Water Supply Capital Improvements

WATER SUPPLY OVERVIEW

The District manages and operates a complex and integrated water supply infrastructure, including storage, transmission, treatment, and recycled water facilities, to meet the Board's Ends Policy E–2, "There is a reliable, clean water supply for current and future generations."

Storage Facilities

- 10 surface reservoirs
- 393 acres of recharge ponds
- 76 miles of in-stream recharge
- Ground water basins

Transmission Facilities

- 142 miles of pipelines
- 3 pump stations

Treatment Facilities

- 3 treatment plants

Recycled Water Facilities

- Silicon Valley Advanced Water Purification Center
- South County Recycled Water Distribution System

Planning, design and construction of the above facilities took decades of effort. Beginning in the 1930s, reservoirs and recharge ponds were built to halt depletion of the ground water basin and subsidence, followed by pipelines and treatment plants to bring in state and federal water to meet growing water demands in the County.

In the early 1990s, the District embarked on new and challenging 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 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.

The Rinconada Water Treatment Plant (RWTP) was built in the late 1960s and is reaching the end of its useful life. A number of projects to upgrade and improve operations have been completed. The RWTP Reliability Improvement Project will add raw water ozonation, construct new flocculation and plate settler clarification, and dual media filtration facilities. It will also increase plant capacity from 80 to 100 million gallons per day. Construction of this Project began in the summer 2015 and will continue for approximately five years. It will be constructed in a phased approach that will allow the plant to continue operations throughout the construction process.

With a significant portion of the Water Supply infrastructure approaching fifty to sixty 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 Improvement Program in recent years, as shown in the CIP.

The District owns and operates ten dams. While these dams provide water supply, flood management, recreation, and environmental flow benefits, there are consequences and costs for dam ownership. Knowledge of seismic stability design and construction was very rudimentary during the design and construction of District dams in the 1930s and 50s. Both liquefaction of dam embankments and foundations and embankment stability is critical for seismic stability. Several of the District reservoirs have operating restrictions imposed by the Department of Safety of Dams (DSOD) while an engineering analysis of how the District's dams would perform under a major seismic event is completed and appropriate corrective actions are implemented.

On November 26, 2010, the Board was informed that Anderson Dam will require a seismic retrofit and the operating restriction was increased to 45 feet below the crest of the dam. Since this briefing, the consultant has determind that a magnitude 7.2 Maximum Credible Earthquake on nearby Calaveras Fault could cause a deformation (slumping) of the dam crest by 25 feet. The Anderson Dam Seismic Retrofit Project ($550 million) was initiated in January 2011.

Water Supply Capital Improvements

The District completed a seismic stability evaluation of Almaden, Calero, and Guadalupe Dams in late 2010. Almaden Dam was found to be seismically stable; however both Calero and Guadalupe Dams will require seismic retrofitting to meet DSOD performance criteria. A project was initiated in fiscal year 2013 to address the Calero and Guadalupe Dams retrofit needs. A separate capital project to address outlet and spillway improvements at Almaden Dam is continuing. Seismic stability evaluations were conducted at Lenihan and Stevens Creek Dams. Both were found to be seismically stable.

Major Capital Improvements Identified in CIP

Storage:

- Almaden Dam Improvements
- Anderson Dam Seismic Retrofit
- Calero Dam Seismic Retrofit
- Guadalupe Dam Seismic Retrofit

Transmission:

- 10-Year Pipeline Rehabilitation
- FAHCE Implementation
- Main and Madrone Pipeline Rehabilitation
- Vasona Pumping Plant Upgrade

Treatment:

- PWTP Residuals Management
- RWTP Reliability Improvement

Recycled Water:

- Expedited Purified Water Program
- South County Recycled Water Pipeline

PRIORITY PROCESS AND FINANCIAL ANALYSIS

A rigorous priority setting process was conducted to ensure that the new water supply projects proposed to be added to the Fiscal Year 2019-23 CIP reflect the Board's priorities. The priority criteria used to evaluate these projects is included in Appendix A.

A financial analysis of the Water Utility Enterprise Fund, the funding source for water supply capital improvements, was performed to determine the limitations to funding the projects proposed for the Fiscal Year 2019-23 capital program. Results of this year's prioritization process and financial analysis are summarized in Appendix B.

Based on the feedback from the FY 2006-07 CIP and Board direction, a concerted effort was made to develop a multi-year water charge structure that would support the priority work of the water utility business. Staff analyzed both immediate requirements and anticipated future needs to support operations and the continued appropriations for capital investment needed to maintain infrastructure and comply with water quality regulations. Each year staff reviews Board priorities, the financial needs of the water utility enterprise fund, current political and economic factors and updates the multi-year structure. The rate structure for the first year is recommended to the Board for adoption during the annual rate setting process.

While the District has one Water Utility fund, the District has two zones of benefit for the purposes of setting groundwater production charges. The North County Zone is very different from the South County Zone in that the water infrastructure is substantially separate and distinct with an entirely different cost of providing service. For example the north zone overlays the Santa Clara groundwater subbasin and is much more densely populated, requiring a large amount of imported water from outside the county to provide a reliable water supply. To receive, filter

Water Supply Capital Improvements

and distribute the imported water, the District chose to build three water treatment plants and a network of raw water and treated water distribution pipelines many decades ago. Conversely, the south zone overlays the Coyote and Llagas groundwater subbasins and is more sparsely populated. South County relies primarily on groundwater to serve roughly 50% agricultural and 50% non-agricultural water needs. A small amount of recycled water is served in the Gilroy area. No treated water is served in South County. A small amount of imported water is used to recharge the groundwater subbasins in the South County. The groundwater subbasins have the ability to absorb the recharge and remain healthy under normal water usage levels, unlike the North County, where several sections of the groundwater basin are very sensitive, which is the main reason for building the treatment plant system long ago.

To fully fund the Water Supply projects in the FY 2019-23 CIP an increase in the groundwater production charges up to 9.7% in Zone W-2 (North County) and 7.7% in Zone W-5 (South County) will be required in FY 2018-19. Preliminary projections indicate the need for annual rate increases of 9.7% on average in subsequent years for North County and 7.7% on average for South County.

The majority of capital projects included in the 5-Year CIP are related to asset management which replaces aging equipment and facilities, infrastructure reliability, which protects the county's baseline water supply or Advanced Purified Water which produces a drought-proof source of water.

The District is currently engaged in several critical studies related to understanding the conditions of various water supply facilities and meeting future water supply needs of the county, including updating the Water Supply Master Plan, which is scheduled to be presented to the Board in summer 2018. These studies will likely identify a number of new capital projects, some of which may require significant capital investment.

Water Supply Capital Improvements

The following table is a project funding schedule for water supply capital improvements resulting from this year's priority process and financial analysis. Detailed information for each project can be found in this document on the following pages in the order presented in this table. The chart also identifies partially funded projects and estimated unspent appropriation from FY 2017-18.

Water Supply Capital Improvements

Project Number	PROJECT NAME	Through FY17	FY18	FY18 Unspent	FY19	FY20	FY21	FY22	FY23	FY24-33	TOTAL
	STORAGE FACILITY										
91854001	Almaden Dam Improvements	12,520	520	-	3,518	829	525	24,963	18,940	393	62,208
91864005	Anderson Dam Seismic Retrofit (C1)	31,586	7,932	-	10,562	152,391	116,197	141,234	89,533	1,458	550,893
91084020s	Calero and Guadalupe Dams Seismic Retrofits	26,808	3,349	3,955	1,911	1,638	9,914	30,332	42,072	55,880	171,904
91084020	Calero and Guadalupe Dams Seismic Retrofits - Planning	9,476	-	499	-	-	-	-	-	-	9,476
91234002	Coyote Pumping Plant ASD Replacement	-	536	436	698	814	3,244	6,416	4,486	791	16,985
91234011	Coyote Warehouse	2,940	2,981	-	1,034	471	143	78	-	-	7,647
91084019	Dam Seismic Stability Evaluation	18,812	-	33	1,060	667	456	5,963	498	1,941	29,397
60954001	Pacheco Reservoir Feasibility Study	-	2,250	-	12,809	-	-	-	-	-	15,059
91214010s	Small Capital Improvements, San Felipe Reach 1-3	n/a	2,457	-	3,702	2,104	2,706	92	-	34,750	45,811
	TRANSMISSION FACILITY										
95084002	10-Year Pipeline Rehabilitation (FY18-FY27)	-	27,170	-	13,866	17,342	20,355	8,260	4,885	33,591	125,469
92C40357	FAHCE Implementation	-	-	-	-	-	4,739	4,379	14,691	121,299	145,108
26764001	IRP2 Additional Line Valves (A3)	-	-	-	1,090	673	9,826	-	-	-	11,589
26564001	Main & Madrone Pipelines Restoration (A1)	2,327	15,084	-	292	-	-	-	-	-	17,703
92144001	Pacheco/Santa Clara Conduit Right of Way Acquisition	1,861	1,034	-	1,514	385	-	-	-	-	4,794
92374005	SCADA Remote Architecture & Communications Upgrade	776	186	362	250	306	313	1,026	1,072	3,662	7,591
92764009	Small Capital Improvements, Raw Water Transmission	n/a	321	-	849	84	-	92	-	3,226	4,572
94764006	Small Capital Improvements, Treated Water Transmission	n/a	-	-	-	152	-	-	-	-	152
94084007	Treated Water Isolation Valves	-	-	-	529	795	6,891	-	-	-	8,215
94084008	Westside Retailer Interties	-	80	-	67	358	1,385	114	-	-	2,004
92264001	Vasona Pumping Plant Upgrade	119	712	480	549	1,163	548	17,541	586	-	21,218
	TREATMENT FACILITY										
93234044	PWTP Residuals Management	-	-	-	-	-	742	1,550	8,279	-	10,571
93294051s	RWTP Residuals Remediation	21,520	22,053	7,808	-	1,222	14,301	2,421	2,350	821	64,688
93294057	RWTP Reliability Improvement	116,221	48,144	176	46,979	47,629	30,116	143	-	-	289,232
93294056	RWTP Treated Water Valves Upgrade	8,424	170	1	9	209	-	-	-	-	8,812
93764004	Small Capital Improvements, Water Treatment	n/a	2,512	-	3,578	7,659	7,682	3,872	315	16,943	42,561
	RECYCLED WATER FACILITY										
91304001s	Expedited Purified Water Program (EPWP)	17,650	2,727	1,147	3,288	6,339	7,593	32,637	64,979	78,253	213,466
91C40389	Long-Term Purified Water Program Elements	-	-	-	-	-	-	-	26,356	83,909	110,265
91094007s	South County Recycled Water Pipeline	32,915	-	6,737	-	21,753	2,166	-	-	-	56,834
	TOTAL	294,479	140,218	21,135	108,154	264,983	239,842	281,113	279,042	436,917	2,044,748

The following table shows funding requirements from each funding source for water supply capital improvements.

