the Fund generated $25.4 million, and in FY 10-11 the Fund was projected to generate $38.4 million. Projected revenues for FY 11-12 will increase due to the recent rate hike. Revenues for the past three fiscal years are shown in Figure 15-3.

In FY 10-11, the Water Fund generated in excess of $38 million in revenues from the following sources:

Late Payment Penalties	**$68,391**	**0.2%**
Water Connection Fees	$122,692	0.3%
Water Meter Sales	$67,225	0.2%
Water Meter Use Fees	$3,631,489	9.5%
Water Sales - Metered	$22,480,452	58.5%
Water Turn-on Fees	$168,684	0.4%
Water Recycled	$1,085,992	2.8%
Interest Income	$115,008	0.3%
Miscellaneous	$68,502	0.2%
Bond Proceeds	$10,622,782	27.6%
Total	$38,431,217	100%

As detailed above, significant revenues are derived from water sales and bond proceeds for capital improvements. Those revenues listed as fees are associated with 'development costs' for new construction.

Rates

A significant portion of the Water Supply and Distribution Fund's total costs are related to the cost of purchased water. In FY 10-11, SFPUC charged the City $836 per acre foot plus meter charges of $275,268. For FY 11-12, costs increased to $1,146 per acre foot plus meter charges, a 38.4 percent increase in one year. Based on wholesale water rate projections by SFPUC, costs will increase an average of 10 percent per year over the next 10 years. SCVWD currently charges $520 per acre foot plus a $100 per acre foot treated water charge. These costs will rise to $669 per acre foot, a 9.4 percent increase. SCVWD is projecting an 8 percent annual increase over the next 10 years. In addition, SCVWD charges the City a pumping fee for water extracted from the City's municipal wells. The projected well water unit cost (fee plus electrical costs) is expected to increase by 7.4 percent from $710 per acre foot to $763 per acre foot.

As a result of these wholesale price increases, the City has raised its overall water rate charge to its customers by 7.5 percent in FY 10-11 and 18 percent in FY 11-12. Since the early 1980's, the City has encouraged the prudent use of water through an 'inclining block

tier' rate structure which charges proportionally higher water rates for higher water users. In conjunction with the FY 11-12 rate increase, the City made cost of service adjustments to that rate structure to more accurately reflect the cost of providing service.

Current rates adopted by the City Council on June 14, 2011 increased the cost of water for residential customers as follows:

Monthly Water Bill Examples in hundred cubic feet (CCF)[111]	**New Rate**	**Percent Change**
4 CCF (minimal indoor use)	$14.44	18.0%
15 CCF (average Summer use)	$52.39	20.0%
25 CCF (twice the monthly average)	$101.89	35.5%

Based on the anticipated costs for wholesale water, it is expected that monthly water bills will continue to increase in the foreseeable future. The City is evaluating its options with respect to purchases of wholesale water.

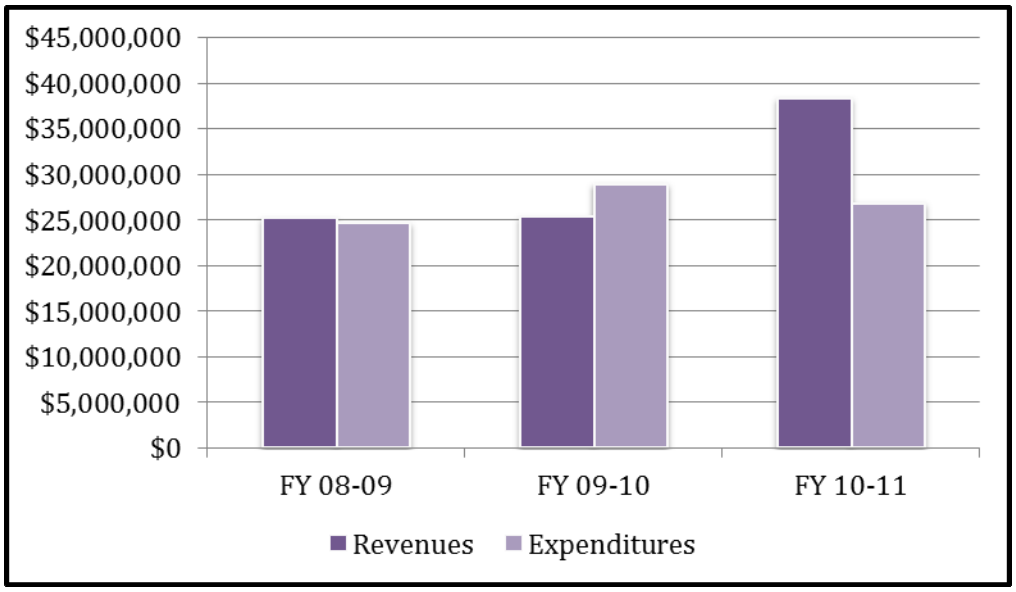
Expenditures

For FY 11-12, the Water Supply and Distribution Fund expenditure is expected to total $32.2 million, which is 12.1 percent of the City total expenditure of $265.9 million.

In FY 08-09, the Water Fund spent a total of $24.7 million, in FY 09-10 the Fund spent $29.0 million, and in FY 10-11 the Fund was projected to spend $28.8 million. Increased expenditures are attributed to increased costs for wholesale water and infrastructure projects. Revenues and Expenditures of the Fund for the past three fiscal years are shown in Figure 17-3.

[111] One hundred cubic feet (CCF) equals 748 gallons.

Figure 17-3: Expenditures and Revenues (FYs 08-09, 09-10 and 10-11)



Capital Outlays

The current budget includes 24 capital improvement projects scheduled over the 20-year planning period. Particular focus is being placed on rehabilitation and maintenance of water tanks, and replacement of water lines.

Over $13 million has been budgeted for water tank renovation including refurbishing, cleaning, interior coating, and exterior painting. Over 35 percent in funding is provided to replace the City's aging water lines. The project focuses on areas of the City where soil conditions are most corrosive. The project schedule calls for replacement of approximately two miles of pipe per year.

In FY 11-12, the Environmental Services Department will also complete replacement of the Water-Sewer Supervisory Control and Data (SCADA) System at a total cost of $1.5 million.

Long-term Debt

A $24 million water revenue bond was issued on June 29, 2010. This revenue bond refunded the City's 2001 Water and Wastewater Revenue Bonds, and provided $18 million in proceeds to will finance infrastructure improvements. Interest ranges from 4 percent to 5.25 percent, with annual payments ranging from $1.4 million to $1.9 million. Repayment will be made from net revenues of the Water Supply and Distribution Enterprise Fund and will be retired in 2040.

The Water Fund also carries a loan that was advanced from the General Fund in FY 02-03 in the amount of $1.6 million to purchase additional property for the City Corporation Yard. This annual loan payment is $351,700, and is included in the Water Fund budget for repayment through FY 14-15.

Reserves

The City's fiscal policy calls for the Water Fund to maintain a contingency reserve of 25 percent of direct operating costs. This contingency fund is to be used only in the event of disasters or other emergencies. For FY 11-12, this fund is budgeted for $5,650,457, which is 23.6 percent of FY 10-11 direct operating costs and would be sufficient to fund water operations for 2.4 months.

The City also maintains a Rate Stabilization Reserve ($475,000) to smooth utility rates from year to year, normalize economic cycles, and plan for project-related expenditures. The City also maintains a Debt Service Reserve at $1.0 million, and a Capital and Infrastructure Projects Reserve at $700,000.

WATER SUPPLY

The City has three sources of potable water supply: purchased surface water from SFPUC; purchased treated surface water from SCVWD; and groundwater from seven City-owned and operated wells. One additional well remains on stand-by for emergencies. An additional source of non-potable water comes from the City's Water Pollution Control Plant in the form of recycled water. The City also has distribution system interties with the cities of Cupertino, Mountain View, and Santa Clara, as well as the California Water Service Company through service connections located within city boundaries that are reserved for use in case of an emergency. The City's current and projected future water supplies for normal water years are shown in Figure 17-4.

Figure 17-4: City of Sunnyvale Current and Projected Water Supplies- Normal Year (AFY)

Source	2010	2015	2020	2025	2030
SFPUC	8,982	10,003	10,003	10,003	10,003
SCVWD	9,331	9,570	9,999	11,023	12,728
Groundwater	1,629	1,000	1,000	1,000	1,000
Recycled Water	1,523	1,400	1,525	1,765	1,775
Supply Total	21,465	21,973	22,527	23,791	25,506

Source: City of Sunnyvale 2010 UWMP, June 2011, Table 4-1: Water Supplies - Current and Projected in a Normal Year (AFY), page 4-2.

SFPUC Water

The City receives water from the City and County of San Francisco's Regional Water System, operated by SFPUC. In 2010, SFPUC water comprised 42 percent of the City's total water supply. The agreement between the City and SFPUC was negotiated by the Bay Area Water Supply and Conservation Agency (BAWSCA). Per the agreement, the 27 SFPUC wholesale customers have a combined supply assurance of 184 million gallons per day. The City of Sunnyvale's guaranteed portion of the supply assurance is referred to as the individual supply guarantee. Although the supply agreement and contract expire in 2034, the individual supply guarantee (which quantifies San Francisco's obligation to supply water to its individual wholesale customers) survives their expiration and continues indefinitely. Sunnyvale's individual supply guarantee is 12.58 million gallons per day (or approximately 14,100 acre feet per year (AFY). The Sunnyvale contract also includes a minimum purchase amount of 8.93 million gallons per day (10,003 AFY), which the City of Sunnyvale agrees to buy, regardless of whether water sales drop below this level. As shown in Figure 17-4, the City anticipates just meeting its minimum purchase amount each year from 2015 through 2030.

The SFPUC water supply is subject to reductions during drought conditions. As part of the water supply agreement, a water shortage allocation plan between SFPUC and its wholesale customers was adopted in 2009, and addresses shortages of up to 20 percent of system-wide use. The Tier 1 Shortage Plan allocates water from the regional water system between San Francisco Retail and the wholesale customers during system-wide shortages of 20 percent or less. The water supply agreement also includes a Tier 2 Shortage Plan, which allocates the available water among the SFPUC wholesale customers. A new Tier 2 plan was approved by the BAWSCA agencies in 2011, which provides the framework for allocating the wholesale Tier 1 water allocation between the different BAWSCA agencies. The new Tier 2 water shortage plan is in effect until 2018. For details, refer to the 'Drought Allocations' section of Chapter 23, San Francisco Public Utility Commission.

SCVWD Water

SCVWD supplies the City of Sunnyvale with treated surface water through an entitlement of imported Central Valley Project (CVP) water and the State Water Project (SWP), as well as surface water from local reservoirs. The current contractual agreement between the City and SCVWD sunsets in 2051, and currently allocates 10,988 AFY, adjustable by up to five percent every three years. In 2010, the City purchased 9,331 acre feet, or 85 percent of its current total allocated amount from SCVWD. Over the next 20 years, the City anticipates increasing it purchases from SCVWD by 36 percent.

Groundwater

In 2010, groundwater comprised eight percent of the City's total water supply. The City's groundwater comes from the Santa Clara Plain subarea of the Santa Clara Subbasin.

Groundwater is extracted by way of wells, either owned or operated by area retailers or private property owners. The allowable withdrawal of groundwater by the City depends on a number of factors, including withdrawals by other water agencies, the quantity of water recharged and carry-over storage from the previous year. Figure 17-5 shows the historic metered groundwater pumping data for the City from 2006 to 2010.

Figure 17-5: City of Sunnyvale Historic Groundwater Pumping (AFY)

Source	2006	2007	2008	2009	2010
Santa Clara Plain Subarea	1,113	2,696	1,006	1,231	1,629
Percent of Total Water Supply	5%	11%	4%	5%	8%

Source: City of Sunnyvale 2010 UWMP, June 2011, Table 4-3:Groundwater Pumped Volume (AFY), page 4-5

The City of Sunnyvale has eight municipal wells, of which seven are operational and part of the water supply system for the City. The eighth well is available for emergency purposes. The seven production wells combined have an average flow rate of 6,550 gallons per minute (gpm). As shown in Figure 17-4, the City anticipates reducing its use of groundwater through 2035, in response to the need to increase its SFPUC purchase to the minimum contract amount.

Recycled Water

The City of Sunnyvale has developed a recycled water program which today serves parks, golf courses and the landscaping needs of diverse industries. A wastewater reclamation program was developed in 1991 when the City first identified a short-term goal of recycling from 20 to 30 percent of high-quality effluent from the Sunnyvale Water Pollution Control Plant (WPCP). The long-term goal of the City is to reuse 100 percent of all wastewater (15 mgd) generated from the WPCP to reduce all flows to the bay, as stated in the 2000 Recycled Water Master Plan. This goal, if attained, would involve the export of water to locations or agencies outside the City limits. The City has completed Phases I and II of the 2000 Recycled Water Master Plan, which now serves Baylands Park, Lockheed/Martin Area, the Sunnyvale Municipal Golf Course, and other parks and industrial areas in the northern part of the City. A storage tank was built in the Year 2000 to allow for more recycled water to be developed and stored in order to keep up with demand on the system once the area is built out. Possible extensions to serve the south end of the City and also Cupertino and Los Altos may be evaluated in the future. Refer to Chapter 26 for more information on the Sunnyvale WPCP.

Emergency Preparedness

Water Supply Hazards

The aging water distribution system is prone to breaks and leaks, especially during the winter months. While the water line replacement project is on-going, it will be a number of years before new water lines are in place. The Water Division is prepared to respond to any leaks or breaks in a timely manner, and is able to be on site within 30 minutes of dispatch.

In 2004, a seismic vulnerability study of Sunnyvale's water system was conducted. According to the study, a magnitude 7.9 earthquake on the San Andreas Fault would cause a prolonged loss of water service in the City. To mitigate for such an event, two of the 5.0-million gallon storage tanks on Wright Avenue have been seismically retrofitted. The City is also planning to retrofit other key water infrastructure components that may be at risk.

Emergency Water Supply

An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 19.7 million gallons. This storage capacity can provide approximately one day of emergency water under a maximum daily demand scenario.

Interties and Back-up Supply

Regarding transfer opportunities, the City is currently connected to the cities of Cupertino, Mountain View and Santa Clara and to California Water Service Company through service connections located within Sunnyvale for use during emergency situations.

WATER DEMAND

The City of Sunnyvale projected water demands for a single dry year to 2035 are shown in Figure 17-6. The single dry year scenario is shown, as it represents the worst case scenario for the City regarding available water supply.

Figure 17-6 shows that no differences between projected supply and demand would occur under a single future dry year (i.e., 1977). Similar results were developed for multiple (three-year dry year) sequences through year 2035, where demand would also equal supply. In the event of a decrease of local supplies, the City would respond by pursuing demand reduction programs in accordance with the severity of the supply shortage.

Figure 17-6: City of Sunnyvale Supply and Demand Comparison- Single Dry Year (AFY)

	2010	2015	2020	2025	2030	2035
Total Supply	21,465*	21,973	22,527	23,676	25,506	25,506
Total Demand	21,464**	21,973	22,527	23,676	25,506	25,506
Difference	1	0	0	0	0	0
Difference as % of Supply	0	0	0	0	0	0
Difference as % of Demand	0	0	0	0	0	0

Source: Adapted from City of Sunnyvale 2010 UWMP, June 2011, Table 5-9: Supply and Demand Comparison - Single Dry Year (AFY), page 5-17.
*From Table 4-1: Water Supplies - Current and Projected in a Normal Year (AFY), City of Sunnyvale 2010 UWMP, June 2011.
**From Table 3-7: Projected Demand by Source (AFY), City of Sunnyvale 2010 UWMP, June 2011.

The City of Sunnyvale would be able to increase the amount of groundwater pumped to meet reasonably anticipated deficiencies from other sources, thus supply is projected to be sufficient to meet demand out to 2035. The City of Sunnyvale groundwater basin is not adjudicated, which means the right to pump groundwater from the basin has not been given by judgment of a court or board. For each of the five-year increments presented, the three-year dry period indicates that supplies will be able to meet demands through increased groundwater pumping and implementation of drought conservation programs. The City will be able to address the projected demands without rationing.

WATER INFRASTRUCTURE AND FACILITIES

The Sunnyvale water system is a comprehensive water storage and delivery system. The City is divided into three pressure zones. Zone 1 comprises the northerly two-thirds of the City and is supplied by six SFPUC turnouts (Mary, Palomar, Lockheed, Borregas, Fair Oaks, and Lawrence) and by the Central well. Zones 2 and three comprise the southerly one-third of the City and are supplied by two SCVWD turnouts (Barranca and Wright), and by seven wells (Raynor, Ortega, Westmoor, Serra, Hamilton No. 2 and 3, and Losse).

Water Treatment Facilities

Sunnyvale does not have any water treatment facilities.