FY 2017-18 Funds to be reappropriated

Water Supply Capital Improvements

The following table shows funding requirements from each funding source for water supply capital.

Water Supply - Funding Source ($K)

Fund Number	FUND NAME	Through FY17	FY18	FY18 Unspent	FY19	FY20	FY21	FY22	FY23	FY24-33	TOTAL
61	Water Utility Enterprise Fund	294,479	137,968	21,135	94,255	264,310	225,277	276,734	264,351	315,618	1,872,992
11	General Fund	-	2,250	-	12,809	-	-	-	-	-	15,059
26	Safe, Clean Water and Natural Flood Protection Fund	-	-	-	1,090	673	14,565	4,379	14,691	121,299	156,697
	TOTAL	294,479	140,218	21,135	108,154	264,983	239,842	281,113	279,042	436,917	2,044,748

FY 2017-18 Funds to be reappropriated

This page intentionally left blank.

Project	**Almaden Dam Improvements**
Program	Water Supply – Storage
Priority No.	50
Project No.	91854001
District Contact	Katherine Oven koven@valleywater.org

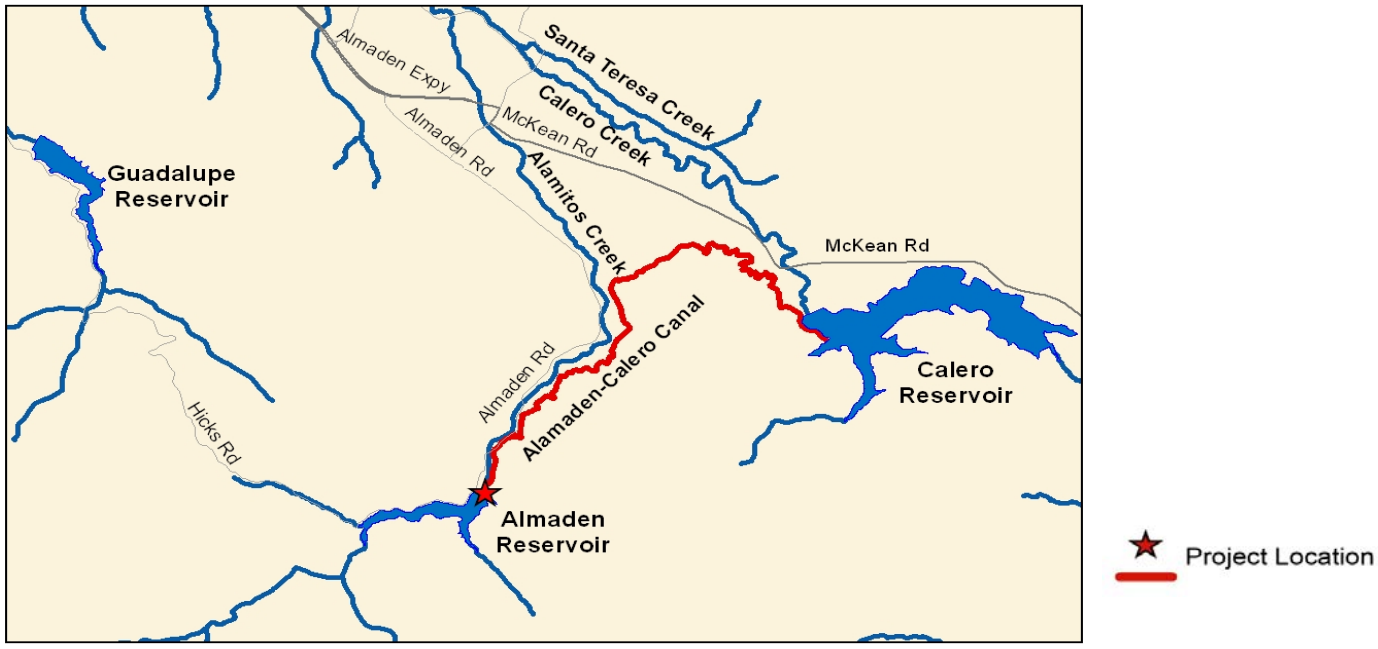
Aerial view of Almaden Dam and spillway, and part of the reservoir

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements to the Almaden Dam outlet works to accomplish the following objectives:

- Modify or construct a new intake structure, capable of releasing 246 cubic feet-per-second (cfs) of water without flushing of sediments through the outlet works.
- Correct existing problems with the outlet energy dissipation structure, piping and valves.
- Restore operational capacity to the Almaden-Calero Canal and stabilize and improve maintenance access.

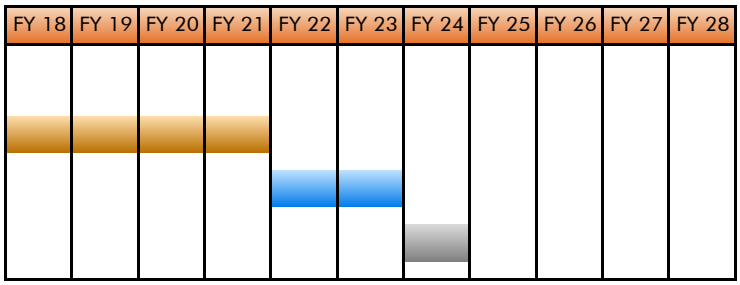
PROJECT LOCATION



SCHEDULE & STATUS

July 1995 to June 2024

Phase	Cost
Plan	5,676
Design	8,423
Construct	38,082
Closeout	302
	56,137



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
91854001-Almaden Dam Improvements	10,704	2,090	3,764	759	460	21,710	16,370	302	56,159
with inflation	10,704	2,090	3,764	829	525	24,963	18,940	393	62,208

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
91854001-Almaden Dam Improvements	12,520	520	246	3,518	829	525	24,963	18,940	393	62,208

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	62,208
Other Funding Source	0
Total	**62,208**

OPERATING COST IMPACTS

The completion of this project is anticipated to decrease operating costs by approximately $2,000 per year, beginning in FY 2025. Manually flushing the control valves during the winter months to remove silt will no longer be required.

USEFUL LIFE: 50+ Years

Project	**Anderson Dam Seismic Retrofit**
Program	Water Supply – Storage
Priority No.	100
Project No.	91864005
District Contact	Katherine Oven koven@valleywater.org

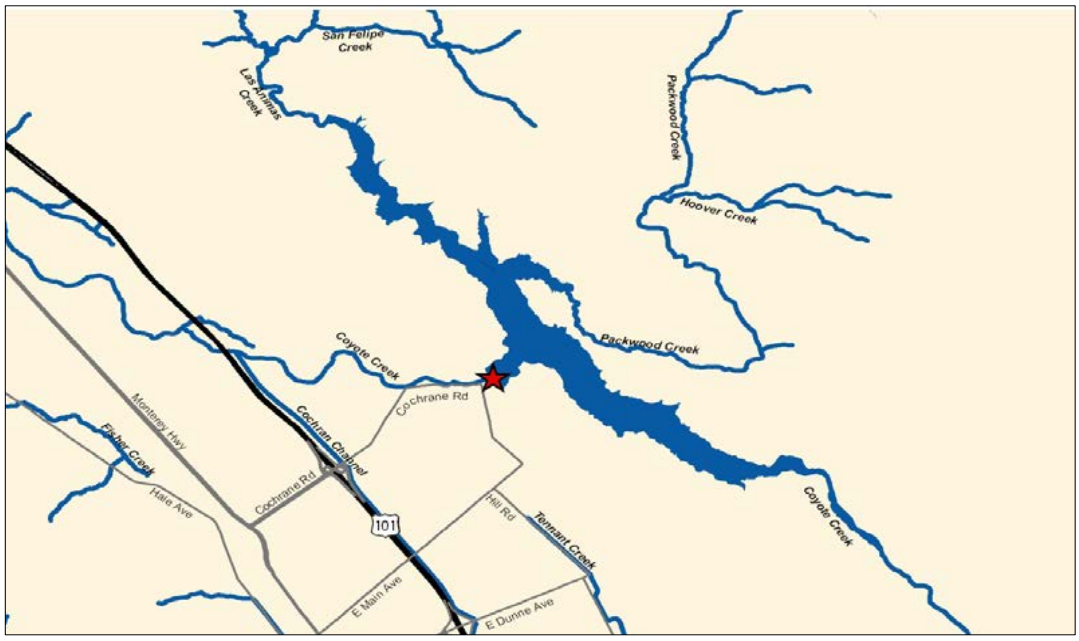
Aerial view of Anderson Dam and spillway, with a portion of the reservoir

PROJECT DESCRIPTION

This project plans, designs, and constructs seismic retrofit or replacement of outlet works at Anderson Dam, pending completion of a field investigation that will determine whether the Coyote Fault is determined to be "active". Seismic stability improvements will accomplish the following objectives:

- Resolve seismic stability deficiencies to ensure public safety.
- Restore lost reservoir storage capacity resulting from the operational restriction issued by Division of Safety of Dams (DSOD).
- Resolve the DSOD/FERC (Federal Energy Regulatory Commission) requirements in a timely manner.