Water Storage Facilities

The City has five active 5.0 million gallon (mg) storage tanks with a combined capacity of 25.0 MG. These tanks are in the process of being seismically retrofitted, which will reduce their combined capacity to 19.7 mg. The City also has five 0.5 mg storage tanks with a combined capacity of 2.5 mg. Three of these tanks have been retrofitted, which will

reduce their combined capacity to 1.2 mg. The other two tanks are not currently utilized, but are available for emergency purposes.

Conveyance and Distribution Facilities

The water distribution system is composed of approximately 10 miles of 16-inch to 30-inch diameter transmission lines and over 280 miles of 6-inch to 14-inch diameter distribution mains. There are still remaining some 4-inch diameter pipes, which are being replaced with 8-inch diameter lines, which is the City's current minimum standard.

The distribution system also consists of three booster pump plants (Mary-Carson, Wolfe-Evelyn, and Wright Avenue), each with four pumps, one of which is on standby for emergency purposes. The system also features 49 pressure reducing valves, 3,380 fire hydrants, 250 City-owned backflow prevention devices (with 3,104 backflow prevention devices total), and 29,257 water service connections. The system also includes the automated Supervisory Control and Data Acquisition (SCADA) System that control distribution of water throughout the system.

Approximately 80 percent of the water main pipelines were constructed in the 1960's, and the remainder in the 1980's. The 1960's vintage pipes are approaching their estimated 50-year useful service life and are in need of replacement.

The City reported that in calendar year 2010 there were 14 main line breaks or leaks, and 168 service connection breaks or leaks. The City did not issue any 'boil water' orders or report any water outages.

Infrastructure Needs & Capital Improvement Program

The current capital improvement program identifies 24 capital improvement projects scheduled over the 20-year planning period. Particular focus is being placed on rehabilitation and maintenance of water tanks, replacement of water lines, and replacement of the SCADA system. Refer to the Financing Section for details.

Shared Facilities

The City does not share any facilities with any other agencies or organizations.

WATER QUALITY

Source Water

For the SFPUC system, the major water source originates from spring snowmelt flowing down the Tuolumne River to the Hetch Hetchy Reservoir, where it is stored. This pristine water source is located in the well-protected Sierra region and meets all Federal and State criteria for watershed protection. DPH and the EPA have granted the Hetch Hetchy water source a filtration exemption, based on the SFPUC's disinfection treatment practice, extensive bacteriological-quality monitoring, and high operational standards. In other words, the source is so clean and protected that the SFPUC is not required to filter water from the Hetch Hetchy Reservoir. Water from the Hetch Hetchy is supplemented by run-off collected in the Alameda and Peninsula Watersheds. This water is treated at two water treatment plants prior to distribution.

Overall groundwater quality in Santa Clara County is very good and water quality objectives are achieved in most wells. Public water supply wells throughout the County deliver high quality water to consumers, almost always without need for treatment. The most significant exceptions are nitrate and perchlorate, which have impacted groundwater quality predominately in South County. In the future, new and more stringent drinking water quality standards could also affect the amount of groundwater pumped from the basin.

According to the California Department of Public Health (CDPH) Drinking Water Source Assessment, which evaluates the vulnerability of water sources to contamination, the SVCWD's surface source waters are susceptible to potential contamination from sea water intrusion and organic matter in the Delta and from a variety of land use practices, such as agricultural and urban runoff, recreation activities, livestock grazing, and residential and industrial development. Local sources are also vulnerable to potential contamination from commercial stables and historic mining practices.

Treated Water

Quality of treated water can be evaluated according to several measures. For the purposes of this report, the following indicators are used: the number of violations as reported by the EPA since 2000, the number of days in full compliance with Primary Drinking Water Regulations in 2010, and any deficiencies identified by CDPH as prioritized health concerns.

The City of Sunnyvale does not treat water derived from the City's municipal wells. Treated water is received from the SFPUC Regional Water System and the SCVWD water

treatment plants. The City's water wholesalers, SFPUC and SCVWD, conduct their own testing. Of the parameters tested, none were found to be higher than CDPH allows.

According to the federal Environmental Protection Agency (EPA) through its Safe Drinking Water Information System (SDWIS), the City of Sunnyvale did not have any health based violations or monitoring and reporting violations during the 2000-2010 period.

The City's 2010 Water Quality Report indicates that the City's potable water supply from all sources met all state and federal drinking water health standards. In order to insure that water quality standards are met, drinking water samples are collected daily throughout the City and analyzed for a variety of regulated and unregulated contaminants. Samples are tested by the City's certified laboratory and an independent laboratory using the latest testing procedures and equipment.

The CDPH Annual Water System Sanitary Survey conducted in December of 2010 indicated that permitting for Well No. 32 and its associated iron and manganese filter treatment system is still pending. The City is pursuing this permit in order to utilize Well No. 32 for emergency conditions. The survey also identified minor deficiencies related to tank vent screens and corrosion and peeling paint on the interior of Serra Tanks No. 1 and No. 3. These deficiencies have been remedied by the City.

CITY OF SUNNYVALE
SERVICE REVIEW DETERMINATIONS

Growth and Population Projections

- The current 2010 United States Census population for Sunnyvale is 140,081.
- ABAG projects that the population of Sunnyvale will increase to 163,300 by 2035, a 16.6 percent increase over the twenty-five year period.

Present and Planned Capacity of Public Facilities and Adequacy of Public Services, Including Infrastructure Needs and Deficiencies

- The City anticipates being able to purchase sufficient water to meet its needs under its current contracts with the San Francisco Public Utilities Commission and the Santa Clara Valley Water District.
- The Sunnyvale water supply and distribution system has sufficient capacity to serve all water customers within its service area.
- Continued emphasis on water conservation, use of recycled water, and higher water rates are expected to curtail the City's demand for water.
- The City anticipates utilizing recycled water to make up about seven percent of its total water supply between 2010 and 2035.
- An emergency backup water supply is provided by above-ground water storage tanks, with an effective capacity of 19.7 million gallons (MG). This storage capacity can provide approximately one day of emergency water under a maximum daily demand scenario.
- Capital improvement funding is provided for an aggressive program to replace the City's aging water lines. The project schedule calls for replacement of approximately two miles of pipe per year.
- Over $13 million has been budgeted for water tank renovation including refurbishing, cleaning, interior coating, and exterior painting.
- The City provides high quality water based on city compliance with drinking water regulations, a lack of health and monitoring violations since 2000, and timely

thorough district response to California Department of Public Health infrastructure and operational concerns.

- City management methods appear to generally meet accepted best management practices. The City prepares a budget before the beginning of each fiscal year, has a detailed Capital Improvement Program, conducts periodic financial audits, maintains relatively current transparent financial records, regularly evaluates rates and fees, tracks employee and department workload, and has established a process to address complaints.

Financial Ability of Agency to Provide Services

- As an Enterprise Fund, the Sunnyvale water system has sufficient financial resources to provide an adequate level of service. The Fund has been able to generate sufficient revenues to stay ahead of the rising expenditure curve.

- Water rate increases will be required over the next several years to finance SFPUC Regional Water System seismic improvements, increased pumping fees from SCVWD, and reduced retail water sales.

- The City has an ongoing multi-year capital improvement program that includes repair, replacement and rehabilitation projects that are designed to improve the overall water storage and distribution system.

Status and Opportunities for Shared Facilities

- The City practices facility sharing by receiving potable water through the SFPUC distribution system and the SCVWD distribution system.

- The City shares emergency water line interties with Cupertino, Mountain View and Santa Clara, and with California Water Service Company for use during emergency situations.

- The City collaborates with the Bay Area Water Supply and Conservation Agency (BAWSCA), serves on several Santa Clara Valley Water District Subcommittees, and participates in the 'Watershed Watch' program of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Accountability for Community Services, Including Governmental Structure and Operational Efficiencies

- Accountability is best ensured when contested elections are held for governing body seats, constituent outreach is conducted to promote accountability and ensure that constituents are informed and not disenfranchised, and public agency operations and management are transparent to the public. The City demonstrated accountability with respect to all of these factors.

- The City does not have a water-related advisory commission or committee.

- The City has indicated that future opportunities may present themselves with respect to the City serving the water service pockets currently served by the California Water Service Company.

- Operational efficiencies are being improved by replacing water meters with 'radio read' meters, allowing for more efficient recording of water use. Over-35 percent of the 28,000 meters have been replaced. The Division has also added a 'Hydro-excavator' to enable the utility crews to more efficiently replace water lines. The Division will soon implement a Maintenance Management System (including training) to better track projects.

- No alternative government structure options have been identified for Sunnyvale.

PRIVATE WATER PURVEYORS

18. SAN JOSE WATER COMPANY

TYPE AND EXTENT OF SERVICES

San Jose Water Company (SJWC), founded in 1866, is one of the largest water providers in Santa Clara County serving an area that encompasses 139 square miles. SJWC provides potable water service to portions of Cupertino and San Jose; all of Campbell, Los Gatos, Saratoga, and Monte Sereno; and contiguous territory in the County of Santa Clara. As an investor-owned water utility, the Company operates under the authority of the California Public Utilities Commission (CPUC). SJWC is owned by San Jose Water Corp., a publicly traded company listed on the New York Stock Exchange under the symbol SJW.

On October 1, 1997 SJWC entered into a 25-year lease agreement with the City of Cupertino to operate and maintain the City's water system.

San Jose Water Company is an investor owned utility and not subject to LAFCO purview; therefore, no determinations have been included. The Company is included in the report to ensure a comprehensive review of water service in Santa Clara County. San Jose Water Company was last reviewed in the 2005 Countywide Water Service Review.

ACCOUNTABILITY AND GOVERNANCE

San Jose Water Company is an investor owned utility operated under the direction of a ten-member Board of Directors. Directors are elected by the shareholders to one-year terms. SJWC maintains a website to provide information to its customers. SJWC is regulated by the California Public Utilities Commission (CPUC).

MANAGEMENT AND STAFFING

San Jose Water Company has a total of 352 employees—109 are employed in management and administration and 243 are dedicated to the operations and maintenance of the water system.

The Company has established Best Management practices in order to increase efficiency and maximize profits. It is investor-owned and must meet certain levels of performance based on investor expectations.

San Jose Water Company is managing operating costs by employing efficient management operations, maximizing the use of its water resources and being actively involved in water-related issues in the County. The Company provides leadership in SCVWD's water retailers group as well as the group's financial subcommittee.

SJWC uses technology extensively to manage its system, resulting in lower staff levels, controlled energy costs, and improved security monitoring. For its system, the Company uses a fifth generation Supervisory Control and Data Acquisition system that enables staff to efficiently manage pressure, flow and energy use, as well as monitor for system problems before they become critical

In addition, SJWC is a partner in South Bay Water Recycling, along with the San Jose Municipal Water System, the Cities of Milpitas and Santa Clara, the Great Oaks Water Company, SCVWD and the US Bureau of Reclamation. This partnership provides coordination with the retailers to ensure that the area's recycled water resource is maximized, both in terms of delivery and plant treatment capacity.

POPULATION AND PROJECTED GROWTH

San Jose Water Company serves an estimated population of one million. Growth within the service area is expected to be slow to moderate; the Association of Bay Area Governments projects that population in SJWC's service area will increase by about 1.4 percent per year for the next five years. The population in the service area is projected to be 1,017,684 in 2015 and up to 1,293,771 in the year 2035.[112]

The metered connections served by the Company, including those in parts of Cupertino that are being leased by SJWC, are shown in Figure 18-1.

Figure 18-1: San Jose Water Company Connections

Connection Type	Number of Connections	Percentage
Residential/Business	220,654	99%
Industrial	75	0%
Other/Governmental	1,648	1%
Recycled	73	0%
Total	**222,450**	**100%**

SJWC adds approximately 1,200 new connections on average each year. The Company manages future supply based on projected growth. The Company has planned for growth within its service area through its Urban Water Management Plan, Infrastructure Master Plans, and Capital Improvement Plan.

FINANCING

The majority of revenues for SJWC are derived from rates charged for water service. In calendar year 2010, the Company's revenue was $199.1 million and operating expenses

[112] San Jose Water Company, *2010 UWMP*, April 2011, p. 5.

were $170 million. SJWC invested $95.5 million for capital improvements during the same fiscal year.

SJWC undergoes an annual independent audit. The results of the FY 09-10 audit were not qualified in any way. The Company has outstanding bonds of about $252 million; the First Mortgage Bonds are rated NAIC 1, while the Private Activity bonds are rated A.

Supply Rates

SJWC pays a groundwater extraction fee of $520 per acre foot to SCVWD to cover the costs associated with the District's groundwater recharge program. The Company also pays a treated water rate of $620 per acre foot for imported supply from SCVWD.

Demand Rates

The rates charged for water service by San Jose Water Company are reviewed triannually and adjusted annually; any rate changes must be approved by the CPUC. The Company increased rates by 9.2 percent in FY 09-10 and 3.3 percent in FY 10-11. It is expected that rate increases will continue. The projected rate increase for FY 11-12 is 5.8 percent.

SJWC has a tiered rate structure that includes a meter charge and water usage. In addition, there is a 1.5 percent surcharge on all customer bills to recover the cost of the fee imposed by the CPUC to fund its regulation. For comparison purposes, a ¾" meter would pay $16.37 for the meter charge, $2.52 per each 100 cubic feet up to 1300 cubic feet and $2.77 for each 100 cubic feet thereafter, plus the 1.5 percent surcharge.

WATER SUPPLY

SJWC obtains its water supply from several sources: groundwater (39 percent), local surface water (varies but averages about eight percent), and imported treated surface water from SCVWD (53 percent). SJWC is SCVWD's largest customer, purchasing over 50 percent of the District's treated supply. SJWC receives water from all three of SCVWD's treatment plants.

Local surface supply is the most cost-effective water source for SJWC as there is a lower cost for supply, collection, treatment and distribution. SJWC holds water rights on several local creeks and impounds raw water at the following lakes: Cozzens, Elsman, Kittredge, McKenzie, and Williams.

Groundwater is extracted from the Santa Clara Valley Basin, which receives natural and artificial recharge through SCVWD's facilities. The District manages all of the groundwater resources and is responsible for all recharge functions.

SJWC has the water rights for most properties in its service area in the form of quitclaim deeds. These revocable rights are usually obtained by SJWC prior to providing water service to a customer. Thus SJWC has rights to pump water from the aquifers because SJWC has the deeded water rights from property owners in the service area when in compliance with the SCVWD's permitting requirements.

Based on SJWC's projections, groundwater will continue to be an important source of water, comprising forty percent of the supply through year 2035.

SJWC receives recycled water through South Bay Water Recycling; the water is produced at the San Jose/Santa Clara Water Pollution Control Plant in Alviso and is available in the northern and eastern portions of SJWC's service area. SJWC's role in the SBWR system is as a retailer that provides meter reading and billing services for the project within its service boundaries. In addition, SJWC owns and operates portions of distribution system.

SJWC plans to add additional sources of supply in the form of new, higher capacity, replacement groundwater wells, in order to meet the demands of planned developments within SJWC's service area. The program proposes replacing two wells per year. In addition to well replacements, the proposed North First Street development would require additional supply

WATER DEMAND

Figure 18-2 shows existing and projected future water demands. As shown, the Company projects that average day demand will increase by approximately 16 percent by 2035.

SJWC anticipates that it will continue to have sufficient water capacity available from the existing three water sources, based on demand projections of 0.4 percent annual demand growth until 2035. SCVWD will be able to meet the demands of SJWC's service area during normal and single dry years. The local surface water supply will be limited during dry years, but the balance will be made up through additional groundwater pumping. SCVWD has determined that water shortages would occur in the event of an extended drought period after 2020, and are planning to make investments such that no greater than 20 percent shortages are expected through year 2035, based on Santa Clara County's historic hydrology.

Based on SCVWD's water supply management through year 2035, conservation methods currently employed and future demand management measures, SJWC will be able to meet the needs of the service area through at least 2035 for normal and single dry years. In a multiple dry year event beyond 2025, SJWC may be faced with a 20 percent reduction of supply from SCVWD's sources in years four to six of a multiple dry year event. In this case, SJWC will enact a water shortage contingency plan.

SJWC's total demand is not limited to metered customer use. Between six and seven percent of the water produced (pumped, treated or purchased) never gets billed and is classified as "non-revenue water." Non-revenue water includes authorized unmetered uses including firefighting, main flushing and public use. The remaining unmetered water is likely due to meter reading discrepancies, reservoir cleaning, malfunctioning valves, leakage and theft.

Figure 18-2: Existing and Projected Water Demand

Type	Quantity
Average Day Demand (2010)	110 mgd
Maximum Day Demand (2003-2004)	233 mgd
Projected Average Day Demand (2035)	128 mgd

SJWC has a water conservation program and dedicated conservation staff. It uses a number of demand management measures in order to encourage water conservation.

WATER INFRASTRUCTURE AND FACILITIES

The SJWC infrastructure is described in detail in Figure 18-3.

Figure 18-3: SJWC Water Infrastructure

Facility	Details
Pipelines	2,453 miles
Reservoirs	5
Tanks	98
Total Water Storage Volume	7,690 AF
Pump Stations	247
Pump Station Capacity	451 mgd
Wells	111
Total Well Pumping Capacity	263.1 mg
Pressure Zones	95

The Company operates under the authority of the CPUC, which sets standards for system capacity and service reliability.

SJWC has developed an Infrastructure Master Plan for pipelines and special facilities. Related to that is the Company's five-year capital improvement plan. Over $50 million in infrastructure replacement is performed each year to keep the aging system running well. There are areas where existing pipes were designed for the fire flow requirements present at installation, which is less than would be required if installed currently. The Company is actively working to improve this situation whenever there is an opportunity to upgrade pipeline capacity.

SJWC disinfects groundwater at the well station and has two treatment facilities for surface water—Montevina and Saratoga. One uses a direct filtration process and the other microfiltration, with a combined capacity of 35 million gallons per day. The smaller plant was built in 1993 on the site of a former plant that had been taken out of service. The larger facility will soon undergo major improvements to keep pace with all upcoming water quality requirements and to maximize usage for the ratepayers benefit.

Groundwater quality in the service area is excellent overall. SJWC is able to manage this through time of use and dilution. The water storage facilities include steel and redwood tanks as well as large in-ground lined treated water reservoirs and raw water reservoirs.

Shared facilities

SJWC shares facilities where appropriate to increase efficiency and improve cost effectiveness. The Company has two intertie connections with SCVWD at Quito Road and Cox Avenue to improve reliability for SCVWD retailers receiving water from the Rinconada Treatment Plant through the West Pipeline.

The Company also wholesales water to 39 mutual water companies and other small water systems. It sells raw untreated water to the Aldercroft Heights County Water District directly from Los Gatos Creek, where the Company holds water rights.

19. CALIFORNIA WATER SERVICE COMPANY

TYPE AND EXTENT OF SERVICES

California Water Service Company (Cal Water) is a private company based in San Jose which provides water service in numerous locations throughout California. The Company's Los Altos-Suburban District serves Los Altos and the vicinity. Cal Water is the largest investor-owned water utility in the western United States and is a subsidiary of the California Water Service Group. Within its Los Altos- Suburban District, Cal Water serves 18,310 connections. The source of supply includes both groundwater and treated surface water provided by SCVWD. Cal Water operates under the oversight and authority of the California Public Utilities Commission (CPUC).

The service area of Cal Water is currently being updated to include corrections and additions. The latest service area map is awaiting CPUC approval.

Cal Water is a private entity and is not subject to LAFCO purview; therefore no determinations have been included. Cal Water is included in the report to ensure a comprehensive review of water service in Santa Clara County. California Water Service Company was last reviewed in 2005 as part of the Countywide Water Service Review.

ACCOUNTABILITY AND GOVERNANCE

Cal Water is a private entity operated under the direction of a Board of Directors. Directors are elected by majority vote of outstanding shareholders. Cal Water maintains a website to provide information to its customers.

MANAGEMENT AND STAFFING

Cal Water has nearly 1,000 employees companywide. The company has established management practices in order to increase efficiency and maximize profits by centralizing several departments, such as engineering and water quality, with operation and maintenance being managed at the district level. The Company is investor-owned and must meet certain levels of performance per investor expectations.

POPULATION AND PROJECTED GROWTH

Cal Water currently provides service to the connections within its Los Altos-Suburban District shown in Figure 19-1. The Company estimates that it serves approximately 55,270 residents.

Figure 19-1: Connections Served by Cal Water

Type	Connections	Percentage
Residential	16,787	91.68%
Multi-residential	150	0.82%
Commercial	1,152	6.29%
Industrial	5	0.03%
Governmental	198	1.08%
Other	18	0.10%
Total	18,310	100.00%

Cal Water's Los Altos District is growing at a relatively slow rate of 0.13 percent based on growth in total services over the past five years. The growth rate has averaged 0.15 percent annually over the last ten years. Based on available space and past experiences little growth is expected within this service area over the next twenty years. Cal Water's projected average annual growth rate for Los Altos is 0.13 percent.[113]

The land within the Los Altos Suburban District service area that can sustain development is limited and other retail water purveyors surround the District; therefore, Cal Water does not anticipate any significant growth other than from redevelopment.

FINANCING

Cal Water declined to provide proprietary financial information for this review as the financial data is commingled with all other Cal Water operations. The Company did note that planned capital improvements for the Los Altos- Suburban District are $3.3 million for FY 10-11.

Supply Rates

The Company pays a groundwater production service charge of $520 per acre foot pumped to SCVWD to cover the costs associated with the District's groundwater recharge program. The Company pays $620 per acre foot for contract treated water and $570 per acre foot for non-contract treated water.

[113] Cal Water, *Los Altos District UWMP*, July 2011, p. 22.

Figure 19-3: Cal Water Residential Water Rates, FY 11-12

Service Charge	Per meter Per month
For 5/8 x 3/4- inch meter	$13.27
For 3/4- inch meter	$19.90
Quantity	**Rates**
For the first 1,000 cubic feet, per 100 cubic feet	$2.98
For the next 1,700 cubic feet, per 100 cubic feet	$3.17
For all over 2,700 cubic feet, per 100 cubic feet	$3.80

Demand Rates

Cal Water must receive approval from CPUC for any rate changes. The Company charges a flat monthly service charge depending on meter size and a tiered rate depending on quantity of water usage. Residential meter service rates are shown in Figure 19-3.

WATER SUPPLY

Cal Water's depends on a combination of groundwater (29 percent) and treated water purchased from SCVWD (71 percent) for its water supply. Data provided by SCVWD indicated that the Company extracted 3,396 acre feet of groundwater in 2010. Groundwater management and recharge is performed by SCVWD.

Treated water from SCVWD is delivered to Los Altos from the Rinconada treatment plant through a large-diameter high pressure pipeline that runs through Cupertino and along Foothill Expressway. This pipeline is commonly referred to as the West Pipeline. The Los Altos District takes SCVWD water at four locations in the system. In 2010, SCVWD sold 8,252 acre of treated water to the Company. In order to address future growth in demand, the Company anticipates increasing purchases of SCVWD water by 21 percent by 2035. The Company anticipates a one percent increase in groundwater use over that same period.

When surface water supplies are plentiful, SCVWD authorizes the sale of "Non Contract" water in order to facilitate conjunctive use storage of surplus supply in the groundwater aquifers in the region. Because there is usually a slight economic advantage to purchasing this "Non-Contract" water, the Cal Water reduces its production of groundwater and increases the purchase of surface deliveries from SCVWD. When supplies are scarce, the SCVWD has imposed both voluntary and mandatory reductions in the overall use of water. Because surplus supplies are stored underground by SCVWD when available, during shortages Cal Water maintains groundwater production at fairly constant level and drastically reduces the direct purchase of water from SCVWD.

Recycled water is not available within the Company's service area.

Emergency Preparedness

Cal Water's well capacity is sufficient to accommodate moderate treated water reductions. However, it could not supply maximum day or peak hour demands if treated water was eliminated completely. Additional wells would need to be installed

WATER DEMAND

In 2010, Cal Water delivered 11,648 acre feet of water to its customers.[114] The Company projects that by 2035 total water deliveries will equal 13,440 acre feet, which is equivalent to approximately 15 percent growth in demand over the 25 year period. As discussed previously, this increase in demand is anticipated to be largely addressed through increased purchases of SCVWD water.

The Company's UWMP asserts that the combination of SCVWD purchased water and groundwater supplies will be sufficient to provide an adequate amount of water to Cal Water's Los Altos District even in times of prolonged drought.[115]

WATER INFRASTRUCTURE AND FACILITIES

The Company has no treatment facilities. Cal Water provides both groundwater and treated local surface water within the Los Altos-Suburban service area. The water infrastructure is described in Figure 19-2. The Company operates under the authority of the CPUC, which sets standards for system capacity and service reliability.

Figure 19-2: Cal Water Infrastructure

Facility	Quantity
Pipelines	297 miles
Reservoirs (Tanks)	45
Total Water Storage Volume	14.6 mg
Booster Stations	41
Wells	21
Total Well Pumping Capacity	21.9 mgd
Pressure Zones	18

Shared facilities

Cal Water does not have any shared facilities.

[114] Errors in the 2010 water production data result in a negative value for unaccounted for water. Total water use was likely higher. This could not be resolved prior to the writing of the UWMP.

[115] Cal Water, *Los Altos District UWMP*, July 2011, p. 54.

20. GREAT OAKS WATER COMPANY

TYPE AND EXTENT OF SERVICES

The Great Oaks Water Company, formed in 1959, is a utility that provides domestic water services. The Great Oaks' service area includes a portion of the southern end of the City of San Jose. It provides services to the Blossom Valley, Santa Teresa, Edenvale, Coyote Valley, and Almaden area of the City. The area is roughly bounded by Snell Avenue on the West, the Silver Creek Ridge on the East, Palm Avenue (in Coyote Valley) on the South and Riverview Drive on the North. Approximately 95 percent of the Company's revenue is derived from service within San Jose's incorporated area.

The Company uses groundwater as its sole source of supply. Great Oaks is an investor-owned utility and operates under the oversight of the California Public Utilities Commission (CPUC).

The Great Oaks Water Company is not subject to LAFCO purview, and accordingly no determinations are included in this report. Great Oaks is included in the report to ensure a comprehensive review of water service in Santa Clara County. The Great Oaks Water Company was last reviewed in the 2005 Countywide Water Service Review.

ACCOUNTABILITY AND GOVERNANCE

The Great Oaks Water Company maintains a website where company information is made available to its customers. The Company did not provide any additional information on its governing body.

MANAGEMENT AND STAFFING

The Great Oaks Water Company operates with 18 staff members, which are headed by a chief executive officer.

The Company makes projections for future demand in its UWMP.

POPULATION AND PROJECTED GROWTH

The Great Oaks Water Company serves an estimated population of 92,995[116] and a total of 20,628 connections. The Company provides services to connections as described in Figure 20-1.

Figure 20-1: Connections Served by Great Oaks Water Company (2011)

Type	Connections	Percentage
Commercial (including domestic)	20,410	99%
Industrial	46	0%
Public Authorities	140	1%
Schools	33	0%
Total	**20,628**	**100%**

The Association of Bay Area Governments (ABAG) has projected population growth to be modest in the future, growing at a rate of 1.1 to 1.5 percent per year to a population of 128,439 in 2035.[117]

In recent years, the City of San Jose has engaged in various planning activities in an effort to control development in the undeveloped areas of the City and in contiguous unincorporated areas of Santa Clara County. At the time Great Oaks prepared its 2005 UWMP, the City had planned for development in Coyote Valley, a geographic area already partially included within Great Oaks' CPUC-authorized service area. In the years since, the City's planning efforts have changed direction.

In 2009 and 2010, two large multi-family residential and/or mixed use projects in Great Oaks' service area have been the subject of water supply assessments requested of and submitted by Great Oaks. Both projects combined would constitute 4,400 residential units, which would increase Great Oaks' residential population by approximately 15,000, per company estimates.[118]

The Company reported that it will likely annex additional areas in the next few years. The exact areas are unknown and are not expected to be significant.

[116] Great Oaks Water Company, *Draft 2010 UWMP*, p.5.

[117] Great Oaks Water Company, *Draft 2010 UWMP*, p.5.

[118] Great Oaks Water Company, *Draft 2010 UWMP*, p.6.

FINANCING

Supply Rates

The Company pays a groundwater production service charge of $520 per acre foot pumped to SCVWD to cover the costs associated with the District's groundwater recharge program.

Demand Rates

The Company's current water rates include a readiness to serve charge (meter charge) as well as a usage charge. The water usage charge is determined by how much water a customer uses during the billing period. The rate is $1.960 per hundred cubic feet. The readiness to serve charge is a recurring monthly charge that is determined by the size of the water meter serving a property. This charge applies even if no water is used during the billing period. In addition there are several taxes charged by various governmental agencies that are added to a water bill. CPUC requires the addition of a 1.5 percent surcharge to all customer bills to fund the CPUC's activities. The City of San Jose also charges a five percent utility user tax to all Great Oaks' customers living within the City. Any proposed rate changes must be submitted to the CPUC for approval. Great Oaks Water Company's rates were last changed on July 1, 2011.

WATER SUPPLY

Groundwater is Great Oaks' sole source of water supply. In 2010, the Company pumped approximately 11,021 acre feet, of which about four percent was considered unaccounted for loss and the remainder was delivered to service connections. The Company presently plans to continue using groundwater to meet all demand needs; although, it is presently in discussions with the City of San Jose regarding the possibility of receiving recycled water for distribution within the Great Oaks service area.

WATER DEMAND

The Company reported that although the total number of accounts had increased by about one percent over the last five year period (2005-2010), water usage had declined by four percent during that same period. The Company anticipates this trend to continue over the next 25 years. Great Oaks' UWMP indicates that although the Company projects 1,048 additional connections between 2010 and 2035, by 2035, the Company anticipates total delivered water to decline by 19 percent from 10,536 acre feet in 2010 to 8,509 acre feet.

Great Oaks has analyzed its sources of water during normal, single and multiple dry years and has concluded that it will have sufficient water available to meet demand projections through the year 2035.[119]

WATER INFRASTRUCTURE AND FACILITIES

The Great Oaks water system consists of 195 miles of pipelines and 19 wells. The Company's total well pumping capacity is 29,900 gallons per minute. The Company is required to adhere to the standards adopted by the CPUC for system condition and capacity to ensure adequate levels of service for domestic use and fire flow.

Shared facilities

The Company maintains an intertie with San Jose Water Company for emergency purposes.

[119] Great Oaks Water Company, *Draft 2010 UWMP*, 2011, P. 1.

21. WEST SAN MARTIN WATER WORKS

TYPE AND EXTENT OF SERVICES

West San Martin Water Works, Inc. is an investor-owned company providing water services in the unincorporated San Martin area west of Monterey Road. The San Martin County Water District lies to the east. The Company serves 297 connections. Water service is provided to parcels within its service area that have been approved by the California Public Utilities Commission (CPUC). The Company is regulated by CPUC.

The Company has been in operation for a number of years, owned and operated by the same family the entire time. The source of water supply is groundwater. As a private entity, West San Martin Water Works, Inc. is not subject to LAFCO purview and no determinations have been included. The Company is included in the report to ensure a comprehensive review of water service in Santa Clara County. West San Martin Water Works was last reviewed in 2005.

ACCOUNTABILITY AND GOVERNANCE

West San Martin Water Works, Inc. is a private entity operated under the direction of a Board of Directors consisting of three family members. Directors are elected or appointed at the Company's annual meeting. The Company provides service-related information to its customers when it is deemed necessary.

MANAGEMENT AND STAFFING

West San Martin Water Works is a family-owned business. Specific staffing information was not provided; however, it was noted that family members involved in the business handle all the tasks, including system operations, billing and collections.

POPULATION AND PROJECTED GROWTH

West San Martin Water Works currently provides service to 253 residential connections (85 percent), 41 commercial/manufacturing/industrial connections (14 percent) and three governmental connections (one percent).

The Company is expecting a two percent to five percent annual increase in population. accompanied by a related increase in water demand. The Company usually adds a few new connections each year. Steady growth is projected.

FINANCING

West San Martin Water Works declined to provide proprietary financial information for this review.

The Company pays a groundwater production service charge to SCVWD to cover the costs associated with SCVWD's groundwater recharge program. SCVWD rates have increased 96 percent since 2002 (from $140/AF in FY 02 to $275/AF in FY 12), and SCVWD's rapidly increasing groundwater service charge is an ongoing issue for the Company, as it is not able to pass the full incremental cost increase onto customers.

Most retailers of SCVWD, as reported by the Company, are expecting the pump tax rate to continue to increase significantly over time, which will result in rate increases for the end users.

The Company did not provide specific information regarding its rate structure; however the Company is subject to CPUC oversight and the Commission must approve all rate changes. The Company reported that average monthly bills varied from $20 per month in older parts of the service area to $600 for large estates in peak use months.

WATER SUPPLY

West San Martin Water Works relies on groundwater extracted from the Llagas sub-basin, one of three sub-basins of the Santa Clara Valley Groundwater Basin. The Company has no interconnections to other systems. Groundwater recharge is performed by SCVWD, and the Company pays a pump tax to cover its share of those costs. The total amount of groundwater pumped from the wells in 2010 was 303.03 AF.

West San Martin Water Works overlies the Llagas sub-basin, as do the other water purveyors in the South County. Groundwater quality is of critical concern, particularly with the continuing use of septic systems in the San Martin area and previous manufacturing land use in the South County region. Septic systems and agriculture are known to increase nitrate levels in groundwater. Perchlorate contamination in the groundwater extracted through the Company's wells, which resulted from the previous manufacturing operations, has been an issue for West San Marin. Water treatment facilities have been provided by Olin.