PROJECT LOCATION

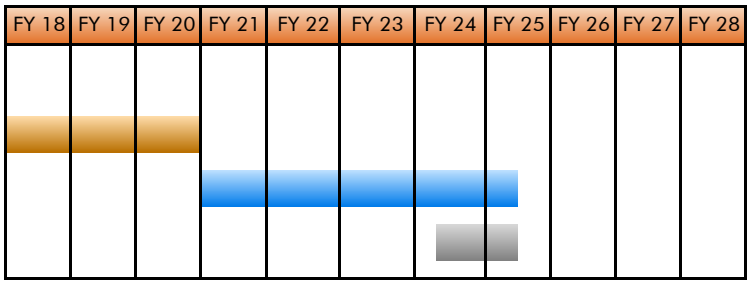


★ Project Location

SCHEDULE & STATUS

January 2011 to December 2024

Phase	Cost
Plan	16,220
Design	35,705
Construct	453,837
Closeout	1,100
	513,098



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
91864005-Anderson Dam Seismic Retrofit	31,298	8,220	10,562	141,844	107,664	130,161	82,263	1,100	513,112
with inflation	31,298	8,220	10,562	152,391	116,197	141,234	89,533	1,458	550,894

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
91864005-Anderson Dam Seismic Retrofit	31,586	7,932	0	10,562	152,391	116,197	141,234	89,533	1,458	550,894

Adjusted Budget includes adopted budget plus a planned budget adjustment of $19,000.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	484,841
SCVWD Safe Clean Water Fund	66,053
Other Funding Sources	0
Total	**550,894**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: 50+ Years

Project Calero and Guadalupe Dams Seismic Retrofits
Program Water Supply - Storage
District Contact Katherine Oven koven@valleywater.org
Priority No. 92
Project No. 91084020s

Aerial view of the Calero Dam and reservoir

Areial view of the Guadalupe Dam, spillway, and part of the reservoir

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements to the Calero and Guadalupe Dams to accomplish the following objectives:

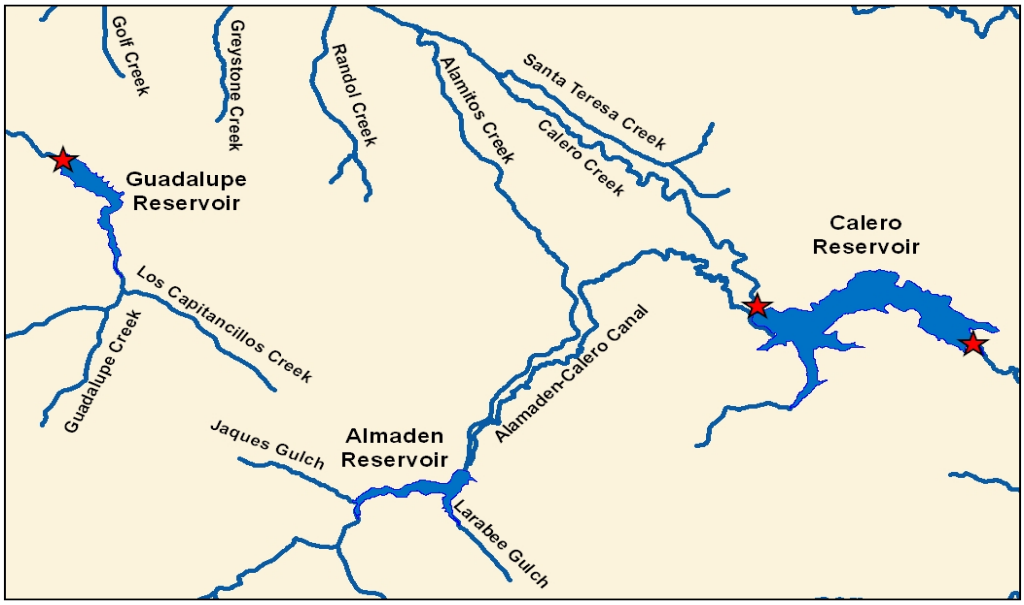
Calero Dam

- Stabilize the embankment to withstand a Maximum Credible Earthquake (MCE).
- Modify or replace the outlet works if determined to be inadequate.
- Modify the spillway or increase the freeboard of the dam for safe passage of the Probable Maximum Flood (PMF).
- Provide modifications that do not preclude potential future expansion of dam and reservoir to provide additional reservoir storage.
- Remove or relocate the Bailey Ranch structures and breach Fellow's Dike.

Guadalupe Dam

- Stabilize the embankment to withstand a MCE.
- Implement improvements as necessary for the dam system to safely pass the PMF.
- Ensure that the outlet works and hydraulic control system meet the Division of Safety of Dams (DSOD) requirements.
- Relocate the intake structure out of the upstream berm in a timely manner.
- Incorporate other measures to address seismic and other dam safety deficiencies that are identified through the Project delivery process.

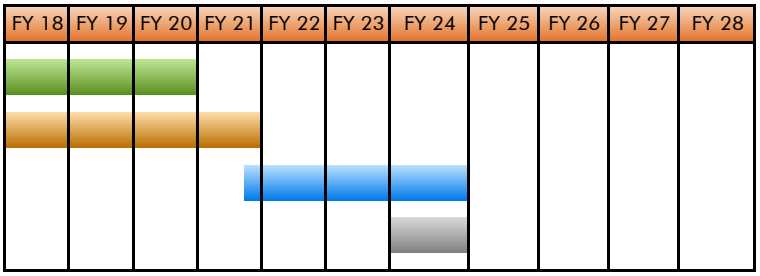
PROJECT LOCATION



SCHEDULE & STATUS

July 2012 to June 2024

Phase	Cost
Plan	7,695
Design	17,892
Construct	117,300
Closeout	360
	152,668



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91084020 - Calero and Guadalupe Dams Seismic Retrofits-Planning	7,167	1,810	209	150	0	0	0	0	9,336
with inflation	7,167	1,810	209	164	0	0	0	0	9,350
91874004 - Calero Dam Seismic Retrofit-Design & Construct	7,360	2,320	3,444	500	2,580	6,000	15,750	41,438	79,392
with inflation	7,360	2,320	3,444	546	2,944	7,155	18,750	49,266	91,785
91894002 - Guadalupe Dam Seismic Retrofit-Design & Construct	6,371	1,174	1,923	1,000	6,250	20,700	20,700	5,822	63,940
with inflation	6,371	1,174	1,923	1,092	6,970	23,177	23,322	6,614	70,643
TOTAL	**20,898**	**5,304**	**5,576**	**1,650**	**8,830**	**26,700**	**36,450**	**47,260**	**152,668**
with inflation	**20,898**	**5,304**	**5,576**	**1,802**	**9,914**	**30,332**	**42,072**	**55,880**	**171,778**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91084020 - Calero and Guadalupe Dams Seismic Retrofits-Planning	9,476	0	499	0	0	0	0	0	0	9,476
91874004 - Calero Dam Seismic Retrofit-Design & Construct	9,223	2,188	1,731	1,713	546	2,944	7,155	18,750	49,266	91,785
91894002 - Guadalupe Dam Seismic Retrofit-Design & Construct	8,109	1,161	1,725	198	1,092	6,970	23,177	23,322	6,614	70,643
TOTAL	**26,808**	**3,349**	**3,955**	**1,911**	**1,638**	**9,914**	**30,332**	**42,072**	**55,880**	**171,905**

Adjusted Budget includes adopted budget plus approved budget adjustments. Allocated funding exceeds the projected cost of one of the projects listed above by approximately $126,000. Excess funds will be returned to Fund Reserves at the close of the project.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	171,905
Other Funding Source	0
Total	**171,905**

OPERATING COST IMPACTS

Operating cost impacts are anticipated and will be determined during the planning phase.

USEFUL LIFE: 50+ Years

Project	**Coyote Pumping Plant ASD Replacement**
Program	Water Supply – Storage
Priority No.	70
Project No.	91234002
District Contact	Christopher Hakes CHakes@valleywater.org

ASD motors at the Coyote Pumping Plant

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements to the Coyote Pumping Plant Adjustable Speed Drives (ASD) to accomplish the following objectives:

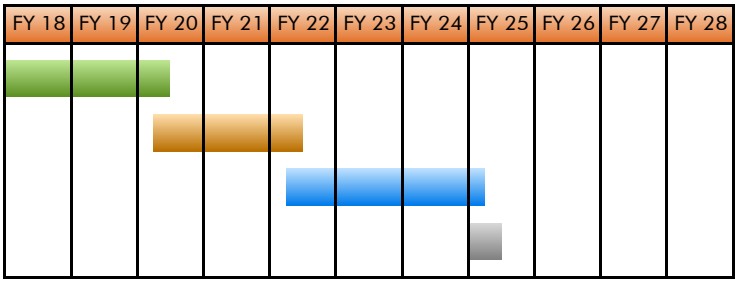
- Replace existing outdated and unsupported ASDs with the latest technology.
- Modify/convert existing six wound rotor motors to be compatible with new stator fed ASD.
- Upgrade the HVAC system to support the additional cooling requirements.
- Modify/upgrade Supervisory Control and Data Acquisition (SCADA) control and instrumentation systems, and control strategy to support the new ASDs.
- Replace two main medium voltage circuit breakers and one medium voltage tie circuit breaker (switch) which are at the end of service life.
- Replace motor control equipment line-up (MCE) with new switchgears.
- Installation of a pump motor vibration and a power monitoring system and motor control center.

PROJECT LOCATION

SCHEDULE & STATUS

July 2017 to October 2024

Phase	Cost
Plan	1,279
Design	1,150
Construct	12,305
Closeout	65
	14,799



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
91234002-Coyote Pumping Plant ASD Replacement	0	100	1,134	745	2,900	5,550	3,735	635	14,799
with inflation	0	100	1,134	814	3,244	6,416	4,486	791	16,985

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
91234002-Coyote Pumping Plant ASD Replacement	0	536	436	698	814	3,244	6,416	4,486	791	16,985

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	13,247
San Benito County Water District	3,738
Total	**16,985**

OPERATING COST IMPACTS

The completion of this project is anticipated to decrease operating costs by approximately $60,000 per year beginning in FY 2024.

USEFUL LIFE: Not Available

Project	**Coyote Warehouse**
Program	Water Supply - Storage
Priority No.	48
Project No.	91234011
District Contact	Katherine Oven koven@valleywater.org

Storage containers used to secure equipment and spare parts

PROJECT DESCRIPTION

This project plans, designs, and constructs the Coyote Warehouse to accomplish the following objectives:

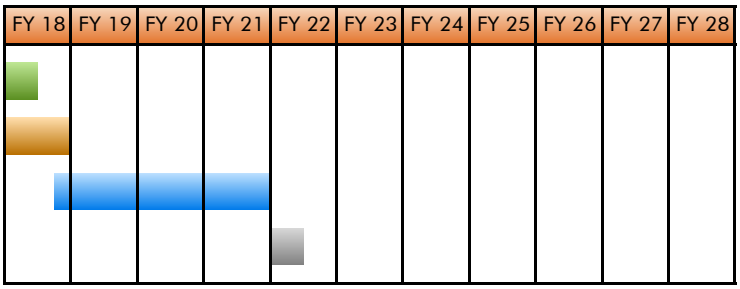
- Provide suitable storage space for pipeline spare parts and appurtenances to protect such materials from weather.
- Improve District's staff efficiency and effectiveness in pipeline maintance work.

PROJECT LOCATION

SCHEDULE & STATUS

July 2014 to December 2021

Phase	Cost
Plan	102
Design	516
Construct	6,621
Closeout	60
	7,576



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
91234011-Coyote Warehouse	743	5,178	1,034	431	125	65	0	0	7,576
with inflation	743	5,178	1,034	471	143	78	0	0	7,646

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
91234011-Coyote Warehouse	2,940	2,981	0	1,034	471	143	78	0	0	7,646

Adjusted Budget includes adopted budget plus a planned budget adjustment of $77,000.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	7,646
Other Funding Sources	0
Total	**7,646**

OPERATING COST IMPACTS

Operating cost impacts are anticipated and will be determined upon completion of the design phase.