Recycled water is not available within the Company's service area.

WATER DEMAND

According to data provided by the Company, West San Martin Water Works extracted 303.03 acre feet in 2010. Existing average annual demand is 0.30 mgd.

The Company primarily serves residential accounts; it does not have a water conservation program. The largest demand is from the Corde Valle Golf Course for domestic use and fire protection. This property encompasses nearly half of the Company's service area.

WATER INFRASTRUCTURE AND FACILITIES

West San Martin Water Works provides groundwater treatment and water distribution within its service area. The water system is comprised of 17 miles of pipelines, four storage tanks, two pump stations, three wells, and three pressure zones. The total well pumping capacity is approximately 1,000 gallons per minute.

Two of the company's wells have perchlorate treatment facilities provided by the Olin Corporation. However, since 2008, water from only one well is being treated for the perchlorate. Olin has been identified as the manufacturing operation that originally created the perchlorate contamination.

West San Martin Water Works faces the same issues as other public water agencies in South County, including rising costs and groundwater quality. It is treating contaminated water through a system provided by the Olin Corporation.

Two of the wells had new pumps installed in 2004. Ninety percent of the Company's customers are located in Pressure Zone 1.

The Company has four storage facilities (three 50-gallon tanks and one 400-gallon tank) with a total capacity of 0.55 million gallons. The tanks were reported to be in good condition. They were each cleaned and inspected in 2010. With this storage capacity, the company is able to store a supply equal to 1.8 days of average day demand.

Shared facilities

As a private entity, West San Martin Water Works has limited opportunities to share facilities. The company did not participate in the Perchlorate Working Group, due to the fact that it settled with the Olin Corporation in exchange for treatment facilities.

22. STANFORD UNIVERSITY

Stanford University chose not to participate in this version of the service review. The University was included in the 2005 service review. For a description of Stanford University's water utility, refer to the 2005 Countywide Water Service Review.

RELATED AGENCIES

23. SAN FRANCISCO PUBLIC UTILITIES COMMISSION

TYPE AND EXTENT OF SERVICES

The San Francisco Public Utilities Commission (SFPUC) is a department of the City and County of San Francisco that provides water, wastewater and municipal power services to the City of San Francisco. Under contractual agreements, 27 wholesale water agencies in Alameda, San Mateo, and Santa Clara Counties also purchase water supplies from the SFPUC. The 27 wholesale customers comprise the Bay Area Water Supply and Conservation Agency (BAWSCA). The SFPUC's existing water supplies are from the Hetch Hetchy System and the Local Bay Area Watersheds (San Mateo Creek, Pilarcitos Creek and Alameda Creek Watersheds). The SFPUC's Water System Improvement Program (WSIP) currently underway will have a significant impact on the water purveyors and rate payers within the system's service area, providing greater reliability as well as long-term cost increases.

The SFPUC is not subject to the authority of Santa Clara LAFCO, and no determinations have been included in this review. The information is provided in order to provide a comprehensive overview of the water resources of Santa Clara County. SFPUC was last reviewed in 2005 as part of the Countywide Water Service Review.

SFPUC wholesale customers in Santa Clara County include: 1) Santa Clara Valley Water District 2) City of Milpitas, 3) City of Mountain View, 4) City of Palo Alto, 5) City of San Jose, 6) City of Santa Clara, 7) City of Sunnyvale, 8) Purissima Hills Water District, and 9) Stanford University.

Regional Capital Improvement Plan

In May 2002, the SFPUC approved a $3.6-billion Water System Improvement Program (WSIP) to repair, replace and seismically upgrade the system's infrastructure. Approximately $715 million was designated for local projects within the City and County of San Francisco; the majority, $2.9 billion, was for regional projects. The cost for the local projects within San Francisco will be paid by retail customers within San Francisco; the cost for the regional projects will be borne by retail customers in San Francisco as well as the 27 water wholesalers within the three counties. The magnitude of this program and its potential impact on regional water service led to four legislative actions.

First, Assembly Bill (AB) 2058 (Papan) established the Bay Area Water Supply and Conservation Agency (BAWSCA) in 2003. This agency is the successor to the former Bay Area Water Users Association and its 27-member Board of Directors includes a

representative from each of the water wholesalers. BAWSCA is the only entity with the authority to directly represent the interest of the water agencies that purchase water from San Francisco on a wholesale basis. As such, it provides crucial oversight on SFPUC water service facilities jointly with other local public agencies or on its own to carry out the agency's purposes.

The second piece of legislation, Senate Bill (SB) 1879 (Speier) established the San Francisco Bay Area Regional Water System Financing Authority. The Authority is a regional organization with the power to raise money, if needed, to finance the regional system improvements. BAWSCA provides administrative support to the authority.

The State Legislature passed a third piece of legislation, AB 1823 (Papan) in response to increasing concern over accountability and schedule for the regional projects. AB 1823 requires the SFPUC to submit annual progress reports to the State Department of Health Services, Seismic Safety Commission, and Joint Legislative Audit Committee on the implementation of its capital improvement program. The legislation also requires SFPUC to provide prompt notification of any changes in the scope and/or schedule of capital projects.

Lastly, AB 2437 (Ruskin) amended AB 1823 and was passed in July of 2008. This act extended State oversight of the SFPUC's WSIP from December 31, 2010 to January 1, 2015 and requires San Francisco to identify in its annual progress report, any project that is behind schedule, and, for each project identified, to describe its plan and timeline for making up the delay or adopting a revised implementation schedule. The bill also updates the name of the State Department of Health Services to California Department of Public Health (DPH).

ACCOUNTABILITY AND GOVERNANCE

The SFPUC governing body consists of five members, nominated by the Mayor of San Francisco and approved by the Board of Supervisors. Their responsibility is to provide operational oversight in areas such as rates and charges for services, approval of contracts, and organizational policy.

SFPUC meets on the second and fourth Tuesdays of each month. The meetings are held in City Hall at 1:30 p.m., unless otherwise noticed. Coverage of the meetings can be seen live via streaming video.

POPULATION AND PROJECTED GROWTH

SFPUC estimates that there were 856,095 residents in its retail service area. In addition, its wholesale customers serve approximately 1.75 million residents. SFPUC projects that the population within its retail service area will increase by approximately 12

percent by 2035, and the population served by its wholesale customers will increase by 21 percent over the next 25 years.

FINANCING

The Water Enterprise accounts for the activities of SFPUC's water utility operations and is engaged in the distribution of water to the City and certain suburban areas. The enterprise recovers costs of service through user fees. Service to wholesale customers is provided pursuant to the 25-year Water Supply Agreement which establishes the basis for determining the costs of wholesale service.

SFPUC charges wholesale customers a flat monthly meter charge and a rate based on usage. In FY 10-11, wholesale customers paid a rate of $1.90 per 100 cubic feet (ccf). For FY 11-12, SFPUC raised its rates to $2.63 per ccf. Additional rate increases are anticipated over the next 10 years. The increases are attributed to SFPUC's significant $4.3 billion capital improvement program intended to make its water system more reliable in the event of an earthquake or other disaster.

In addition, SFPUC initiated an environmental enhancement surcharge (EES) for agency purchases of water in excess of their allotted amount. The surcharge is to be in effect beginning in FY 11-12 through FY 17-18. The EES is based on each agencies' water use in million gallons per day. If the entire Hetch Hetchy regional system uses more than 265 mgd, then those agencies over their supply assurance will pay a surcharge based on a rate of $850,000 per mgd over the supply assurance.

Water System Improvement Program

The WSIP program budget and schedule were originally adopted by the SFPUC on March 1, 2003. The original program cost was $3.6 billion. The scope of the program 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, known as the "baseline budget" of $4.3 billion, was adopted on November 29, 2005. Since then, the WSIP budget has been revised twice, in 2007 and 2009.

The approved December 2007 revised budget adopted in February 2008 increased the budget to $4.392 billion, a $49.16 million variance. This increase was due to the need to compensate for the additional resources needed to address real estate requirements (land acquisition and encroachment removal) and complete delivery activities (program management, project management and environmental review/permitting/mitigation).

The approved June 2009 revised budget, which was adopted in July 2009, increased the budget to $4.6 billion, a $194 million variance. Significant cost increases in two projects, the Harry Tracy Water Treatment Plant Long Term Improvements Project (+ $183 million)

and the Calaveras Dam Replacement Project (+ $102 million), account for the overall budget increase.

As of February 5, 2011, the forecasted cost for the regional program is $4.442 billion, which indicates that cumulatively the projects are anticipated to be $175 million under budget.

To date, $4.586 billion has been appropriated for the WSIP and the program has expended or encumbered approximately $2.9 billion through March 21, 2011.

During the last few years, the WSIP has benefited from a very favorable bidding climate due to the limited amount of infrastructure work advertised in the last few years. Since 2005, the WSIP has realized $364 million or 19 percent in savings for awarded construction contract work (awarded contracts lower than total amount budgeted for that work). Although there have been significant savings with construction contracts, the program has encountered a number of challenges in the field which have resulted in project cost increases. For instance, construction of some improvements has been impacted by differing site conditions, archeological discoveries and contaminated soil and groundwater.

The SFPUC projects the Wholesale Revenue Requirement to grow from $188.8 million in fiscal year 2011-12 to $311.9 million in fiscal year 2017-18 when debt service impacts are fully realized. Of that $123.1 million increase, over 78 percent is a result of debt service associated with WSIP.

WATER SUPPLY

A majority of the SFPUC's water supply comes from the Hetch Hetchy watershed (85 percent) with a majority of the remainder coming from the Alameda and Peninsula watersheds. SFPUC makes minimal use of groundwater in the Castlewood and Sunol areas within its retail service area. SFPUC does not presently make use of recycled water, but plans to initiate use of recycled water by 2015.

The Hetch Hetchy watershed, an area located in Yosemite National Park, provides approximately 85 percent of San Francisco's total water needs. Spring snowmelt runs down the Tuolumne River and fills Hetch Hetchy, the largest reservoir in the Hetch Hetchy water system. This surface water in the Hetch Hetchy Reservoir is treated, but not filtered because it is of such high quality.

Together the Alameda and Peninsula watersheds produce about 15 percent of the total water supply. The Alameda watershed, located in Alameda and Santa Clara Counties, contributes surface water supplies captured and stored in two reservoirs—Calaveras and San Antonio. The Peninsula watershed in San Mateo County contributes surface water supplies captured and stored in lower and upper Crystal Springs and San Andreas

Reservoirs and in two smaller reservoirs (Pilarcitos and Stone Dam). The six reservoirs in the Alameda and Peninsula watersheds capture rain and local runoff. Some also store Hetch Hetchy water for use by San Francisco. These local water sources are treated and filtered before delivery.

Two turnouts from the South Bay Aqueduct of the California State Water Project can supply limited supplemental water to the regional water system. The SFPUC, however, currently does not possess entitlements to water from the State Water Project.

The amount of water available to the SFPUC is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River. Due to these constraints, the SFPUC is very dependent on reservoir storage to maximize the reliability of its water supplies. More importantly, reservoir storage provides water supply carry-over capability. During dry years, the SFPUC has a very small share of Tuolumne River runoff available and the local Bay Area watersheds produce very little water. Reservoir storage is critical during drought cycles because it enables the SFPUC to carry-over water supply from wet years to dry years.

Deliveries from the regional water system watersheds are limited to an average annual flow of 265 million gallons per day (mgd) through 2018. As a decision on future water deliveries beyond 2018 has not yet been made, the 2010 UWMP assumes that the 265 mgd supply limitation extends to 2035.

Drought Allocations

In July 2009, in conjunction with the "Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County and Santa Clara County" (WSA), the wholesale customers in Santa Clara County, along with other wholesale customers and the City and County of San Francisco adopted a Water Shortage Allocation Plan (WSAP) to allocate water from the regional water system during system-wide shortages of up to 20 percent (the "Tier One Plan"). The Tier One Plan replaced the prior Interim WSAP, adopted in 2000. The Tier One Plan also allows for voluntary transfers of shortage allocations between SFPUC and any wholesale customer and between wholesale customers themselves. In addition, water "banked" by a wholesale customer, through greater than required reductions in usage, may also be transferred.

Tier One Drought Allocations

The Tier One Plan, which allocates water between San Francisco and the wholesale customers collectively, distributes water based on the level of shortage shown in Figure 23-1 as follows:

Figure 23-1: Distribution of Water Based on Level of System-wide Reduction

Level of System-Wide Reduction in Water Use Required	Share of Available Water After Reduction	
	SFPUC Share	Wholesale Customer's Share
0%	30.6%	69.4%
5% or less	35.5%	64.5%
6% through 10%	36.0%	64.0%
11% through 15%	37.0%	63.0%
16% through 20%	37.5%	62.5%

Source: BAWSCA, *Long-term Reliable Water Supply Strategy Phase I Scoping Report*, p. ES-1.

Tier Two Drought Allocations

The wholesale customers have negotiated and adopted the "Tier Two Plan," the second component of the WSAP which allocates the collective wholesale customer share among each of the 27 wholesale customers. This Tier Two allocation is based on a formula that takes multiple factors into account for each wholesale customer, including:

- Individual Supply Guarantee;
- Seasonal use of all available water supplies; and
- Residential per capita use.

The Tier Two Plan requires that the allocation factors be calculated by BAWSCA each year in preparation for a potential water shortage emergency. The Tier Two Plan will expire in 2018 unless extended by the wholesale customers.

WATER DEMAND

Approximately one-third of SFPUC delivered water goes to retail customers in San Francisco, while wholesale deliveries to 27 suburban agencies in Alameda, Santa Clara, and San Mateo counties comprise the other two-thirds. Of the 27 Wholesale Customers, 14 derive 100 percent of their water from SFPUC.

Water use within San Francisco is currently below historic consumption. Both the total consumption and the per capita use of water have been on a general decline in San Francisco since the mid-1970s. Many factors have contributed to this reduction in water use, including significant changes to the mix of industrial and commercial businesses and their associated water demand, and the general characteristics of water use by San

Francisco water customers. In particular, the severe droughts of 1976-77 and 1987-92, changes in plumbing codes, and conservation programs (either voluntarily embraced by residents and businesses or mandated by San Francisco), have apparently affected water demands.

In 2010, total SFPUC retail water use was 77.7 mgd. Results of the water demand forecasts show that SFPUC's in-City retail water demand will only slightly increase, even though the household population in San Francisco is expected to increase by nearly 12 percent for the same period (2010 through 2035). The projected increase in in-City retail water demands is due to estimated growth in business and industry, which will translate into a commensurate increase in water use. The expected increase in water use in the non-residential sector, however, is expected to be partially balanced by decreases in water use in the residential sector.

In 2010, SFPUC supplied 149.5 million gallons per day to its wholesale customers. For the purposes of the supply and demand comparisons in the SFPUC's UWMP, it is assumed that the present 265 mgd supply limitation extends beyond 2018. Projected Wholesale Customer demands have been limited to 184 mgd. Prior to 2018, this 184 mgd includes the demands of San Jose and Santa Clara. After 2018, subject to the process requirements for interruption or reduction of supply provided in the WSA, the SFPUC will continue to supply water to San Jose and Santa Clara on a temporary, interruptible basis pending a decision by SFPUC, as to whether to make San Jose and Santa Clara permanent customers of the regional water system.

Based on analysis of supply availability during drought years, SFPUC has determined that at current delivery levels, the SFPUC regional water system can be expected to experience up to a 25 percent shortage 15 to 20 percent of the time during multiple-year drought sequences. Therefore, SFPUC is faced with the necessity to develop a long-term strategy to accommodate or rectify the potential of future water shortages throughout its wholesale and retail operations. In order to mitigate the impact of any long-term drought scenario, SFPUC is using the WSIP to secure water supply during these periods, and limit any shortage to less than 20 percent of normal year supply.

WATER INFRASTRUCTURE AND FACILITIES

The SFPUC water system consists of over 280 miles of pipeline, over 60 miles of tunnels, 11 reservoirs, 5 pump stations, and 2 water treatment plants located outside the City (the regional water system) and over 1,250 miles of pipeline, 12 reservoirs, 9 storage tanks, and 17 pump stations 1 located within the city limits (the in-City distribution system).

SFPUC's main water source is the Hetch Hetchy Reservoir. Water is delivered through a 167-mile gravity fed system to customers in Alameda, Santa Clara, San Mateo and San Francisco counties. The system was constructed in the 1920's with the first water

deliveries occurring in 1934. The system crosses three major earthquake faults and includes concrete and earthen dams, tunnels, reservoirs, and four major pipelines connecting the East Bay to the Peninsula (two cross the San Francisco Bay near the Dumbarton Bridge and two extend around the bay edge through portions of southern Alameda County, northern Santa Clara County and into San Mateo County). The age of the system, the geography, and the lack of capital improvements over the years has caused increasing concern about the integrity of the system and its reliability in the event of a major earthquake or other natural disaster.