USEFUL LIFE: 50 years

Project	**Dam Seismic Stability Evaluations**
Program	Water Supply – Storage
Priority No.	92
Project No.	91084019
District Contact	Katherine Oven KOven@valleywater.org

Field exploration for seismic stability evaluations

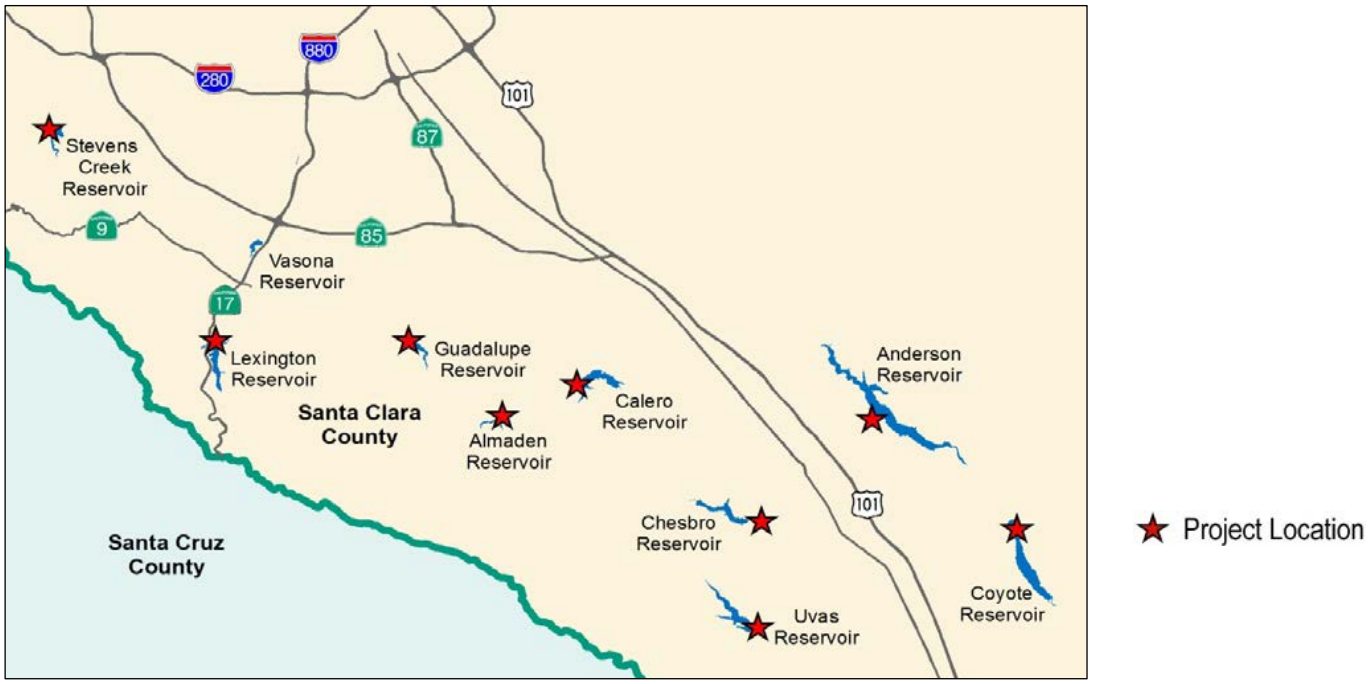
PROJECT DESCRIPTION

This project conducts preliminary planning (seismic stability evaluation) for nine dams (shown on the map) to accomplish the following objectives:

- Address seismic stability issues.
- Provide for public safety.
- Ensure operational availability of reservoirs.
- Address protection of the assets.

Site-specific planning, design, and construction of dam seismic stability improvements will be funded separately. This project funds preliminary planning (seismic stability evaluation, to determine the need for seismic stability improvements) for eight dams. The seismic stability evaluation for Anderson Dam was completed in a separate project. The seismic analysis for Almaden, Calero, Guadalupe, Lenihan, and Stevens Creek Dams has been completed. The analysis for Coyote, Chesbro and Uvas is continuing through 2020.

PROJECT LOCATION

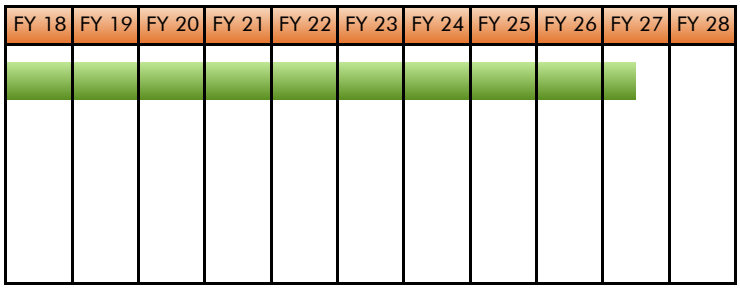


SCHEDULE & STATUS

August 2009 to December 2026

(Planning Phase Only)
Dam Safety Evaluation Report will take 5 years to complete, starting in 2015.

Phase	Cost
Plan	22,481
Design	-
Construct	-
Closeout	-
	27,682



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
91084019-Dam Seismic Stability Evaluations	17,459	1,320	1,093	611	400	5,000	400	1,400	27,683
with inflation	17,459	1,320	1,093	667	456	5,963	498	1,941	29,398

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
91084019-Dam Seismic Stability Evaluations	18,812	0	33	1,060	667	456	5,963	498	1,941	29,398

Adjusted Budget includes adopted budget plus approved budget adjustments

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	29,398
Other Funding Source	0
Total	**29,398**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: 50+ Years

Project	**Pacheco Reservoir Feasibility Study**
Program	Water Supply – Storage
Priority No.	52
Project No.	60954001
District Contact	Kurt Arends karends@valleywater.org

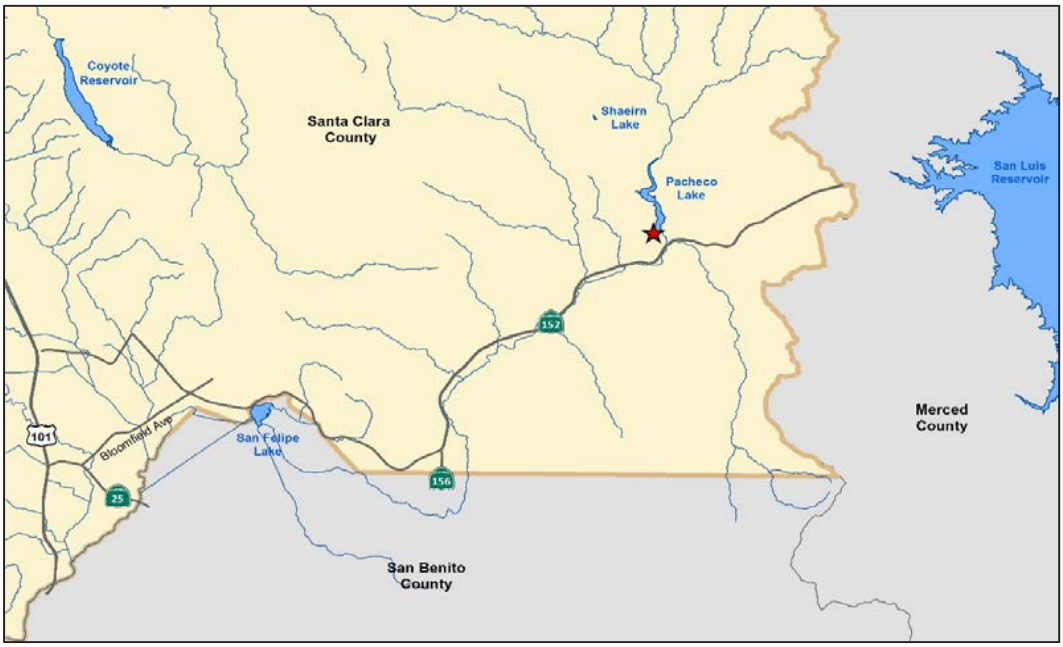
View of Pacheco Reservoir from the dam

PROJECT DESCRIPTION

This project will include expanding the storage capacity of the existing Pacheco Reservoir to 140,000 acre-feet through construction and operation of a new dam, conveyance facilities, and related appurtenant structures. The project objectives:

- Increase suitable habitat in Pacheco Creek for federally threatened steelhead.
- Increase water supply reliability to help meet municipal and industrial (M&I) water demands in Santa Clara County during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions.
- Develop water supplies for environmental water management that support habitat management and other environmental water needs.
- Avoid supply interruptions when water is needed by increasing the certainty of meeting the requested delivery schedule throughout the year to south-of-Delta contractors dependent on San Luis Reservoir.
- Reduce flood risks along Pacheco Creek and downstream areas.

PROJECT LOCATION

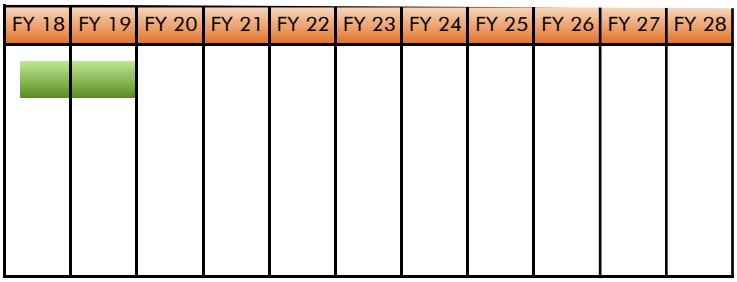


SCHEDULE & STATUS

October 2017 to June 2019

Initial planning/feasibility study and grant application only.

Phase	Cost
Plan	15,013
Design	46
Construct	-
Closeout	-
	15,059



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures						Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
60954001-Pacheco Reservoir Feasibility Study	0	2,250	12,809	0	0	0	0	0	15,059
with inflation	0	2,250	12,809	0	0	0	0	0	15,059

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
60954001-Pacheco Reservoir Feasibility Study	0	2,250	0	12,809	0	0	0	0	0	15,059

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	15,059
Other Funding Sources	0
Total	**15,059**

OPERATING COST IMPACTS

TBD

USEFUL LIFE: TBD

Project	**Small Capital Improvements, San Felipe**
Program	Water Supply – Storage
Priority No.	76
Project No.	91214010s
District Contact	Kurt Arends karends@valleywater.org

Example of bacterial corrosion on a suction wear ring of an impeller

PROJECT DESCRIPTION

This project provides resources for the improvement of small capital investments that replace or extend the life of an asset. This project implements a systematic approach to equipment replacement and renewal at facilities contained within San Felipe Division by designing and constructing improvements identified through the District's 10-year asset management program. Infrastructure within this project includes tunnels, large diameter pipelines and valve structures, pumps and associated equipment, as well as a large, above-ground storage tank. The Reach 1 renewal and replacement activities are conducted in coordination and cooperation with San Felipe Division Reach 1 contractors, partner cities, and other agencies. Planned projects for FY 2019 include:

- 91214010 Reach 1: Refurbish or Rebuild the pump, motor windings and bearings for Pump Units 5 & 7.
- 91224010 Reach 2: CFI/CFO Road Access Fix (culvert replacements); Environmental clearance/permitting.
- 91234010 Reach 3: Replace entire section of asphalt at Coyote Pumping Plant (approx. 28,000 sq.ft.)