The Alameda System includes two reservoirs, San Antonio Reservoir and Calaveras Reservoir, which collect water from the upper Alameda and San Antonio Creek watersheds in Alameda County plus conveyance facilities connecting the Hetch Hetchy System and Alameda water sources to the Peninsula System. The Sunol Valley Water Treatment Plant (SVWTP) filters and disinfects water supplied from San Antonio and Calaveras Reservoirs. The Peninsula System includes conveyance facilities connecting the regional system to the in-City distribution system and to other SFPUC customers on the Peninsula. The Harry Tracy Water Treatment Plant (HTWTP) filters and disinfects water supplied from Crystal Springs and San Andreas Reservoirs before it is delivered to the Peninsula customers and the in-City distribution system.

WSIP Update

Since 2005, significant progress has been made on the WSIP with only 16 of the 86 projects yet to reach construction. As of February 5, 2011, construction is ongoing on almost $2 billion worth of projects and construction will be initiated on three additional projects worth nearly $900 million within the first half of the year. Currently the WSIP is 39 percent complete (based on expenditures to date) with 44 of the program's 86 projects being completed. A total of 60 construction contracts have been awarded between 2005 and 2011 with a total value of $1.6 billion.

As of February 5, 2011, of the 46 WSIP regional projects, 15 projects with a total value of $183 million, are in close out or have been completed. Eighteen regional projects with a total value of $36 million are currently in construction and three regional projects with a total value of $876 million are in the bid and award phase, just a few month away from entering construction. Only two projects remain in the planning phase and four projects remain in the design phase with total values of $36 million and $202 million, respectively. Of the six projects that have yet to reach construction, four are seismic reliability projects. Finally, four projects with a total value of $379 million are in multiple phases. The current projected completion date for the WSIP regional program is December 2015.

AB 1823 mentions nine specific projects to be completed as part of the capital improvement program. Significant progress has been made on the implementation of those projects. The status of these projects as of February2011 is shown in Figure 23-2.

Figure 23-2: AB 1823 Project Status

Project Listed in AB1823	Corresponding WSIP Project	Forecasted Substantial Completion	Overall Status**
Irvington Tunnel Alternative	New Irvington Tunnel	04-16-14	Construction
Crystal Springs Pump Station & Pipelines	CS-SA Transmission Upgrade	06-07-13	Construction
BDPL 1 & 2 – Repair of Caissons/Pipe Bridge	BDPL Reliability Upgrade – Pipeline (BDPL No. 5)	East Bay: 12-09-11 Peninsula: 02-11-12	Construction
	BDPL Reliability Upgrade – Tunnel (Bay Tunnel)	03-02-15	Construction
BDPL Pipeline Upgrades at Hayward Fault	Seismic Upgrade of BDPL Nos. 3 & 4	04-18-14	Bid & Award (NTP: March 2012)
Calaveras Fault Crossing Upgrade	Alameda Siphon #4	09-01-11	Construction
Crystal Springs Bypass Pipeline	New Crystal Springs Bypass Tunnel	05-27-11	Construction
BDPL Cross Connections 3 & 4	BDPL Nos. 3 & 4 Crossovers	08/15/12	Construction
Conveyance Capacity West of Irvington Tunnel	San Joaquin Pipeline (SJPL) System	Contract A: 11-27-11 Contract B: 09-18-12 Contract C: 06-09-13	Contract A: Construction Contract B: Construction Contract C: Bid & Award
Calaveras Dam Seismic Improvements	Calaveras Dam Replacement	05-01-15	Bid & Award (NTP: August 2011)

WSIP Schedule

The overall program completion date adopted as part of the November 2005 Baseline Schedule was June 2014. That schedule was based on the extent of project and program definition available at the time. The current forecast for the Regional Program completion date is December 2015, which is consistent with the Approved June 2009 schedule. The SFPUC will seek approval from SFPUC for a revised WSIP budget and schedule in July 2011.

24. BAY AREA WATER SUPPLY AND CONSERVATION AGENCY

The Bay Area Water Supply and Conservation Agency (BAWSCA) was formed in 2003 by a special act of the Legislature to represent the interests of the 26 cities and water districts, and two private utilities in Alameda, Santa Clara and San Mateo Counties that purchase water on a wholesale basis from the San Francisco Public Utilities Commission (SFPUC) regional water system. The Agency does not own or manage any infrastructure nor provide any water supply.

BAWSCA is not under the jurisdiction of LAFCO; therefore, no determinations have been included in this review. The information is provided in order to ensure a comprehensive review of Santa Clara County's water resources and related agencies. The Agency was last reviewed in 2005.

BAWSCA members in Santa Clara County include: 1) City of Milpitas, 2) City of Mountain View, 3) City of Palo Alto, 4) City of San Jose, 5) City of Santa Clara, 6) City of Sunnyvale, 7) Purissima Hills Water District, and 8) Stanford University.

TYPE AND EXTENT OF SERVICES

BAWSCA is the successor to the former Bay Area Water Users Association, formed in 1958. Each of the 26 wholesalers in Alameda, Santa Clara and San Mateo Counties receiving water from the SFPUC system is automatically eligible as a member of the agency. The total service area represented encompasses 460 square miles. BAWSCA's current programs include water contract administration, capital improvement program oversight, financial analyses, and water resources planning.

BAWSCA represents the SFPUC wholesalers' common interest, providing greater collaboration and efficiency in oversight of this source of supply, particularly at a policy level. In light of the ongoing concern regarding the status and progress of the SFPUC Regional CIP, BAWSCA contracted with an independent engineering consultant to review the SFPUC CIP budget and program expenditures.

All of SFPUC's wholesale contracts expired in 2009. BAWSCA renegotiated a master contract with SFPUC on behalf of its members and each of the wholesalers has an individual contract directly with SFPUC per the terms and conditions of the master agreement. One critical area in which BAWSCA has been instrumental is establishing an appropriate water supply allocation among the agencies during drought periods. The prior master agreement contained a default for water allocations during drought that did not encourage water conservation and was not in the best interests of the individual service

areas in the region. BAWSCA successfully negotiated a new water shortage allocation agreement that was approved by all the governing boards and provides greater reliability to the wholesalers and San Francisco.

Environmental compliance for the SFPUC Capital Improvements Program requires that a program EIR be prepared. As part of this analysis, detailed water use projections for each agency were prepared with the assistance of BAWSCA. The data has been published in three technical studies:

1) SFPUC Wholesale Customer Water Demand Projections;

2) SFPUC Wholesale Customer Water Conservation Potential; and

3) SFPUC Wholesale Customer Recycled Water Potential.

The combined results of these technical studies for the wholesale and retail service areas along with projected purchase estimates in 2030 are presented in a final technical report entitled "2030 Purchase Estimates Technical Memorandum."

The Agency also provides water conservation services for its member agencies. The services provided complement those of the SCVWD but do not duplicate activities or cost. The program is designed by BAWSCA's member agencies and is provided through contractors. The charge to the participating agencies covers the cost of the program as well as BAWSCA's administrative time.

ACCOUNTABILITY AND GOVERNANCE

BAWSCA is governed by a 26-member Board of Directors serving four-year terms. Twenty-four of the Directors are appointed by the governing bodies of the public agencies that are members of BAWSCA. In addition, the Santa Clara County Board of Supervisors appoints a Director from the Stanford University service area, and the San Mateo County Board of Supervisors appoints a Director from the California Water Service Company service area.

The Board meets bimonthly on the third Thursday at 7 in the evening in Foster City. Meeting notices and agendas are distributed by email, posted on BAWSCA's website, and circulated to the city clerks, clerks of the board and district secretaries for posting. BAWSCA also maintains a website that contains detailed information on the Agency and its current projects and programs.

In June 2004, the Board Policy Committee was formed to carry out the functions of advising the general manager and Board on matters of policy. Its composition fully reflects that of the Board—large and small water agencies, cities, water districts, private utilities, and the three counties.

MANAGEMENT AND STAFFING

The Agency operates with seven staff members—one executive/management and six professional/support personnel.

POPULATION AND PROJECTED GROWTH

The Agency serves about 1.7 million people, as well as businesses and community organizations in Alameda, Santa Clara and San Mateo Counties who depend on the San Francisco Bay Area regional water system.

FINANCING

BAWSCA is funded through assessments of each of its member agencies, based on a percentage of each agency's annual budget. The percentage is proportionate to the amount of SFPUC water used in FY 00-01. Assessment rates are reviewed annually. In addition to assessment revenue, BAWSCA has been successful in pursuing grant funding in the past. The Agency was awarded a $240,000 grant by the State Department of Water Resources in FY 03-04. The last independent audit was conducted in July 2010. The Agency's financial summary for FY 09-10 is shown in Figure 24-1.

Figure 24-1: Revenues and Expenditures FY 09-10

Income/Expenses	*FY 09-10*	
Income		
Assessments	$2,516,816	99%
Other	$37,645	1%
Total Income	***$2,554,461***	***100%***
Expenses		
Expenses	$2,329,844	99.8%
Capital Improvements	$5,492	0.2%
Total Expenses	***$2,335,336***	***100%***
Net Income	***$219,125***	

Agency revenues generally exceed expenditures in any given year. In FY 09-10, the Agency's net income was $219,125. Net assets at the beginning of FY 09-10 were $868,205 and grew to $1,087,330 by the end of the same fiscal year. Unrestricted net assets at the end of FY 09-10 equated to almost six months of operating expenditures.

BAWSCA does have the authority to issue bonds, however it currently has no long-term debt.

WATER SUPPLY

BAWSCA has the statutory authority to plan for and acquire supplemental water supplies and to encourage water conservation and use of recycled water supplies on a regional basis. Water supply reliability is one of BAWSCA's key goals.

The Interim Water Shortage Allocation Plan is an agreement between BAWSCA agencies and SFPUC to eliminate contractual penalties to conservation during times of drought. The

plan clarifies how water is to be shared between SFPUC and BAWSCA entities, and how water is shared among the BAWSCA agencies. It also allows for water banking by agencies that use less than their allowance, and allows transfer of banked water among the parties.

To ensure water supply reliability on the Tuolumne River, the primary source of water for the SFPUC regional water system, BAWSCA is a stakeholder in the Tuolumne River Technical Advisory Committee. The Committee is responsible for implementing river restoration projects on the Lower Tuolumne River to enhance habitat for spawning Chinook salmon.

WATER INFRASTRUCTURE AND FACILITIES

The Agency does not own or manage any infrastructure.

Shared facilities

BAWSCA is a party to several MOUs, including the Bay Area Water Agencies Coalition (BAWAC) and the Integrated Regional Water Management Plan. BAWSCA and six other agencies participate in the activities of BAWAC, which funds and conducts studies on various issues.

BAWSCA participates in the insurance pools offered by the California Special Districts Association, ACWA and CalPers.

BAWSCA provides administrative support for the San Francisco Bay Area Regional Water System Financing Authority created by SB 1870.[120] The Authority can serve as the means to issue revenue bonds to finance the regional system improvements.

[120] 2002 Water Code §81600 et seq.

SMALL WATER SYSTEMS

25. SMALL COMMUNITY WATER SYSTEMS

OVERVIEW

There are a number of mutual water companies (MWCs) and privately-owned water systems providing service within the County. They are an important component in the overall provision of water service in the County, but are not under LAFCO's jurisdiction. Mutual water companies (also called water companies, cooperative company, water system, water association, and water works) are a legal entity with no specific requirement for the size of the system or number of connections. It essentially means that there are shared interests in the water system and service by customers of the system.

Water systems may also be investor owned, meaning that the owners, whether it be an individual or group, are not customers of the water system. These investor owned systems are regulated by the California Public Utilities Commission (CPUC). The focus in this chapter is on community water systems that serve a non-transient residential population.

Various operations and activities of these water systems are regulated by several agencies depending on size (number of connections and population served), water source, and ownership. The primary regulators for health purposes are the County Department of Environmental Health (DEH) for systems consisting of five to 14 connections and the California Department of Public Health (DPH) for systems of greater than 15 connections. Systems of four or less connections are not regulated by a public health agency. A system may be regulated by both CPUC and a public health agency; the two are not mutually exclusive. For more details on the regulation of water systems, refer to the Regulation of Water Providers section in Chapter 2 of this document.

SMALL WATER SYSTEMS IN SANTA CLARA

Per the records of DPH and the Santa Clara County DEH, there are 100 water systems that serve non-transient residential communities in Santa Clara County of five or greater connections. This excludes institutional systems and RV Parks. Of these systems, 60 have five to 14 connections, and 40 with 15 or more connections.

Since 2005, two mutual water companies are no longer in operation. Chiri Ranch Estates MWC split up into individual well connections, and Redwood MWC was purchased by San Jose Water Company in 2006. DPH currently regulates two additional MWCs than in 2005—Valley View Ranches MWC and Emerald Valley Estates MWC.

CPUC regulates four small water systems in Santa Clara County—Mecchi Water Company, Idylwild Water System, Klein Homes Water Company, and Twin Valley Water Company, Inc. The complete list of current mutual water companies and mutually owned small water systems, their locations, number of connections and regulatory authorities are shown in Figure 25-1.

Figure 25-1: Small Community Water Systems in Santa Clara County

Water System	Location	Number of Connections	Regulatory Authority
Aborn Heights Water Mutual Association	Lazy Lane, San Jose	19	DPH
Alamo Farms Mutual Water Company	Travis Court, Gilroy	8	DEH
Alram Mutual Water Company	Cinnabar Hills Road, San Jose	7	DEH
Amberwood Ln. Water Company	Amberwood Lane, Morgan Hill	6	DEH
Angelo Lane Water Company	Canada Road, Gilroy	15	DPH
Arlen Ct. Mutual Water Company	Arlen Court, East San Jose	11	DEH
Arlington Mutual Water Company	Arlington Court at E. Middle	8	DEH
Arrowhead Cooperative Company	Rolling Hills Road, Saratoga	38	DHS
Baughman Water System	Monterey Road, Morgan Hill	7	DEH
Bella Madeira Mutual Water Company	Casa Madeira Lane	12	DEH
Blossomwood Mutual Water Company	Daugherty Avenue, Morgan Hill	10	DEH
Blue Oaks Water System	Blue Oaks Road & Wild Turkey, Los Gatos	8	DEH
Brush and Old Well Mutual Water Company	Brush Road, Los Gatos	29	DPH
Burchell Road Water Company	Burchell Road, Gilroy	27	DPH
Call of the Wild Water Works	Call of the Wild Road, Los Gatos	8	DEH
Canada Rd. Water System	Canada Road, Gilroy	6	DEH
Candy Ranch Mutual Water Company	Center Avenue & Dias Drive	6	DEH
Chaboya Hills Est. Mutual Water Company	Chaboya Ct	11	DEH
Chemeketa Park Mutual Water Company	Comanche Trail, Los Gatos	143	DPH
Chiala Water System	Hill Rd & Tennant Ave	12	DEH
Chiri Sweet Water Company	Leann & Maple Avenue, Morgan Hill	8	DEH
Dayland Water Company	Lucky Court, Gilroy	6	DEH
Deep Hole Water Association	Godfry & Ferguson	6	DEH
Deer Hill Mutual Water Company	Barnard Road, Morgan Hill	14	DEH
Emerald Valley Mutual Water System	Melchior & Day Road, Gilroy	13	DEH, DPH
Espana Mutual Water Company	Paquita Espana Court, Morgan Hill	8	DEH
Est.of Paradise Valley Water Company	Louis Holstrom Drive	6	DEH
Fagole Water System	Tourney Road, Los Gatos	6	DEH

Notes:
DEH = Santa Clara County Department of Environmental Health, DPH = California State Department of Public Health, PUC = California Public Utilities Commission

Figure 25-1: Small Community Water Systems in Santa Clara County (continued)

Water System	Location	Number of Connections	Regulatory Authority
Far-Vue Mutual Water Company	Far-Vue Lane & Denevi Lane, Los Gatos	8	DEH
Foothill Mutual Water Company	San Martin	15	DPH
Golden Heights Mutual Water Company	Roop Road & Via del Oro, Gilroy	20	DEH, DPH
Green Acres Mutual Water	Green Acres Court, Morgan Hill	18	DPH
Green Mountain Water Company	Armsby Lane, Morgan Hill	49	DPH
Happy Acres Mutual Water Company	Campisi Court, Gilroy	78	DPH
Howell Water System	Elege Road off Black Road, Los Gatos	6	DEH
Idylwild Water System	Old Santa Cruz Highway, Los Gatos	43	DPH, PUC
Jean Ellen Mutual Water Company	Jean Ellen Drive, Gilroy	8	DEH
Jefferson Drive Mutual Water Company	Jefferson Drive, Gilroy	6	DEH
Kell Park Mutual Water Company	Kell Court, Morgan Hill	12	DEH
Kennon Water Company	Top of the Hill Court, Los Gatos	48	DPH
Lake Canyon Mutual Water Company	Manzanita Drive, Los Gatos	56	DPH
Landmark Mngmt Water System	Thompson Road, Los Gatos	8	DEH
Lee's Orchard Water System	1000 Old Piedmont Road, Milpitas	13	DEH
Lena Ave. Mutual Water Company	Lena Avenue, Gilroy	9	DEH
Lilac Ln. Water Company	1910 Lilac Lane, Morgan Hill	14	DEH
Little Kennon Water Company	Sky Lane, Los Gatos	7	DEH
Live Oak Creek Mutual Water Company	New Avenue, Gilroy	12	DEH
Los Ranchos De Uvas Water Company	Calle Uvas, Gilroy	22	DPH
Main Ave. Mutual Water Company	Alpet Drive, Morgan Hill	8	DEH
Maria Lane Mutual Water Company	Maria Lane, Saratoga	12	DEH
Mecchi Water Company	Crowner Avenue, San Martin	26	DPH, PUC
Melody Woods Water Company	Melody Lane, Los Gatos	54	DPH
Mireval Improvement Association	Paseo Carmelo, Los Gatos	15	DPH
Mountain Springs Mutual Water Company	Old Santa Cruz Highway, Los Gatos	17	DPH
Mt. Eden Mutual Water Company	Mt. Eden Road, Saratoga	46	DPH
Mt. Pleasant Water Users Association	Not Reported	70	DPH
Murphy Mutual Water Company	Whiskey Hill, Drive, Gilroy	7	DEH
New Avenue Mutual Water Company	New Avenue & Roop Road, Gilroy	96	DPH
No-Name Burchell Mutual Water Company	Burchell Road, Gilroy	6	DEH
Oakmont Mutual Water Company	Not Reported	24	DPH
Oaksprings Water Company	Oaksprings Circle, Gilroy	8	DEH
Oaktree Estates Mutual Water Company	Sugarbabe Drive, Gilroy	10	DEH
Osborne Ct. Water System	Bowden Court, Morgan Hill	8	DEH
Paradise Oaks Mutual Water Company	Edmondson Court, Morgan Hill	7	DEH
Peacock Ct. Mutual Water Company	Peacock Court, Cupertino	11	DEH

Notes:
DEH = Santa Clara County Department of Environmental Health, DPH = California State Department of Public Health, PUC = California Public Utilities Commission

Figure 25-1: Small Community Water Systems in Santa Clara County (continued)

Water System	Location	Number of Connections	Regulatory Authority
Pinecrest Water System	Pinecrest Drive, San Martin	6	DEH
Quail Creek Estates Mutual Water Company	Not Reported	18	DPH
Rancho de Lomas Mutual Water Company	Celle Moniz & Peebles Avenue, Morgan Hill	12	DEH
Rancho Robles Mutual Water Company	Not Reported	35	DPH
Rancho Vista Water System	Rancho Vista Court, Gilroy	8	DEH
Rockwood Ranch Estates Mutual Water Compar	Oak Glen & Chesbro Lk Drive, Morgan Hill	10	DEH
Roseview Heights Mutual Water Company	Crothers Road, San Jose	49	DPH
Rucker Avenue Mutual Water Company	Rucker Avenue, Gilroy	6	DEH
San Martin Foothills Water Company	Vincent Drive, San Martin	40	DPH
Santa Teresa Meadows Water Company	Lantz Drive, Morgan Hill	21	DPH
Saratoga Heights Mutual Water Company	Not Reported	83	DPH
Schramm Mutual Water Company	Benetta Lane, Gilroy	6	DEH
Shady Lane Mutual Water Company	Drysdale Drive & Dumtree Lane, Los Gatos	15	DPH
Shannon Heights Mutual Water Company	Shannon Heights Road, Los Gatos	10	DEH
Shawana Water Company	New Avenue, San Martin	6	DEH
Sheldon Rd. Water Company	Sheldon Road, Los Gatos	8	DEH
Sierra Road Improvement Association, Inc	Sierra Road, San Jose	48	DPH
Six Water Works	Denio Avenue & Malo Court, Gilroy	6	DEH
Skylane Mutual Water Company	Sky Lane, Los Gatos	9	DEH
Spring Ave. Mutual Water Company	632 Spring Avenue, Morgan Hill	7	DEH
Spring Creek Lane Mutual Water Company	Spring Creek Lane, San Jose	8	DEH
Spring Valley Heights Mutual Water Company	Vista Spring Court, Milpitas	19	DEH, DPH
Stonebridge Mutual Water Company	Stonebridge Drive, Morgan Hill	15	DEH
Sullivan Mutual Water Company	Scheller Avenue, Morgan Hill	16	DPH
Sweigert Rd. Water Company	Sweigert Road, San Jose	6	DEH
Terri Lynn Water System	Terri Lynn Court, Gilroy	12	DEH
Three Springs Ranch Mutual Water Company	Three Springs Road, Mt. Hamilton	31	DPH
Twin Creeks Properties	Alamitos Road, San Jose	51	DPH
Twin Valley Water Company Inc.	Sycamore Drive, Morgan Hill	83	DPH, PUC
Valley View Ranches Mutual Water Company	Fitzgereld Avenue & Green Valley Drive, Gilroy	15	DEH
Velladao Mobile Home Park	Not Reported	27	DPH
Vista del Lago Mutual Water Company	De Pauld Circle, Gilroy	11	DEH
Vista Grande Water Users Association	Montevina Road, Los Gatos	24	DPH
Walnut Hills Mutual Water Company	Merkley Row Street, San Jose	6	DEH
Whispering Oaks Water Company	Whispering Oaks Drive, San Jose	12	DEH

Notes:
DEH = Santa Clara County Department of Environmental Health, DPH = California State Department of Public Health, PUC = California Public Utilities Commission

CONTAMINATION CHALLENGES

All entities extracting groundwater are required to pay the pumping tax imposed by the SCVWD because they benefit from the groundwater management services provided by the District. Smaller mutual water companies, privately operated systems, and individual well owners typically do not have the facilities to treat groundwater other than disinfection at the wellhead. When these systems are impacted, they often seek the assistance of a larger public or private provider in the area that could extend service. DPH encourages small water systems to merge with larger providers.

The issue is particularly critical in the South County region where groundwater quality is impacted. Although the perchlorate contamination appears to be lessening, some water systems still face challenges with nitrates and septic systems near their wells. For example, San Martin County Water District has received inquiries from neighboring mutual water companies that would like to connect their water systems to the District's due to contamination issues.

Figure 25-2: Contamination in Small Water Systems

Water System	Contaminant
Happy Acres Mutual Water Company	Alpha Particle Activity Manganese Radium - 228
New Avenue Mutual Water Company	Alpha Particle Activity
Green Mountain Water Company	Alpha Particle Activity
Melody Woods Water Company	Manganese
Rancho Robles Mutual Water Company	Alpha Particle Activity Arsenic
Thee Springs Ranch Mutual Water Company	Alpha Particle Activity
Santa Teresa Meadows Water Company	Alpha Particle Activity Lead
Sullivan Mutual Water Company	Alpha Particle Activity
Vista Grande Water Users Association	Trihalomethanes* Bromodichloromethane Chloroform Dibromochloromethane Dichloroacetic acid Haloacetic acids Thrichloracetic acid
Spring Valley Heights Mutual Water Company	Alpha Particle Activity Radium - 228
Angelo Lane Water Company	Manganese
Los Ranchos de Uvas Water Company	Alpha Particle Activity
Green Acres Mutual Water Company	Asbestos* Alpha Particle Activity Lead
Burchell Road Water Company	Radium - 228
San Martin Foothills Water Company	Radium - 228* Alpha Particle Activity
Mecchi Water Company	Alpha Particle Activity
Aborn Heights Mutual Water Company	Alpha Particle Activity Radium - 228
Shady Lane Mutual Water Company	Dichloroacetic acid Chloroform Bromodichloromethane Dibromochloromethane Trihalomethanes
Mountain Springs Mutual Water Company	Radium - 228 Alpha Particle Activity Bromodichloromethane Dibromochloromethane Barium
Foothills Mutual Water Company	Nitrate* Alpha Particle Activity Arsenic
Twin Valley Water Company Inc	Radium - 228 Alpha Particle Activity Lead

Source: The Environmental Working Group
Note: *Above legal limit.

According to the Environmental Working Group, a national public health nonprofit, there are a number of small private water systems and mutual water companies in Santa Clara County that have

contaminated water supply. Individual systems and specific contaminants that are below legal limit but above the recommended healthy limit are shown in Figure 25-2. There are four systems that contain contaminants above the legal limit—Vista Grande Water Users Association (Trihalomethanes), Green Acres Mutual Water Company (Asbestos), San Martin Foothills Water Company (Radium-228), and Foothill Mutual Water Company (Nitrate).

RECYCLED WATER PROVIDERS

26. RECYCLED WATER

Recycled water is produced at four wastewater treatment plants—one in the South County and three in the North County. Wastewater from Gilroy and Morgan Hill is treated at the South County Regional Wastewater Authority facility in Gilroy. In northern Santa Clara County, recycled water is produced at the Palo Alto Regional Water Quality Control Plant, the San Jose/Santa Clara Water Pollution Control Plant (South Bay Water Recycling program) and the Sunnyvale Water Pollution Control Plant.

REGULATORY FRAMEWORK

With the adoption of the Porter-Cologne Act in 1969, the Legislature declared its intent to "undertake all possible steps to encourage development of water recycling facilities." Although water recycling and reuse projects operated successfully before that time, laws enacted in 1969 set forward a basic structure for water reuse projects that has been in place for nearly 30 years. The California Water Code articulates a clearly-defined strategy favoring the beneficial reuse of water to the maximum extent practical. Under this structure of laws and administrative regulations, the California Department of Public Health (DPH) is responsible for the adoption of regulations for the use of recycled water.

DPH establishes water quality standards and treatment reliability criteria for water recycling under Title 22, Division 4, Chapter 3, of the California Code of Regulations. Requirements for the use of recycled water not addressed by the uniform statewide criteria are established by DPH on a case-by-case basis. Uses of recycled water illustrate the wide variety of successful reuse applications and the level of treatment required.

Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required.

In addition to establishing recycled water quality standards, Title 22 specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, DPH has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems.

Other regulations include the Uniform Plumbing Code which contains requirements for the installation, construction, alteration, and repair of reclaimed water systems intended to supply toilets, urinals, and trap primers for floor drains and floor sinks. Use of recycled water for these applications is limited to non-residential buildings. The California-Nevada Section of the American Water Works Association has issued guidelines for planning, designing, constructing, and operating recycled water systems. These guidelines provide design criteria and specifications for the construction of transmission, storage, pumping, and other facilities. Also included is a description of system operation and maintenance requirements pursuant to applicable state regulations.

SANTA CLARA VALLEY WATER DISTRICT

To ensure an adequate and reliable supply of high-quality water, Santa Clara Valley Water District (SCVWD) has partnered with cities and water retailers in the County to develop recycled water supplies. About four percent of the County's total water use currently consists of recycled water, limited primarily to landscaping and industrial uses.

Recycled water use is expected to expand in the coming years. The SCVWD Board of Directors recently approved two agreements with the City of San Jose to build an advanced water treatment facility (to be completed in early 2012), which will produce up to ten million gallons per day of highly purified recycled water. This near distilled-quality water will be blended into existing recycled water provided by the Santa Clara/San Jose Water Pollution Control Plant, which will improve overall recycled water quality so that the water can be used for a wider variety of irrigation and industrial purposes.

In the longer term, SCVWD is investigating the possibility of using highly purified recycled water for replenishment of groundwater basins, similar to the highly successful groundwater replenishment system that has been operated by the Orange County Water District for over 30 years. However, a feasibility study, including pilot research studies, will be conducted before a decision is made regarding whether to use highly purified recycled water as a water supply option. The feasibility study and pilot research studies will likely be completed by 2016; if groundwater replenishment with recycled water is selected as a water supply option, operation of such a system would likely commence ten to 15 years from now.

SOUTH COUNTY REGIONAL WASTEWATER AUTHORITY

Overview

South County Regional Wastewater Authority (SCRWA) is a joint powers authority of the Cities of Gilroy and Morgan Hill. Formed in 1992, the Authority serves both cities, treating approximately 2.6 billion gallons of wastewater and producing 700 million gallons

of recycled wastewater each year for use in landscaping and other applications. In 2010 the SCRWA delivered 2,040 acre feet of recycled water.

Type and Extent of Services

All wastewater from Morgan Hill and Gilroy flows to and is treated at the SCRWA facility. The SCRWA plant was built in 1990 and is a modern wastewater treatment plant. The SCRWA plant is also called a publicly owned treatment works (POTW). The SCRWA plant treats the water and then disposes of the treated water to ponds. The ponds allow the water to soak into the soil and eventually add water to the underground aquifer. This is different from many other POTWs in the Bay Area that discharge the treated water to the Bay. Discharge to ponds requires a more stringent level of treatment than is required for Bay discharge.

The existing SCRWA recycled water treatment facility's capacity was expanded in 2005 to produce six million gallons per day of tertiary treated recycled water. Recycled water has been used for landscape irrigation at Christmas Hill Park Ranch Addition, Christmas Hill Park, and the Eagle Ridge Development and Golf Course. Recycled water is used for agricultural irrigation on local farmland, including Obata Farms. The Calpine-Gilroy Energy Center Peaker Plant began utilization of recycled water for cooling in May 2004. Morgan Hill does not presently receive recycled water from the facility.

SCRWA conducts a pretreatment program via collaboration and educational programs with large non-domestic connections. The program's intent is to control pollutants discharged to a POTW from non-domestic sources. The Chemical Control Division of the City of Gilroy Community Development Department is responsible for the implementation of the program.

Accountability and Governance

SCRWA is governed by a five-member Board of Directors representing the cities of Gilroy and Morgan Hill. The board meets on the second Tuesday of every month at 7:30 in the morning at 1500 Southside Drive, Gilroy. Board member names, positions, and cities they represent are shown in Figure 26-1.

Figure 26-1: 2008-2009 SCRWA Governing Body

Member Name	Position	City
Marby Lee	Chairman	Morgan Hill
Bob Dillon	Vice Chairman	Gilroy
Al Pinheiro	Member	Gilroy
Larry Carr	Member	Morgan Hill
Dion Bracco	Member	Gilroy

Management and Staffing

The City of Gilroy provides administrative oversight and staffing services to SCRWA with the Gilroy City Administrator serving as the SCRWA General Manager. General administrative oversight includes contract negotiation and administration, financial management, public works services, capital project management, budget preparation, insurance administration, and chemical control services amongst others. SCRWA's daily operations are provided under a third party contract with CH2M HILL OMI.

The SCRWA is an award winning plant that was honored with back to back Plant of the Year awards for the Monterey Region by the California Water Environment Association in 2007 and 2008. Also, in 2007, SCRWA received the Plant Safety Award (1 to 25 employees) for the State of California.

Financing

Ratepayers in both cities pay for the operation of the sewage treatment plant and for the maintenance of the sewage collection system.

The budget is comprised of two primary divisions, Administration/Operations and Chemical Control-Pretreatment. Each division highlights specific objectives to be completed over the biennial budget term. The administration budget is comprised of four cost centers including debt service, construction, administration, and operations.

The SCRWA budget reflects the debt service associated with the cost of each individual member's share of the treatment plant's previous expansions, as the Authority issued the debt to cover the cost of expansion. There are separate installment purchase agreements between each of the cities and SCRWA. The members, Morgan Hill and Gilroy, separately administer the debt service for the debt related to each of their individual infrastructure costs. Consistent with the debt service cost center, the construction budget identifies the individual cost to both Morgan Hill and Gilroy for construction undertaken over the budget term. The Administration budget consists of various services provided to SCRWA, including liability insurance, professional support for training and travel, annual audit services and legal service.

Revenue in the operations budget is primarily derived from reimbursements according to user share by the member agencies. In FYs 09-10 and 10-11, Gilroy provided user fee reimbursements totaling $4.3 and $4.6 million, respectively, and Morgan Hill provided reimbursements of approximately $3.3 million in each fiscal year. Other user fees come from charges to private septic dischargers at the plant. In FYs 09-10 and 10-11, SCRWA noticed a reduction in revenues from these fees primarily due to lower use of the service by private septic haulers.

In FY 10-11, the cost of services for CH2M HILL OMI was approximately $4.9 million. The Chemical Control-Pretreatment division conducts inspections and permitting operations for both member agencies with staffing services provided by the City of Gilroy. Morgan Hill reimburses Gilroy for its share of the cost of these services. The division budgets for both FY 09-10 and 10-11 reflect lower cost of services primarily due to staffing reductions within the City of Gilroy.