All active projects have positive NPV saving at feasibility study phase subject to design phase validation.

PROJECT LOCATION

SCHEDULE & STATUS

This project is part of a regularly scheduled 10-year maintenance and asset management program.

Traditional planning, design, and construction phases do not apply.

Phase	Cost
Plan	n/a
Design	n/a
Construct	n/a
Closeout	n/a
	32,561

FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28

EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91214010-Small Capital Improvements, San Felipe Reach 1	n/a	2,409	2,902	1,767	1,750	77	0	10,450	19,355
with inflation	n/a	2,409	2,902	1,930	1,997	92	0	17,401	26,730
91224010-Small Capital Improvements, San Felipe Reach 2	n/a	48	595	0	0	0	0	0	643
with inflation	n/a	48	595	0	0	0	0	0	643
91234010-Small Capital Improvements, San Felipe Reach 3	n/a	0	205	159	621	0	0	11,578	12,563
with inflation	n/a	0	205	174	709	0	0	17,351	18,438
TOTAL	**0**	**2,457**	**3,702**	**1,926**	**2,371**	**77**	**0**	**22,028**	**32,561**
with inflation	**0**	**2,457**	**3,702**	**2,103**	**2,706**	**92**	**0**	**34,752**	**45,811**

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91214010-Small Capital Improvements, San Felipe Reach 1	n/a	2,409	0	2,902	1,930	1,997	92	0	17,401	26,730
91224010-Small Capital Improvements, San Felipe Reach 2	n/a	48	0	595	0	0	0	0	0	643
91234010-Small Capital Improvements, San Felipe Reach 3	n/a	0	0	205	174	709	0	0	17,351	18,438
TOTAL	**0**	**2,457**	**0**	**3,702**	**2,103**	**2,706**	**92**	**0**	**34,752**	**45,811**

Adjusted Budget includes adopted budget plus approved budget adjustments. Small Capital Improvement projects do not carry forward unspent funds from one fiscal year to the next. Unspent funds are returned to fund reserves at the close of each fiscal year and new funding is provided in the next fiscal year.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	38,603
San Benito County Water District	7,208
Total	**45,811**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: Not Available

Project	**10-Year Pipeline Inspection & Rehabilitation**
Program	Water Supply – Transmission
Priority No.	78
Project No.	95084002
District Contact	Christopher Hakes chakes@valleywater.org

A typical rehabilitated line valve assembly

PROJECT DESCRIPTION

The project develops the District's large diameter Pipeline Management Strategy and a 10-year program for implementation tasks associated with the strategy. This program involves the inspection, planning, design for renewal of the District's large pipelines and tunnels. The project work includes the following objectives:

- Perform dewatering and internal inspections of District's pipelines and tunnels.
- Renew distressed pipe sections as required. Renewal encompasses the actions of repair, rehabilitation, and replacement.
- Perform condition assessment, maintenance, repair, coating and other activities as required.
- Replace line valves, flow meters, pipeline appurtenance assemblies, and piping as required.
- Improve system performance by installing Cathodic Protection Systems, Accoustic Fiber Optical Monitoring of PCCP, and transient pressure monitoring systems.
- Development of a Pipeline Asset Risk Management System that includes GIS, databases, algorithms, models, data acquisition, program documents, and decision support systems.

The first 5 years will include inspection and renewal work along the various pipelines and tunnels as identified below:

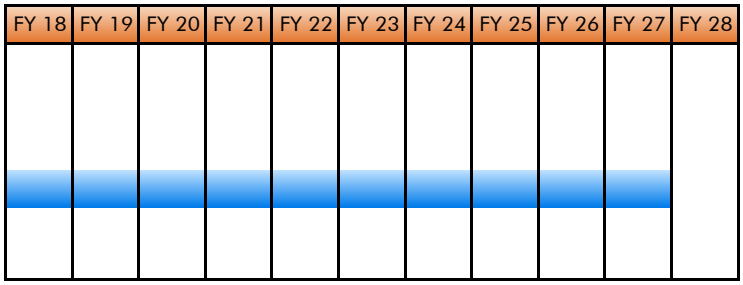
- 2019: Cross Valley Pipeline and Calero Pipeline
- 2020: Central Pipeline, Parallel East Pipeline
- 2021: Santa Clara Conduit, Pacheco Tunnel Reach 2, Santa Clara Tunnel
- 2022: West Pipeline, Penitencia Delivery Main, Penitencia Force Main
- 2023: Almaden Valley Pipeline, Santa Teresa Force Main, Stevens Creek Pipeline

PROJECT LOCATION

SCHEDULE & STATUS

July 2017 to June 2027

Phase	Cost
Plan	3,680
Design	12,490
Construct	95,140
Closeout	340
	111,650



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
95084002-10-Year Pipeline Inspection & Rehabilitation	0	27,170	13,866	16,104	18,170	7,040	4,000	25,300	111,650
with inflation	0	27,170	13,866	17,342	20,355	8,260	4,885	33,591	125,470

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
95084002-10-Year Pipeline Inspection & Rehabilitation	0	27,170	0	13,866	17,342	20,355	8,260	4,885	33,591	125,470

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	125,470
Other Funding Sources	0
Total	**125,470**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: 50 Years

Project	**FAHCE Implementation**
Program	Water Supply - Transmission
Priority No.	73
Project No.	92C40357
District Contact	Vincent Gin VGin@valleywater.org

Fish habitats such as the one shown here will be developed for Habitat Conservation.

PROJECT DESCRIPTION

In 1996, Guadalupe-Coyote Resource Conservation District (GCRCD) filed a water rights complaint with the State Water Resources Control Board (SWRCB) alleging the District's exercise of its appropriative water rights in Coyote Creek, Guadalupe River and Stevens Creek and their tributaries (Three Creeks) was not providing adequate flows for the protection of fisheries and other aquatic resources. A negotiation process (i.e. Fish and Aquatic Habitat Collaborative Effort [FAHCE]) ensued and resulted in the initialing of the FAHCE Settlement Agreement in 2003 by GCRCD, U.S. Fish and Wildlife, National Marine Fisheries Service, California Department of Fish and Wildlife, and other parties. The FAHCE Settlement Agreement includes a proposed FAHCE program that was reviewed by staff of the State and Federal resource management agencies, and will again receive regulatory review as it undergoes environmental impact review prior to implementation to ensure compliance with all applicable laws. The FAHCE program focuses on habitat improvements for steelhead and chinook salmon and is intended to comprehensively address and resolve all issues in the water rights complaint and any related issues arising under State and Federal laws that concern the impacts of the District's facilities and operation on the beneficial uses of the Three Creeks. Once environmental impact review of the FAHCE program is completed, it will be submitted to the SWRCB and included in the District's Three Creek appropriative water rights. The FAHCE program consists of reservoir reoperations to support salmonid spawning, rearing and migration; fish passage remediation and aquatic habitat restoration measures; and an adaptive management program.

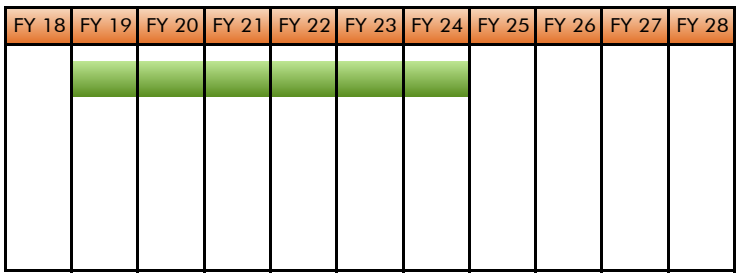
PROJECT LOCATION

Project sites will be located at reservoirs and streams within the Three Creeks Project Area, in the Guadalupe, Coyote and Stevens Creek Watersheds. Project site locations are yet to be determined and no map is provided.

SCHEDULE & STATUS

July 2018 to June 2024

Phase	Cost
Plan	145,108
Design	-
Construct	-
Closeout	-
	145,108



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
92C40357-FAHCE Implementation	0	0	0	0	4,739	4,379	14,691	121,299	145,108
with inflation	0	0	0	0	4,739	4,379	14,691	121,299	145,108

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
92C40357-FAHCE Implementation	0	0	0	0	0	4,739	4,379	14,691	121,299	145,108

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	145,108
Other Funding Source	0
Total	**145,108**

OPERATING COST IMPACTS

Operating cost impacts will vary, depending on the requirements for maintenance of each site. Once the sites have been identified, operating costs will be determined based on the existing conditions and maintenance identified for each site.

USEFUL LIFE:

Not Available

Project	**IRP2 Additional Line Valves**
Program	Water Supply – Transmission
Priority No.	63
Project No.	26764001
District Contact	Christopher Hakes chakes@valleywater.org

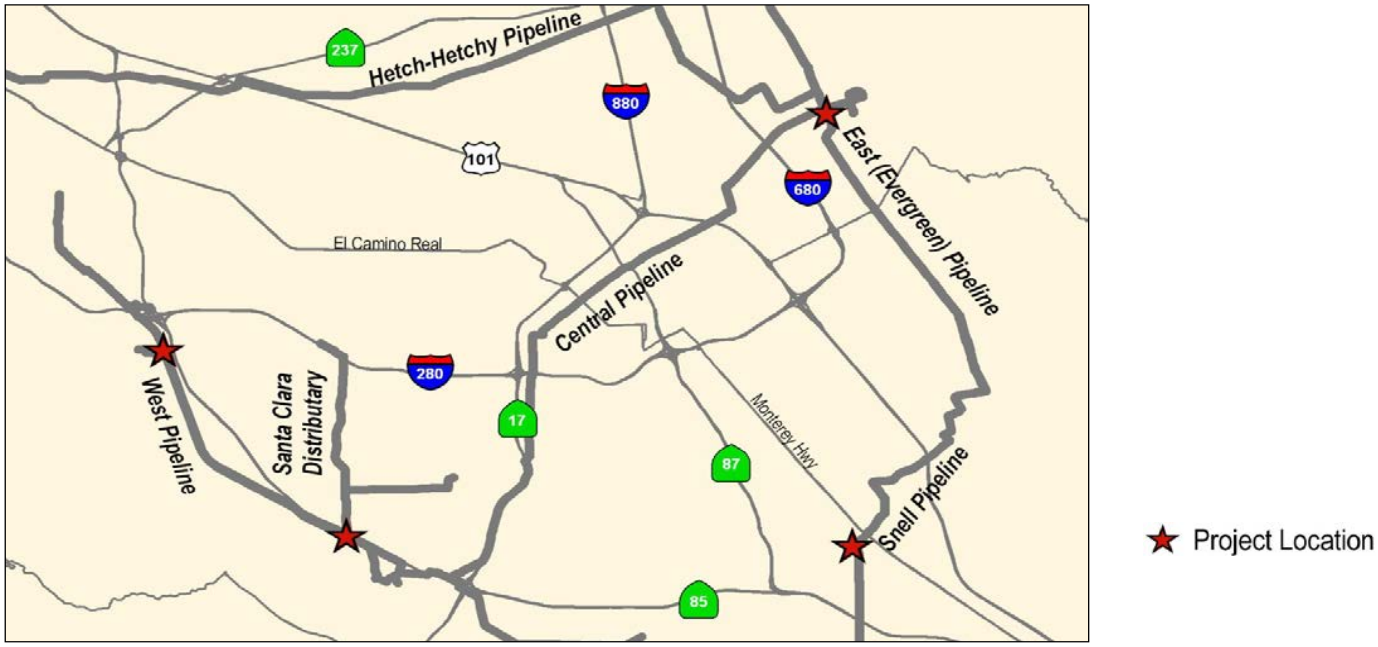
New line valves, actuators, and vaults similar to this will be installed along the East, West, and Snell pipelines

PROJECT DESCRIPTION

This project plans, designs, and constructs four additional line valves in the treated water distribution system, as defined in the Water Infrastructure Reliability Plan, Phase 2 (IRP2). Design and Construction of this project will be in conjunction with work on the same pipelines under the 10- year Pipeline Inspection and Rehabilitation Project. The new line valves will be at various locations along the East, West, and Snell pipeline to accomplish the following objectives:

- Allow the District to isolate sections of the treated water pipeline for general maintenance or to repair activities following a major seismic event.
- Allow the network of emergency wells to operate, even when there is damage upstream and downstream of individual wells.

PROJECT LOCATION

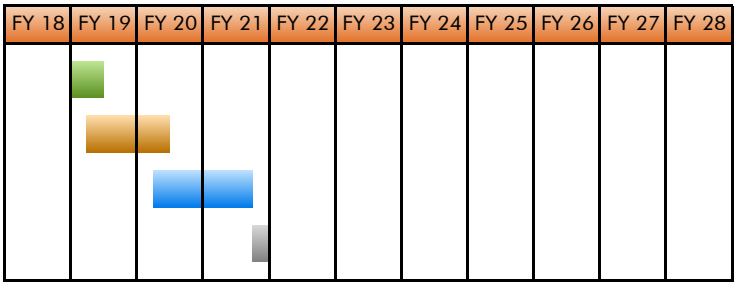


SCHEDULE & STATUS

July 2019 to June 2021

Line valve construction to be coordinated with pipeline maintenance and rehabilitation projects.

Phase	Cost
Plan	209
Design	1,497
Construct	8,728
Closeout	70
	10,504



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
26764001-IRP2 Additional Line Valves	0	0	1,090	616	8,798	0	0	0	10,504
with inflation	0	0	1,090	673	9,826	0	0	0	11,589

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
26764001-IRP2 Additional Line Valves	0	0	0	1,090	673	9,826	0	0	0	11,589

FUNDING SOURCES

(in thousands $)

SCVWD Safe Clean Water Fund	11,589
Other Funding Source	0
Total	11,589

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: 35 Years

Project Main & Madrone Pipelines Restoration
Program Water Supply - Transmission
District Contact Christopher Hakes CHakes@valleywater.org

Priority No. 70
Project No. 26564001

Main Avenue Ponds facing North

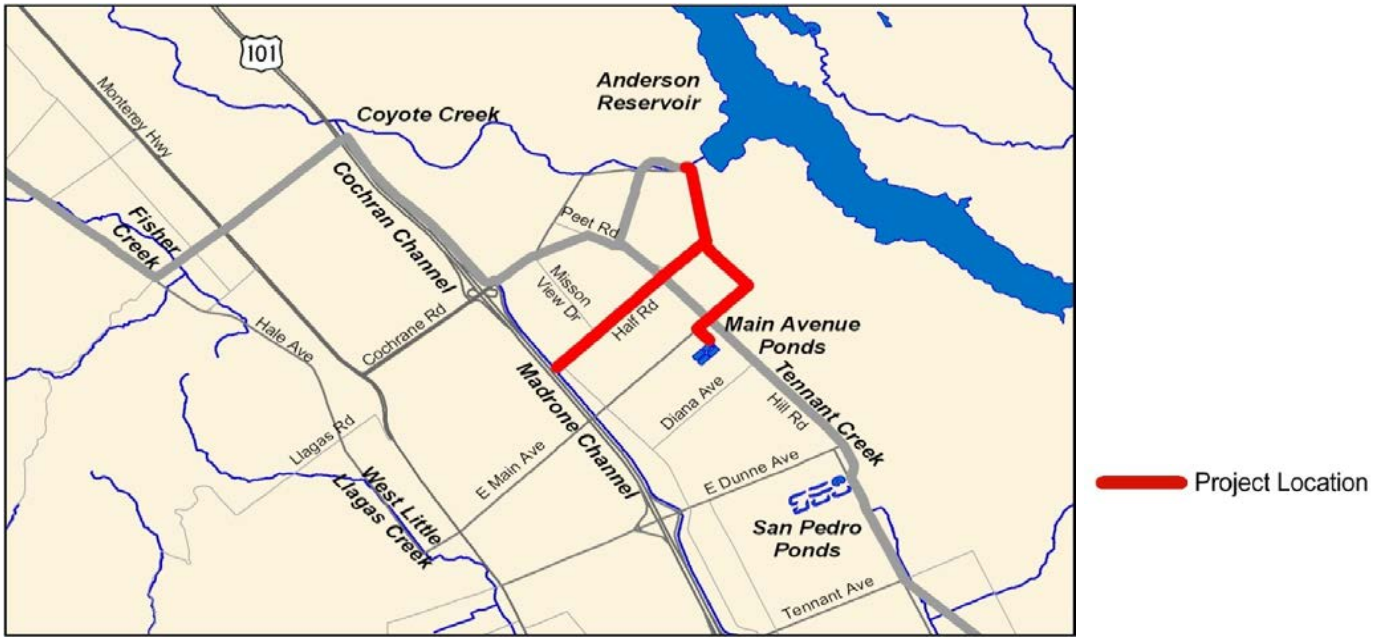
Madrone Pipeline Outlet into Madrone Channel looking North along Northbound Interstate 101

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements on the full length of the Madrone Pipeline and rehabilitates the Main Avenue Pipeline to accomplish the following objectives:

- Provide the means to utilize another reliable water source, (e.g. Anderson Reservoir) to supply water to the Main Avenue Ponds and the Madrone Channel.
- Allow for greater flows to the Main Avenue Ponds and the Madrone Channel.
- Maximize imported water flows to the treatment plants.

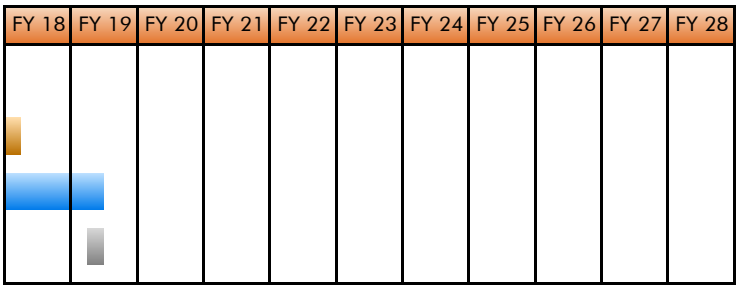
PROJECT LOCATION



SCHEDULE & STATUS

July 2014 to December 2018

Phase	Cost
Plan	337
Design	2,662
Construct	14,535
Closeout	90
	17,703



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
26564001-Main & Madrone Pipelines Restoration	2,794	14,617	292	0	0	0	0	0	17,703
with inflation	2,794	14,617	292	0	0	0	0	0	17,703

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
26564001-Main & Madrone Pipelines Restoration	2,327	15,084	0	292	0	0	0	0	0	17,703

Adjusted Budget includes adopted budget plus a planned budget adjustment of $467,000.

FUNDING SOURCES

(in thousands $)

SCVWD Safe, Clean Water Fund	6,354
SCVWD Water Utility Enterprise Fund	11,349
Total	**17,703**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as it does not significantly alter the facility or modes of operation.

USEFUL LIFE: 40 Years

Project	**Pacheco/Santa Clara Conduit Right of Way Acquisition**
Program	Water Supply – Transmission
Priority No.	75
Project No.	92144001
District Contact	Christopher Hakes CHakes@valleywater.org

Access to much of the San Felipe Division pipelines must currently be made through private property, due to a lack of easements, such as Bloomfield access at Vault 21-23.

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements related to the acquisition of right-of-way along the South County Pipeline to accomplish the following objectives:

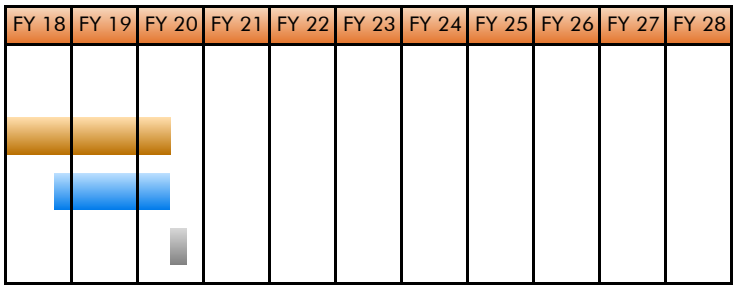
- Provide unlimited access to District owned pipeline.
- Reduce conflicts with local land owners and improve response time for emergency repairs or operations.