Capital Improvement Projects

The capital budget has a five-year planning horizon. In FY 09-10, SCRWA began a two year generator replacement project by replacing the first of two existing 1995 generators with a new, contemporary generator capable of maintaining plant operations during power failure. The second phase of this project will replace the remaining generator. This new system will replace an aging system that has reached its useful life and does not meet reliability criteria for a plant of SCRWA's capacity and scope of operations.

In FY 09-10, SCRWA was to complete the design for a new influent pump station and complete approximately 25 percent of the design for the overall sewer treatment plant expansion, expending approximately $1.8 million. These projects are necessary to accommodate future growth in both cities over the next 20 years. It is anticipated that the estimated $85 million construction of the plant capacity expansion will begin in FY 12-13.

Other SCRWA projects currently in the planning and design phase include:

- River Discharge (South Pipeline Project);
- 12.75 mgd plant capacity expansion;
- Utility water pipeline;
- UV disinfection system;
- Pond valves and spillways;
- Clarifier dewatering wells; and
- Septage receiving station.

SOUTH BAY WATER RECYCLING

Overview

The San Jose/Santa Clara Water Pollution Control Plant is one of the largest advanced wastewater treatment facilities in California. The plant was originally constructed in 1956 by the City of San Jose. In 1959, the City of Santa Clara helped to fund upgrades and became a 20 percent owner of the facility. The plant is presently co-owned by the Cities of San Jose and Santa Clara. In the 1960s and 1970s, the City of Milpitas, Cupertino Sanitary District, and the West Valley Sanitation District began sending wastewater to the plant. The Plant presently treats and cleans the wastewater of over 1.5 million people that live and work in the 300-square mile area encompassing San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno.

In 1998, the South Bay Water Recycling (SBWR) facility and pipeline was constructed to provide recycled water to wholesale water providers for irrigation, landscape and industrial uses. SBWR is a joint powers authority that consists of the Cities of San Jose, Milpitas and Santa Clara , West Valley Sanitation District, and Cupertino Sanitation District. SBWR also collaborates with the Environmental Protection Agency, California Department of Water Resources, Department of Public Health, the Regional Water Quality Control Board, Santa Clara County Health Department, and Santa Clara Valley Water District.

In 2010, the SBWR delivered 8,650 acre feet of recycled water.

Type and Extent of Services

Wastewater treatment is provided by the San Jose/Santa Clara Water Pollution Control Plant, while and recycled water delivery is provided by SBWR. The City of San Jose manages and administers SBWR.

The Water Pollution Control Plant has the capacity to treat 167 million gallons of wastewater per day. It is located in Alviso, at the southernmost tip of the San Francisco Bay. Originally constructed in 1956, the plant had the capacity to treat 36 million gallons of water per day and only provided primary treatment. In 1964, a secondary treatment process was added to the plant's system. In 1979, the plant's wastewater treatment process was upgraded to tertiary treatment.

A majority of the final treated water from the San Jose/Santa Clara Water Pollution Control Plant is discharged as fresh water through Artesian Slough and into South San Francisco Bay. Each day, the plant discharges approximately 110 million gallons of treated fresh water into the South San Francisco Bay. About ten percent of the plant's total water produced is recycled through South Bay Water Recycling pipelines for landscaping,

agricultural irrigation, and industrial needs by 600 customers around the South Bay in the Cities of San Jose, Santa Clara, and Milpitas. The Metcalf Energy center is the largest recycled water consumer, using the water to cool the power generation facility. Other customers that receive recycled water from the facility include the San Francisco 49ers training facility in Santa Clara, the Villages Golf and Country Club in San Jose, the McCarthy Ranch shopping center in Milpitas and four major power plants in the County. The SBWR system consists of over 120 miles of pipeline, five pump stations and 10 million gallons of storage in reservoirs.

The laboratory at the San Jose/Santa Clara Water Pollution Control Plant ensures that the water delivered to parks, golf courses and industrial users is of high quality and safe for reuse. Three significant functions of the laboratory include: 1) Monitoring water at the source of discharge (such as wastewater from an industrial facility); 2) Analyzing wastewater for treatment processes and high-quality effluent (discharge from the plant); and 3) analyzing recycled water. The lab, which has 26 employees, works closely with the treatment plant to optimize treatment plant processes. Samples of effluent discharge are collected and analyzed daily. These samples are run through a series of tests in the four process labs and strict quality control is maintained.

Prior to receiving recycled water, the site must be approved by South Bay Water Recycling. The current system's water retailers include City of San Jose, San Jose Water Company, City of Milpitas, City of Santa Clara, and SCVWD. South Bay Water Recycling provides a short course for site supervisors. The workshop includes information to assist in the effective operation and management of a recycled water irrigation system. Property owners and facility managers whose sites are served with recycled water are responsible for their on-site recycled water systems. Each site must have a certified site supervisor. Site supervisors become certified by attending one of these quarterly workshops to fulfill their recycled water permit requirements.

Financing

In 1959, the City of San Jose and the City of Santa Clara entered into an agreement to jointly own and operate the plant. Under the agreement, the City of San Jose serves as the administering agency and is responsible for operating and maintaining the plant. The cities share in the capital and operating costs on a pro rata basis determined by the ratio of each city's assessed valuation to the sum of both cities' assessed valuations. Annually, these percentages are determined and applied to the capital and operating costs on an accrual basis. For the fiscal year ended June 30, 2010, the City of San Jose's portion of the capital and operating costs was approximately 81.0 percent and, based on operations through the fiscal year ended June 30, 2010, the City's interest in the net assets of the plant was approximately 82.8 percent.

SBWR operations are funded through treatment plant sewer service and use charges and offset by revenue sources. All revenue received by SBWR offsets costs associated with

operations and capital projects. In FY 10-11, approximately $2.6 million was received as retail sales and $1 million was received from the SCVWD for capital programs.

SBWR capital projects are financed through the treatment plant and through grants and developer funded extensions. Approximately $70 million has thus far has been awarded through state and federal grants, with approximately $50 million having been appropriated and received by the City of San Jose. Federal and State granting and loan agencies include the U.S. Bureau of Reclamation, California State Department of Water Resources, and the Santa Clara Valley Water District.

Capital Improvement Projects

The contributing agencies to the plant are in the process of developing a plant master plan, which includes designing and planning the rebuilding of the aging plant with new treatment technologies. Costs for the operational improvements have been identified and the plant's co-owners and tributary agencies are evaluating financing options. The new facility includes plans for several improvements and upgrades to the treatment process, as well as enhanced use of renewable energy sources, and habitat and open space areas. The plant upgrades and improvements are anticipated to cost approximately $1 billion to $1.5 billion. Land uses will be funded separately from plant rebuilding costs. The plant master plan will include a funding plan as sewer fees can only be used for the sewer system. A collaboration between public, corporate, developer, and philanthropic entities could possibly result in funding for new land uses. A map of the proposed facilities is shown in Figure 26-2.

Figure 26-2: Proposed Improvements to the San Jose/Santa Clara Plant

SBWR's current capital improvement projects include:

- Zone 3 Reservoir: SBWR is designing two reservoirs with a total capacity of 5.5 million gallons in the Evergreen area off Murrillo Avenue. Construction began in 2005.

- SJ 13 San Jose Connector & Coleman/I 880 Interchange Recycled Water Line: SBWR will be constructing the connection to the Santa Clara SC 5 pipeline from the San Jose/Santa Clara City Limit to Hedding Street along Coleman avenue.

- Guadalupe Community Garden: This recycled water line will provide recycled water service to the proposed Guadalupe Community Garden located at the intersection of Walnut and Asbury. The new recycled water line will begin at the intersection of Spring and Asbury and proceed along Asbury, terminating at Coleman Avenue. Construction began in 2005.

In May 2010, San José received $6.3 million of American Recovery and Reinvestment Act funds for recycled water expansion following a nationwide competition. The U.S. Bureau of Reclamation signed a cooperative agreement with the City of San Jose to provide the stimulus funds towards the SBWR pipeline expansion project. The project will add approximately nine miles of pipe to the SBWR system and provide up to 2 million gallons per day of additional recycled water to irrigation and industrial customers.

PALO ALTO REGIONAL WATER QUALITY CONTROL PLANT

Overview

The Palo Alto Regional Water Quality Control Plant (RWQCP) treats wastewater from the East Palo Alto Sanitary District, Los Altos, Los Altos Hills, Mountain View, Palo Alto, and Stanford University. Palo Alto's RWQCP has been in operation since 1934 and is owned and operated by the City of Palo Alto for the communities of Los Altos, Los Altos Hills, Mountain View, Palo Alto, Stanford University and the East Palo Alto Sanitary District.

In 1992, the City and the other RWQCP partners completed a water reclamation master plan. This Master plan identified a five-year, three-stage implementation for recycled water development in the service area of the RWQCP.

Recycled water is distributed by the City of Palo Alto and the City of Mountain View. Recycled water is generally available east of Highway 101 in Palo Alto and Mountain View at parks, golf course and businesses sites for landscape irrigation—specifically in Mountain View north of Bayshore Highway, the Palo Alto Golf Course and Baylands Athletic Center, and Greer Park along West Bayshore Road in Palo Alto.

Type and Extent of Services

The plant is an advanced treatment facility that uses gravity settling, biological treatment with microorganisms and dual media filtration to remove unwanted organic materials and toxins from the approximately 22 million gallons a day of wastewater generated by the service area's 220,000 residents. The plant's treated effluent meets all of the requirements for discharge to the South San Francisco Bay.

The RWQCP water reuse program has historically brought a reliable, sustainable and drought-proof supply of water to the South Bay and Santa Clara County. The treated water is suitable for landscape irrigation, commercial and industrial use and habitat restoration.

The plant has the capability to recycle all wastewater flow for restricted and unrestricted uses. To date, over 10 billion gallons have been reused since 1980, which equals the amount of water used by approximately 2,500 families of five per year for the past 23 years. In 2010, the plant produced 2,450 acre feet of recycled water. Recycled water from the plant is presently being used for the following purposes:

- Irrigation water for Greer Park in Palo Alto,
- Irrigation water for the Palo Alto Municipal Golf Course,
- Various uses at the Palo Alto Municipal Service Center, including use in street sweepers, dust control at construction sites, vehicle washing, and for irrigating road median strips,
- Various uses at Shoreline Park and other customers in Mountain View,
- Water for enhancements at the Emily Renzel Marsh in Palo Alto,
- Water for the duck pond in Palo Alto,
- Water for irrigation in and around the RWQCP and in processes at the plant itself,
- Water can be collected by trucks at the plant to be used for dust control at construction projects, for irrigation, and in street sweepers, and
- Irrigation water for CALTRANS for irrigating (by truck) the median strips on local highways.

The Environmental Compliance Division of the plant maintains a pretreatment program for control of industrial dischargers and also regulates many commercial dischargers. The pollution prevention program, which was initiated in response to the RWQCP's strict bay discharge permit conditions, addresses the sewer and stormwater discharges of about 100 major industrial facilities, more than 1,000 commercial businesses, about 200,000 area residents. In addition, over the past few years, the City of Palo Alto staff has created effective pollution prevention programs for mercury, pesticides, copper and trash. In 2011, the pollution prevention priorities for the RWQCP continue to include the same pollutants. Pollution prevention information and programs are supplied to residents as well as businesses within the service area. Public outreach information is included as part of the programs.

Financing

The Cities of Palo Alto, Mountain View and Los Altos participate jointly in the cost of maintaining and operating the City of Palo Alto Regional Water Quality Control Plant and related system. Palo Alto is the owner and administrator of the plant, which provides the

transmission, treatment and disposal of sewage for the partners. The Cities of Mountain View and Los Altos are entitled to use a portion of the capacity of the plant for a specified period of time. Each partner has the right to rent unused capacity from/to the other partners. The expenses of operations and maintenance are paid quarterly by each partner based on its pro rata share of treatment costs. Additionally, joint system revenues are shared by the partners in the same ratio as expenses are paid. The amended agreement has a term of fifty years beginning from the original signing in October 1968, but may be terminated by any partner upon ten years' notice to the other partners.

Capital Improvement Projects

The RWQCP water reuse program is in the midst of a new project. The goal is to replace an existing deteriorating pipeline to the Shoreline Golf Course and to extend a pipeline to the Mountain View-Moffett area. The upgraded pipeline will ensure a sustainable water supply for landscape irrigation.

The pipeline replacement helps fulfill RWQCP permit requirements. To mitigate the discharge of treated wastewater to San Francisco Bay, the RWQCP is required to operate and maintain the Water Reuse Program. Service to Shoreline Golf Course was interrupted due to a leaking pipeline. Therefore, in order to fulfill permit obligations, the RWQCP must restore the golf course connection.

The City is in the EIR process to extend services to customers in the the Stanford Research Park area and potentially offset the need to import approximately 900 AFY of potable water.

The RWQCP staff is working with an engineering firm to develop a conceptual design and environmental analysis for the renovation of landscaping within and around the periphery of the 25-acre wastewater treatment plant. The goals of this project are to improve deteriorated landscape screening around the periphery of the plant, improve the habitat corridor linking the Baylands and Renzel Marsh and provide demonstration landscaping within the RWQCP.

Another project considered by the City is the energy/compost facility. In June 2011, city staff and a contract engineering firm presented the draft feasibility study for a potential energy/compost facility adjacent to the City's wastewater treatment plant to convert organic materials to energy and compost.

The plant has been in operation since 1934 and now serves six communities. Aging equipment, new regulatory requirements, and the movement to full sustainability will require rehabilitation, replacement and new processes. Future activities will focus on biosolids treatment and disposal, waste-to-energy technologies, energy use, major pipeline repairs, recycled water treatment, carbon footprint impacts, and the best alternatives for rehabilitation, replacement or improvement.

SUNNYVALE WATER POLLUTION CONTROL PLANT

Overview

During the 1940s, the City of Sunnyvale became an important industrial and residential community. Because of the population boom, studies were undertaken to assess the need for a citywide sewage treatment system. The resulting sewage treatment plant, constructed in 1956, was a primary, or one-step plant that could process 7.5 million gallons of wastewater a day. However, it soon became overloaded due to an increased number of residents, canneries, and other industries located in Sunnyvale.

By 1960, the population had grown to over 50,000 residents, plus many more non-residents working in the new industries that continued to sprout up. The increase in wastewater flows from this growth created the need to expand the plant.

Construction to increase the treatment capacity to 15 million gallons per day was completed in 1962. However, even with this plant expansion, it became apparent that special consideration to treatment processes would have to be made because of the high cannery flows. Cannery waste, which depletes great quantities of the oxygen available in the water as the waste decays, was identified as being a serious problem for the shallow and fragile South Bay environment. It became necessary to provide additional treatment. Subsequent upgrades include the addition of two evaporation ponds to improve the treatment process.

New developments in chemistry and environmental studies during the technology explosion of the 70's led to further understanding about the processes needed to protect waters from pollutants. With the enactment of the Clean Water Act in 1972, new concepts were incorporated into wastewater treatment, resulting in expansion of the Sunnyvale Water Pollution Control Plant. When a third process, called tertiary treatment, was added to the Plant in 1978, total capacity increased to 22.5 million gallons of treated wastewater each day. The final upgrade to increase the Plant to its present capacity of 29.5 mgd was completed in 1984.

Type and Extent of Services

The Donald M. Somers Water Pollution Control Plant is an advanced wastewater treatment facility serving residents, businesses and industries in the City of Sunnyvale.

Wastewater draining from indoor sources in Sunnyvale flows through sewer pipes that direct the wastewater to the water pollution control plant for treatment before being discharged to the San Francisco Bay or to recycled water users. If left untreated before discharge, residential, commercial and industrial wastewater would upset the ecosystem of southern San Francisco Bay.

In addition to wastewater treatment, services include regulatory permitting and inspections of pretreatment facilities, storm water management for business and industry in Sunnyvale, information on water pollution prevention and environmental education services to schools and youth.

Funded by user fees, the mission of the Water Pollution Control Plant is to conduct a cost-effective wastewater management program that is environmentally sound and regulated to protect public health, safety, property, and the quality of the Bay.

The plant is designed to combine physical, chemical, and natural biological processes. This combination allows the Plant to consistently produce a high-quality effluent from which more than 85 percent of the pollutants have been removed from the influent. The plant utilizes primary, secondary and tertiary treatment processes to treat the wastewater.

While conducting wastewater management program, the plant reuses many byproducts of the treatment process. These include producing electricity and mechanical power from waste gases, recovering heat from engines, producing an alternative to soil for daily landfill cover or a soil amendment for agricultural and pasture land, and supplementing the City water supply by producing recycled water distributed through a separate system for non-potable uses.

Electrical power production offsets the purchase of utility power and produces enough excess power to sell electricity to the California power grid. The fuel to run the engines and generators that produce this power comes from the decomposition of solid waste and liquid waste. Solids removed in the first stage of the wastewater treatment process are sent to an anaerobic digester. Dried solids are used for beneficial reuse as an alternative to soil for daily cover materials on landfills or used as fertilizer for agricultural and pasture land.

Recycled water is produced by diverting a portion of the flow and providing additional treatment. This additionally treated water meets all non-potable Title 22 standards established by the State. It is distributed through a separate underground piping system to provide irrigation for industrial parks, the Sunnyvale Municipal Golf Course, Baylands Park, and sports complexes.

The City converted its traditional sewer treatment plant in the mid 1990's to allow for the production of recycled water and began using recycled water in 1999, supplementing the overall water supply. Approximately 10 percent of the plant flow is treated to a higher level to meet the necessary recycled water quality, and is delivered to customers for non-potable uses, primarily irrigation. In 2010, the plant produced 1,330 acre feet of recycled water. The City has experienced an increase in demand for recycled water; between 2005 and 2010, recycled water landscape irrigation connections increased from 31 to 112. The City anticipates continued growth in the use of recycled water through 2030. Recycled water supplies are expected to drop slightly by 2015 due to an expected reduction in the

production of recycled water by the City's Water Pollution Control Plant (WPCP) due to outages during capital improvements. The increase projected thereafter is largely due to aggressive efforts by the City to encourage the use of recycled water for nonpotable uses.

The long-term goal of the City is to reuse 100 percent of all wastewater (15 mgd) generated from the Plant to reduce all flows to the bay, as stated in the 2000 Recycled Water Master Plan. This goal, if attained, would involve the export of water to a location or agency outside the city limits. SCVWD is considering use of the City's recycled water for groundwater recharge purposes.

The recycled water distribution system currently consists of approximately 43,000 feet of 12-inch through 36-inch transmission mains (possible future extensions) and over 34,000 feet of 8-inch distribution lines. There is also a two-million gallon recycled water storage reservoir.

Management and Staffing

More than 60 city staff are employed in operations, maintenance, pretreatment, laboratory, and administration functions of the plant. Plant operators keep the processes flowing and are on duty 24 hours a day. Maintenance mechanics ensure that the equipment is dependable and implement changes as needed to assist the overall efficiency of the plant. Pretreatment Inspectors work closely with industries and businesses to aid in their compliance with City requirements on the quality of industrial wastewater they discharge into sewers. Laboratory Chemists analyze industrial waste pretreatment samples as well as samples taken throughout the treatment process. Support Services staff the front office, assist the general public, vendors, and other City staff, provide administrative support to plant personnel, and prepare a variety of reports to meet regulatory requirements. Environmental Outreach staff provides education on water pollution prevention, conservation, and watershed stewardship to schools and youth, businesses and industries, and the community.

The plant received multiple awards and honors for outstanding compliance, BMP implementation and outreach.

Financing

The plant is operated as a separate enterprise fund within the City. This means that it must support itself through sewer service fees without any tax dollars being used. Bond issues and government grants, along with service fees, provide funding for operation, maintenance, and future development.

Costs for wastewater treatment continue to rise with new permit requirements, labor and product cost increases, development of new technologies, and maintenance of the

plant's aging infrastructure. In addition, current state and federally mandated requirements compel the City to earmark funds to cover large future expenditures.

From 1993 to 2008, the SCVWD provided financial assistance and support by underwriting some of the operational costs for the City's recycled water system. This assistance was provided in acknowledgement of the savings to the SCVWD by avoiding the need to purchase new sources of water that might otherwise be necessary without the benefit of recycled water to substitute for potable water for non-potable uses.

The City promotes the use of recycled water through its price structure. Recycled water is priced at 90 percent of the prevailing, first-tier potable water rate. The City intends to continue this financial incentive in the foreseeable future, as possible. With few exceptions, the pricing policy has been successful in encouraging prospective users to convert to the limited use of recycled water in those areas where it is available.

Capital Improvement Projects

The City has completed Phases I and II of the 2000 Recycled Water Master Plan, which now serves Baylands Park, Lockheed/Martin Area, the Sunnyvale Municipal Golf Course, and other parks and industrial areas in the northern part of the City. A storage tank was built in 2000 to allow for more recycled water to be developed and stored in order to keep up with demand on the system once the area is built out. The City has plans to further extend mains as part of the Phase IIc and IId projects. Possible extensions to serve the south end of the City and also Cupertino and Los Altos may be evaluated in the future.

27. APPENDICES

METHODOLOGY FOR EVALUATING THE AVAILABILITY OF ADEQUATE WATER SUPPLY FOR LAFCO PROPOSALS

Instructions for Applicants

Introduction

The purpose of these instructions is to assist all applicants in preparing the appropriate information in a uniform, consistent, and understandable manner with the intent of illustrating that an adequate long-term water supply exists on which their project will rely. LAFCO's existing urban service area amendment policies include the following policies regarding water availability:

> LAFCO will require evidence that an adequate water supply is available to the amendment areas and that water proposed to be provided to new areas does not include supplies needed for unserved properties already within the city, the city's Urban Service Area or other properties already charged for city water services. In determining water availability, LAFCO will evaluate, review and consider:
>
> a. The city's plan for water service to the area and statement of existing water supply in terms of number of service units available; service units currently allocated; number of service units within city (and current USA) boundaries that are anticipating future service and service units needed for amendment area.
>
> b. Whether the city is able to provide adequate water supply to the amendment area in the next 5 years, including drought years, while reserving capacity for areas within the city and Urban Service Area that have not yet developed.
>
> c. Whether the city is capable of providing adequate services when needed to areas already in the city, in the city's Urban Service Area or to other properties entitled to service.
>
> d. If capacity is not reserved for unserved property within the city and its Urban Service Area boundary, the current estimate of potential unserved properties and related water supply needs
>
> e. Whether additional infrastructure and or new water supplies are necessary to accommodate future development or increases in service demand. If so, whether plans, permits and financing plans are in place to ensure that infrastructure and supply are available when necessary including compliance with required

administrative and legislated processes, such as CEQA review, CEQA mitigation monitoring plans, or State Water Resources Board allocation permits. If permits are not current or in process, or allocations approved, whether approval is expected.

f. Whether facilities or services comply with environmental and safety standards so as to permit acquisition, treatment, and distribution of necessary water.

While numerous methods exist for determining an ultimate assessment of water needs, the basic premise, however, involves an assessment of the anticipated current and/or future water requirement by various users associated with the proposed "new project" and the comparison of that "need" against the supplies available. This is the fundamental objective and basis upon which these instructions have been prepared.

Water Needs Analysis

Table 1 provides a simplistic depiction of the basic information required by Santa Clara LAFCO. The information requested is broken down by three primary categories; water demands, water supplies, then the calculated water needs (which will demonstrate a surplus or deficit). It is this surplus or deficit that represents the availability, or lack thereof, of a water supply for the proposed new project. Each of these water demand, supply and needs categories are projected along a timeline starting with the current year and working forward by five-year increments. Units are in acre-feet per year (AFY).

Figure 27-1: Water Needs Analysis

Water Needs Analysis (acre-feet per year - AFY)					
	Current	*2015*	*2020*	*2025*	*2030*
Water Demand (for development/uses within agency existing boundaries)					
Allocated /Reserved Water Demand (for new development /uses within agency existing boundaries)					
Project Water Demand (for new development or uses in boundary amendment area					
Water Supply - Total					
Water Supply - Safe Yield					
Calculated Water Needs - A					
Calculated Water Needs - B					

Note: Calculated Water Needs - A is the difference between all of the water demands and Water Supply - Total
Calculated Water Needs - B is the difference between all of the water demands and Water Supply - Safe Yield
A negative value indicates no additional water need for the proposed project above current supplies. A positive value indicates that the proposed project requires an additional amount of water beyond what the current water purveyor possesses.

Water Demand (for development/ uses within agency existing boundaries)

This category represents the water demands that are currently being used to serve the varied land use types and their associated water users within the existing boundaries of the water purveyor (e.g., city utilities, special water districts, and related water agencies). This is the sum total of all water use (from all land uses) within the water purveyors existing boundaries. This includes all residential, non-residential, landscape, and distribution system loss demands.

Allocated /Reserved Water Demand (for new development /uses within agency existing boundaries)

This category represents the water demands that are anticipated or could be used to serve the varied land use types and associated water users in the future within the existing boundaries of the water purveyor (e.g., city utilities, special water districts, and related water agencies). This category differs from the former in that it makes assumptions for water use (not yet realized), but potentially possible across any of the land use types currently undeveloped. For example, it would include an assumed water use for future development(s) within an area currently vacant (undeveloped) but zoned as high-density residential. Similarly, it would include an assumed water use for future development(s) within an area designated as commercial/industrial.

Project Water Demand (for new development or uses in boundary amendment area - outside of agency existing boundaries)

This category represents the projected water demands that are proposed for the current project under consideration (i.e., the applicant's proposed project). Regardless of project type (e.g., residential, commercial, industrial, institutional, etc.), a corresponding water demand will exist based on the project description provided by the applicant. This is the projected water demand that will be needed outside of the existing water purveyor boundaries. Accordingly, this is the new allocation or depletion that Santa Clara LAFCo will closely analyze within the context of the current and allocated/reserved water demands that are already being met within the existing water purveyor boundaries or, could be met by the water purveyor should new projects within their boundaries develop.

Water Supply - Total

This category represents the existing water supplies of the water purveyor(s). It includes all held water entitlements (e.g., water contracts, water rights, transferred water, recycled water, etc.) as well as water pumped from groundwater aquifers. It includes the unconstrained entitlement totals, that is, the maximum allowable quantities.

Water Supply - Safe Yield

The safe yield defines the maximum amount of water that can be made available in any year, including the driest year of record. It is the maximum amount of water conceivably available based on all water year types and acknowledges that, despite the identified quantities on certain entitlements (e.g., federal water contracts), the "guaranteed" annual supply is typically significantly less. This reduction is a result of imposed deficiencies due primarily to unavailable system yield or, shortages in overall supply. As an example, for CVP M&I water contracts, the safe yield will be the maximum allocation permitted in the driest year (consistent with imposed shortage limitations).

Calculated Water Needs

These are the calculated differences between total water demands and water supply. From Table 1, it is the current, future and proposed new project demands, less the total water supplies. With two water supply numbers (i.e., total and safe yield), two corresponding calculated water needs are also generated (noted as A and B).

In Figure 27-2 below, the various boxes have been filled in for demonstration purposes. Water demands within those areas currently developed are shown to increase over time from 10,000 AFY to 25,000 AFY. The allocated/reserved water demands, as defined, not surprisingly are shown to decrease over time as more of the currently vacant lands are built out. By 2030, it is assumed for this example that the lands within the existing boundaries are built out.

Figure 27-2: Water Needs Analysis Example

Water Needs Analysis (acre-feet per year - AFY)					
	Current	*2015*	*2020*	*2025*	*2030*
Water Demand (for development/uses within agency existing boundaries)	10,000	12,000	15,000	20,000	25,000
Allocated /Reserved Water Demand (for new development /uses within agency existing boundaries)	15,000	13,000	10,000	5,000	0
Project Water Demand (for new development or uses in boundary amendment area)	2,000	2,000	2,000	2,000	2,000
Water Supply - Total	30,000	30,000	30,000	30,000	30,000
Water Supply - Safe Yield	25,000	25,000	25,000	25,000	25,000
Calculated Water Needs - A	-3,000	-3,000	-3,000	-3,000	-3,000
Calculated Water Needs - B	2,000	2,000	2,000	2,000	2,000

Note: Calculated Water Needs - A is the difference between all of the water demands and Water Supply - Total
Calculated Water Needs - B is the difference between all of the water demands and Water Supply - Safe Yield
A negative value indicates no additional water need for the proposed project above current supplies. A positive value indicates that the proposed project requires an additional amount of water beyond what the current water purveyor possesses.

The project water demands are identified as 2,000 AFY (it does not specify the type of project or land use). The total water supply (Water Supply - Total) is identified as being 30,000 AFY. This is the sum total of all of the water entitlements held by this water purveyor and is the maximum allowable under those entitlements. The second of the water supply values (Water Supply - Safe Yield) is identified as 25,000 AFY or 5,000 AFY less than the total water supply. As defined earlier, this shows that the water purveyor's total water supplies are constrained by 5,000 AFY. This is the maximum shortfall that can exist to its water supplies in any one given year.

The calculated water needs then are illustrated as two values, one reflecting water needs based on total water supply availability and the other on water supplies based on safe yield. From Example Table 1, if total water supplies are assumed (i.e., unconstrained), then the water purveyor would possess enough water to provide the proposed project (by this example, in perpetuity). If, however, safe yield values are assumed, then the proposed project would exceed the water purveyor's existing water supplies by about 2,000 AFY, coincidentally the same amount as its project needs.

Gross assumptions were used in this example to provide an easy illustrative depiction. In reality, various factors in each category and, over time, make this assessment much more complex. However, this example illustrates the sensitivity in calculating adequate water supplies based on real (or firm) supply availability and the overarching influence of potential future infill development. By including the Allocated/Reserved Water Demand in these calculations, the fundamental assumption is that infill will take priority (in

determining water needs) before any new development or uses are permitted in the boundary amendment areas.[121]

[121] Notes: Additional metrics and details associated with each of these categories are not shown here but are available from Santa Clara LAFCo. This includes additional information and guidance on how to calculate water demands and water supplies, taking into account such factors as per capita water use, landscape irrigation, system loss factors, etc.

INTERVIEWS

Agency	Name and Title
City of Gilroy	David Stubchaer, Operations Manager
City of Gilroy	Dan Aldridge, Water Operations Supervisor
City of Milpitas	Kathleen Phalen, Acting Assistant City Engineer
City of Milpitas	Howard Salamanca, Associate Civil Engineer
City of Morgan Hill	Mario Iglesias, Utility Systems Manager
City of Mountain View	Gregg Hosfeldt, Assistant Public Works Director
City of Mountain View	Alison Turner, Senior Civil Engineer
City of Palo Alto	Romel Antonio, Senior Project Engineer
City of San Jose	Mansour Nasser, Deputy Director of Environmental Services
City of Santa Clara	Christopher de Groot, Director of Water and Sewer Utilities
City of Sunnyvale	Jim Craig, Superintendent of Field Services
City of Sunnyvale	Val Conzet, Water Operations Manager
Santa Clara Valley Water District	James Fiedler, COO Water Utility
Santa Clara Valley Water District	Joan Maher, Deputy Operating Officer
Santa Clara Valley Water District	Amy Fowler, Special Programs Engineer
Santa Clara Valley Water District	Cindy Kao
Santa Clara Valley Water District	Bob Siegfried
Santa Clara Valley Water District	Marc Klemencic
Aldercroft Heights County Water District	Kim Gardner, Business Manager
Aldercroft Heights County Water District	Tyler Boswell, Water Operator
Purissima Hills County Water District	Patrick Walter, General Manager
San Martin County Water District	Peter J. Forest, District Manager
Pacheco Pass Water District	Michael O'Connell, President
Pacheco Pass Water District	Patricia Richardson, Secretary
Guadalupe-Coyote RCD	Nancy Bernardi, Office Manager
Loma Prieta RCD	Patty Marfia, Office Executive Director
San Jose Water Company	Bill Tuttle, Director of Engineering – Water Services and Planning
San Jose Water Company	Tom Victori
California Water Service Company	Michael Bolzowski, Water resource engineer
Great Oaks Water Company	John Roeder, CEO
West San Martin Water Works Company	Bob Ukestad
San Francisco Public Utilities Commission	Molly Petrick, Water Resources Analyst
Bay Area Water Supply and Conservation Agency	Lourdes Enriquez, Assistant to the CEO
South Bay Water Recycling	Mansour Nasser, Deputy Director, Water Resources, Environmental Services Department, City of San Jose
South County Regional Wastewater Authority	Brenda M Miles, Project Manager
Palo Alto Regional Water Quality Control Plant	James S. Allen, Plant Manager
Sunnyvale Water Pollution Control Plant	Lorrie B. Gervin, Environmental Division Manager
Santa Clara County, Department of Environmental Health	Ann Peden, Senior Land Use Specialist
Santa Clara County Controller-Treasurer Department	Vicky Bituin, General Accounting Division
Santa Clara County Department of Parks	Drew Merry, Senior Park Maintenance Worker
California Department of Public Health	Eric Lacey, District Engineer
California Division of Safety of Dams	Perome Dylan, Engineer
Natural Resources Conservation Services	Athena Pratt, District Conservationist
San Benito County Auditor's Office	Janet Norris, Accountant III
San Benito County Auditor's Office	Larry Chapin, Assistant Auditor
San Benito LAFCO	Gary Armstrong, Interim Executive Officer
San Benito County Water District	Jeff Cataneo, General Manager