PROJECT LOCATION

SCHEDULE & STATUS

July 2009 to February 2020

Phase	Cost
Plan	1,178
Design	2,403
Construct	1,071
Closeout	35
	4,687



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
92144001-Pacheco/Santa Clara Conduit Right of Way Acquisition	1,389	1,506	1,514	353	0	0	0	0	4,762
with inflation	1,389	1,506	1,514	385	0	0	0	0	4,794

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
92144001-Pacheco/Santa Clara Conduit Right of Way Acquisition	1,861	1,034	0	1,514	385	0	0	0	0	4,794

Adjusted Budget includes adopted budget plus a plannded budget adjustment of $782,000.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	4,026
San Benito County Water District	768
Total	**4,794**

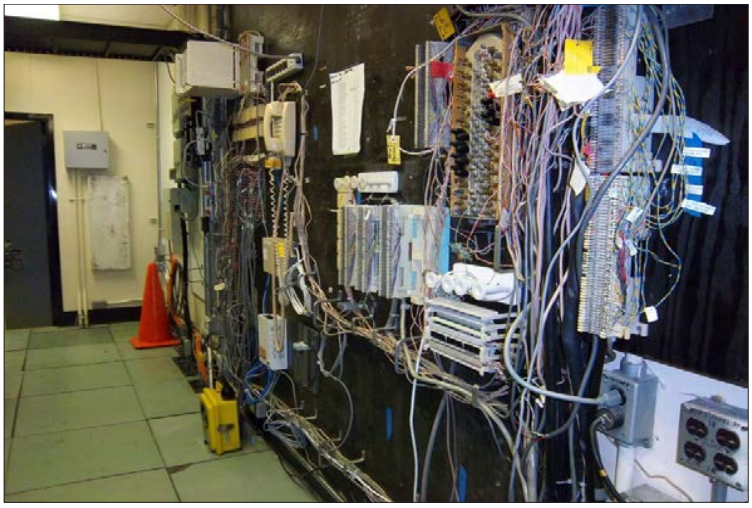
OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $8,000 per year, beginning in FY 2020, for vegetation control and/or maintenance of fences, gates and locks for the access roads.

USEFUL LIFE:

15-20 Years

Project	**SCADA Remote Architecture and Communications Upgrade**
Program	Water Supply – Transmission
Priority No.	74
Project No.	92374005
District Contact	Christopher Hakes chakes@valleywater.org



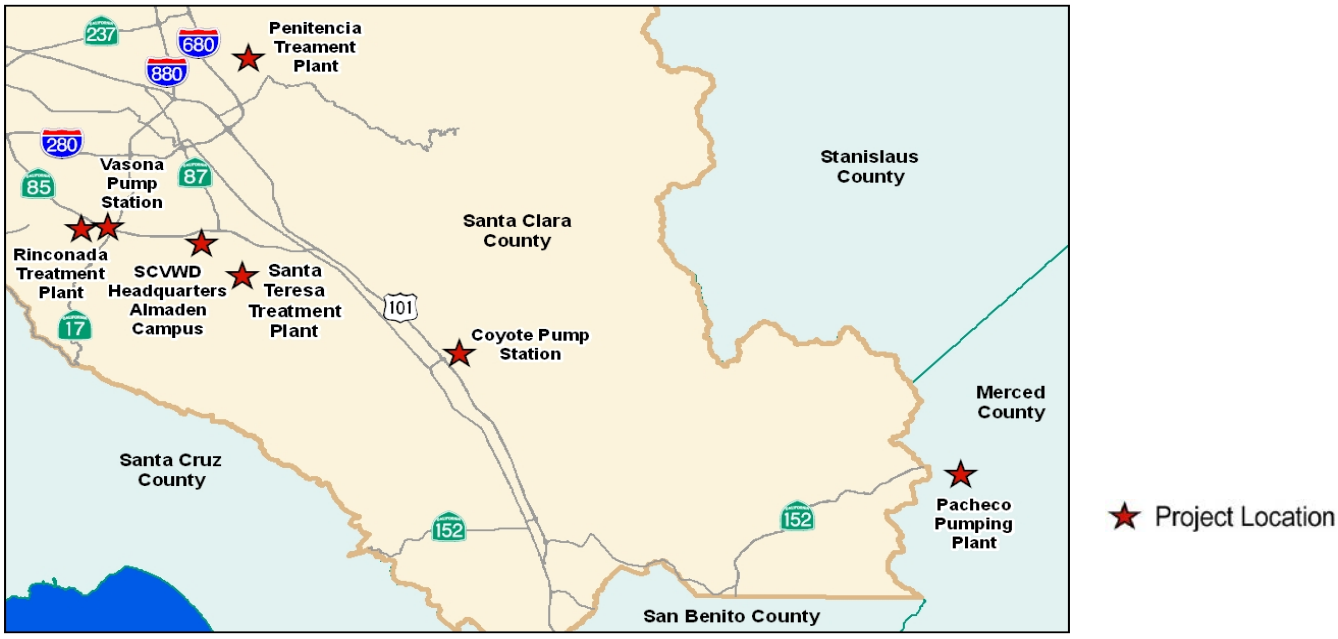
Raw Water Control Center Hub at Rinconada Water Treatment Plant similar to what will be installed at other facilities

PROJECT DESCRIPTION

This project plans, designs, and implements improvements to the back-up raw water control center and Process Control Systems (SCADA) telemetry to accomplish the following objectives:

- Construct a water control center that eliminates suceptability to a single point of failure.
- Upgrade the SCADA telemetry system to remove the single points of failure and to provide a robust and reliable telemetry system.

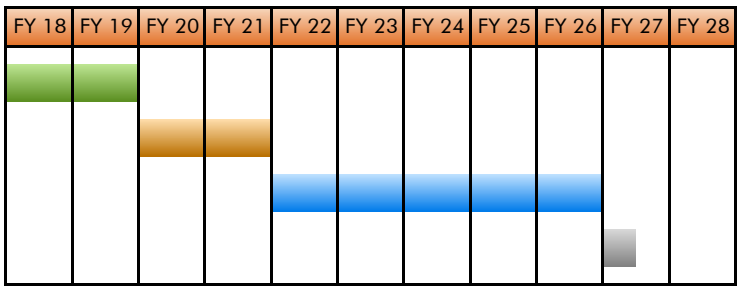
PROJECT LOCATION



SCHEDULE & STATUS

July 2015 to December 2026

Phase	Cost
Plan	1,210
Design	554
Construct	4,300
Closeout	100
	6,164



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
92374005-SCADA Remote Architecture and Communications Upgrade	247	353	612	280	274	860	860	2,680	6,166
with inflation	247	353	612	306	313	1,026	1,072	3,662	7,590

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
92374005-SCADA Remote Architecture and Communications Upgrade	776	186	362	250	306	313	1,026	1,072	3,662	7,590

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	5,974
San Benito County Water District	1,615
Total	**7,590**

OPERATING COST IMPACTS

The completion of this project is anitcipated to increase operating costs by approximately $80,440 per year, beginning in FY 2026 for operational support provided by control technicians, IT technicians, and SCADA engineers.

USEFUL LIFE: 25 Years

Project	**Small Capital Improvements, Raw Water Transmission**
Program	Water Supply – Transmission
Priority No.	73
Project No.	92764009
District Contact	Kurt Arends karends@valleywater.org

Major repair and replacement of turnout roofs and similar small raw water capital projects will be completed in accordance with the asset management plan.

PROJECT DESCRIPTION

This project provides resources for the improvement of small capital investments that replace or extend the life of an asset. This project will repair or rehabilitate various existing raw water distribution facilities. These activities include identifying and fixing corrosion problems, replacing valves and other appurtenances and modifying water recharge facilities to avoid failure of the raw water transmission system and extend the life of the infrastructure. This project is part of the District's 10-year asset management program. Planned projects for FY 19 include:

- Replace two roofs at the Piedmont Valve Yard.
- Replace roof at Kirk Ditch turnout.
- Replace roof at Guadalupe turnout.
- Replace roofing at both the Norwood and Ocala turnouts.

PROJECT LOCATION

SCHEDULE & STATUS

This project is part of a regularly scheduled 10-year maintenance and asset management program.

Traditional planning, design, and construction phases do not apply.

Phase	Cost
Plan	n/a
Design	n/a
Construct	n/a
Closeout	n/a
	n/a

FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28

EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
92764009-Small Capital Improvements, Raw Water Transmission	n/a	321	849	77	0	77	0	2,163	3,487
with inflation	n/a	321	849	84	0	92	0	3,227	4,573

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
92764009-Small Capital Improvements, Raw Water Transmission	n/a	321	0	849	84	0	92	0	3,227	4,573

Adjusted Budget includes adopted budget plus approved budget adjustments. Small Capital Improvement projects do not carry forward unspent funds from one fiscal year to the next. Unspent funds are returned to fund reserves at the close of each fiscal year and new funding is provided in the next fiscal year.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	4,573
Other Funding Source	0
Total	**4,573**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: Not Available

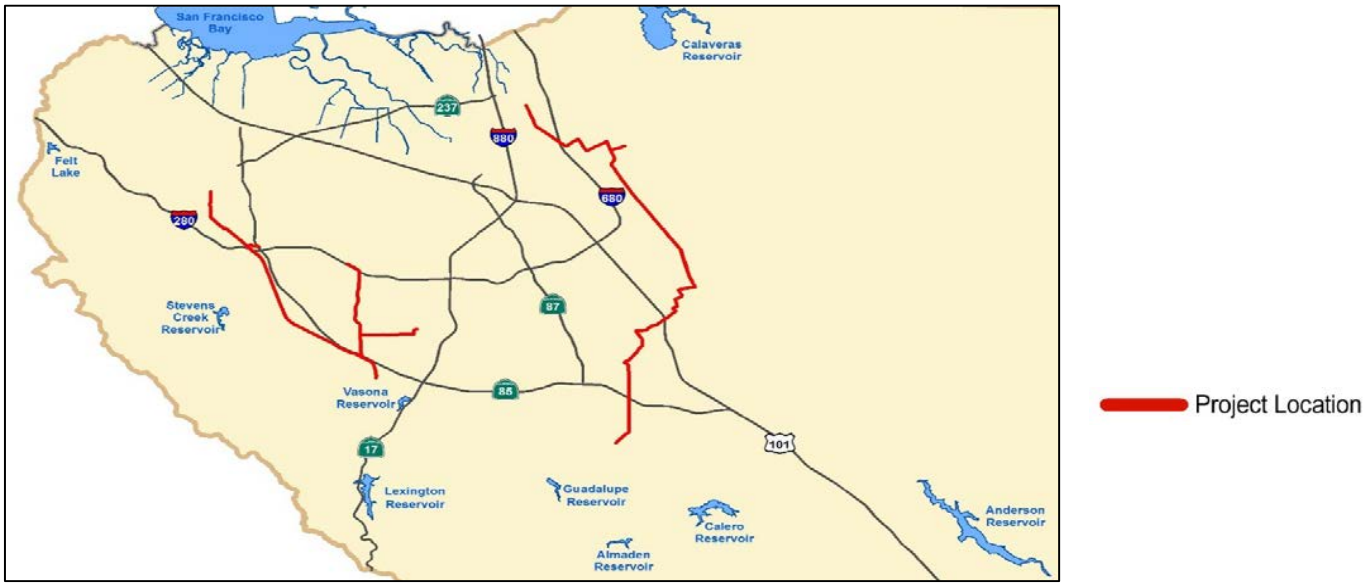
Project	**Small Capital Improvements, Treated Water Transmission**
Program	Water Supply – Transmission
Priority No.	73
Project No.	94764006
District Contact	Kurt Arends karends@valleywater.org

Valve installation in the Piedmont Line Valve Vault; Similar small capital projects will be carried out at treated water transmission facilities according to the asset management plan.

PROJECT DESCRIPTION

This project provides resources for the improvement of small capital investments that replace or extend the life of an asset. This project will repair or rehabilitate various existing treated water distribution facilities, such as identifying and treating corrosion problems, replacing valves and other appurtenances and repairing or adding turnouts to avoid failure of the treated water transmission system and to extend the life of the infrastructure. This project is part of the District's 10-year asset management program.

PROJECT LOCATION



SCHEDULE & STATUS

This project is part of a regularly scheduled 10-year maintenance and asset management program.

Traditional planning, design, and construction phases do not apply.

Phase	Cost
Plan	n/a
Design	n/a
Construct	n/a
Closeout	n/a
	n/a

FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28

EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
94764006-Small Capital Improvements, Treated Water Transmission	n/a	0	0	139	0	0	0	0	139
with inflation	n/a	0	0	152	0	0	0	0	152

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
94764006-Small Capital Improvements, Treated Water Transmission	n/a	0	0	0	152	0	0	0	0	152

Adjusted Budget includes adopted budget plus approved budget adjustments. Small Capital Improvement projects do not carry forward unspent funds from one fiscal year to the next. Unspent funds are returned to fund reserves at the close of each fiscal year and new funding is provided in the next fiscal year.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	152
Other Funding Source	0
Total	**152**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: Not Available

Project	**Treated Water Isolation Valves**
Program	Water Supply – Transmission
Priority No.	62
Project No.	94084007
District Contact	Chris Hakes chakes@valleywater.org

New line valves similar to this will be installed at three locations within the treated water system.

PROJECT DESCRIPTION

This project plans, designs, and constructs three (3) additional line valve appurtenances to accomplish the following objectives:

- Improve service levels to treated water system customers in a major hazard event or system outage.
- Improve the District's ability to take sections of the treated water distribution system out of service for maintenance activities.

PROJECT LOCATION

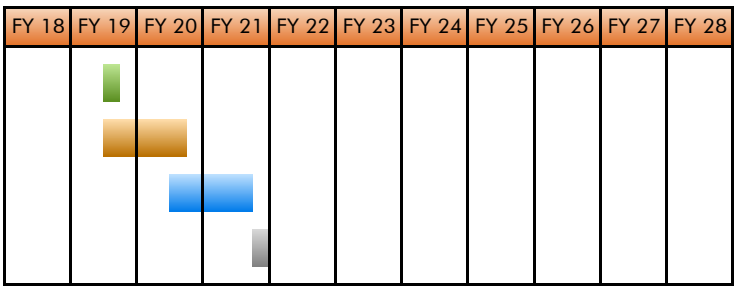
★ Project Location

SCHEDULE & STATUS

December 2018 to June 2021

Line valve construction to be coordinated with other pipeline maintenance and rehabilitation projects.

Phase	Cost
Plan	162
Design	1,095
Construct	6,116
Closeout	53
	7,426



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
94084007-Treated Water Isolation Valves	0	0	529	728	6,169	0	0	0	7,426
with inflation	0	0	529	795	6,891	0	0	0	8,215

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
94084007-Treated Water Isolation Valves	0	0	0	529	795	6,891	0	0	0	8,215

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	8,215
Other Funding Sources	0
Total	**8,215**

OPERATING COST IMPACTS

The operating budget impact for the three proposed line valve facilities is estimated to be $21,000 per year beginning in FY22.

USEFUL LIFE: 50 Years

Project	**Vasona Pump Station Upgrade**
Program	Water Supply – Transmission
Priority No.	67
Project No.	92264001
District Contact	Christopher Hakes chakes@valleywater.org

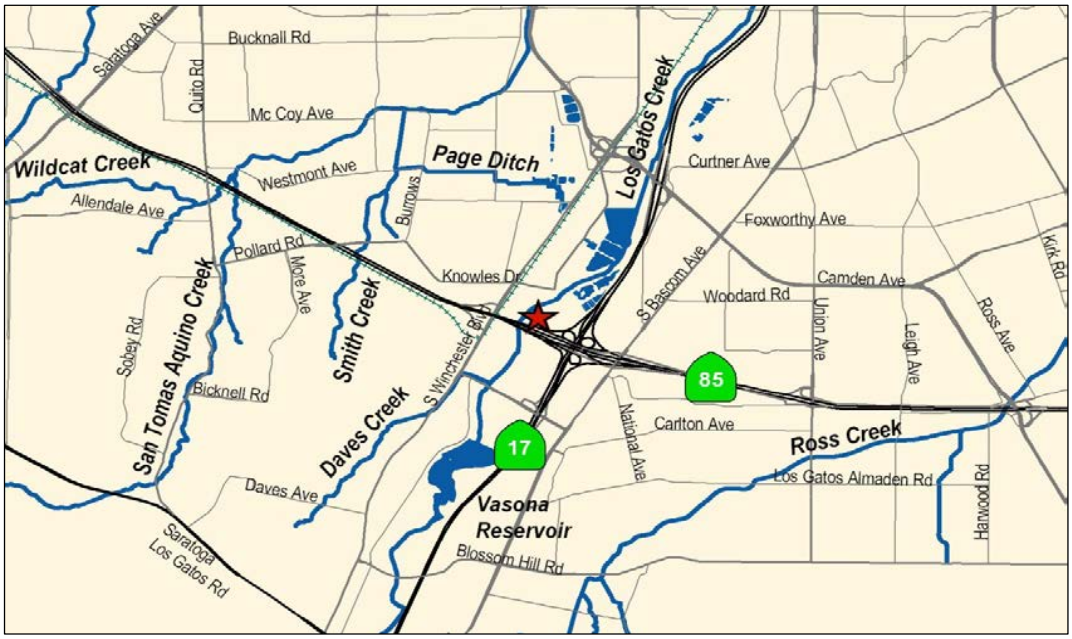
Vasona Pumping Plant pump

PROJECT DESCRIPTION

This project plans, designs, and constructs improvements to the Vasona Pump Station, including replacing aging pumps, motors, drives, valves, actuators, and electrical and control systems that have reached the end of their useful life; and adding one redundant pump. The project will accomplish the following objectives:

- Eliminate the risk of failure by replacing assets that have reached the end of their useful life, including four pumps (two 200 horsepower, two 400 horsepower) and associated motors, drives, electrical and control systems, as well as pump discharge and suction valves and actuators.
- Increase operational flexibility and prepare for future capacity needs by adding one redundant pump and increasing the size of the two 200 horsepower pumps.

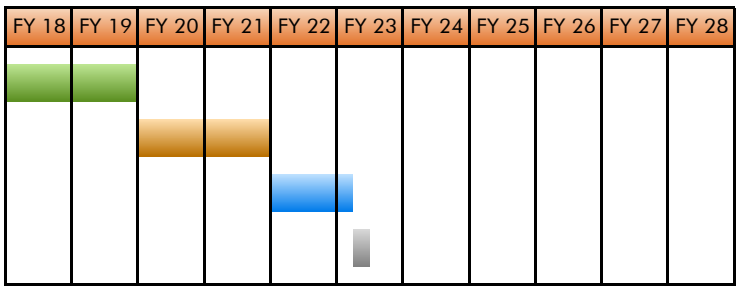
PROJECT LOCATION



SCHEDULE & STATUS

July 2016 to December 2022

Phase	Cost
Plan	1,379
Design	1,545
Construct	15,600
Closeout	70
	18,594



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
92264001-Vasona Pump Station Upgrade	1	350	1,029	1,065	480	15,200	470	0	18,595
with inflation	1	350	1,029	1,163	548	17,541	586	0	21,218

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
92264001-Vasona Pump Station Upgrade	119	712	480	549	1,163	548	17,541	586	0	21,218

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	21,218
Other Funding Sources	0
Total	**21,218**

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $70,000 per year beginning in FY 2023.

USEFUL LIFE: 50 Years

Project	**Westside Retailer Interties**
Program	Water Supply – Transmission
Priority No.	76
Project No.	94084008
District Contact	Christopher Hakes chakes@valleywater.org

New interties similar to this will be installed in the cities of Santa Clara and Mountain View.

PROJECT DESCRIPTION

This project plans, designs, and constructs two new retailer interties and associated appurtenances, structures, and controls in the cities of Santa Clara and Mountain View. The project will accomplish the following objectives:

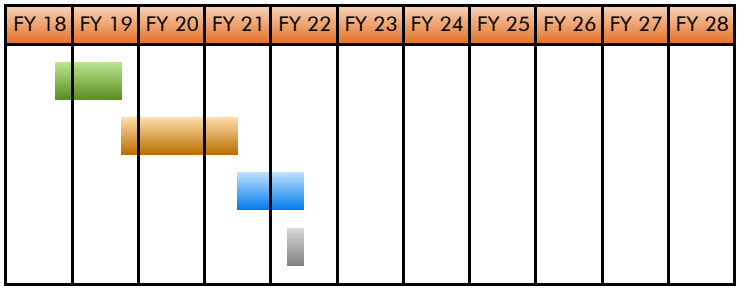
- Improve service levels to the West treated water system customers in a major hazard event or system outage.
- Improve the District's ability to take sections of the West treated water distribution system out of service for maintenance activities.

PROJECT LOCATION

SCHEDULE & STATUS

July 2015 to December 2026

Phase	Cost
Plan	150
Design	386
Construct	1,250
Closeout	24
	1,810



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
94084008-Westside Retailer Interties	0	80	67	328	1,239	96	0	0	1,810
with inflation	0	80	67	358	1,385	114	0	0	2,004

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
94084008-Westside Retailer Interties	0	80	0	67	358	1,385	114	0	0	2,004

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	2,004
Other Funding Sources	0
Total	2,004

OPERATING COST IMPACTS

The operating budget impact for the two proposed Interties is estimated to be $11,000 per year beginning in FY22.

USEFUL LIFE: 50 Years

Project PWTP Residuals Management
Program Water Supply - Treatment
District Contact Katherine Oven koven@valleywater.org

Priority No. 74
Project No. 93234044

Existing belt press to be replaced with new residuals management facility

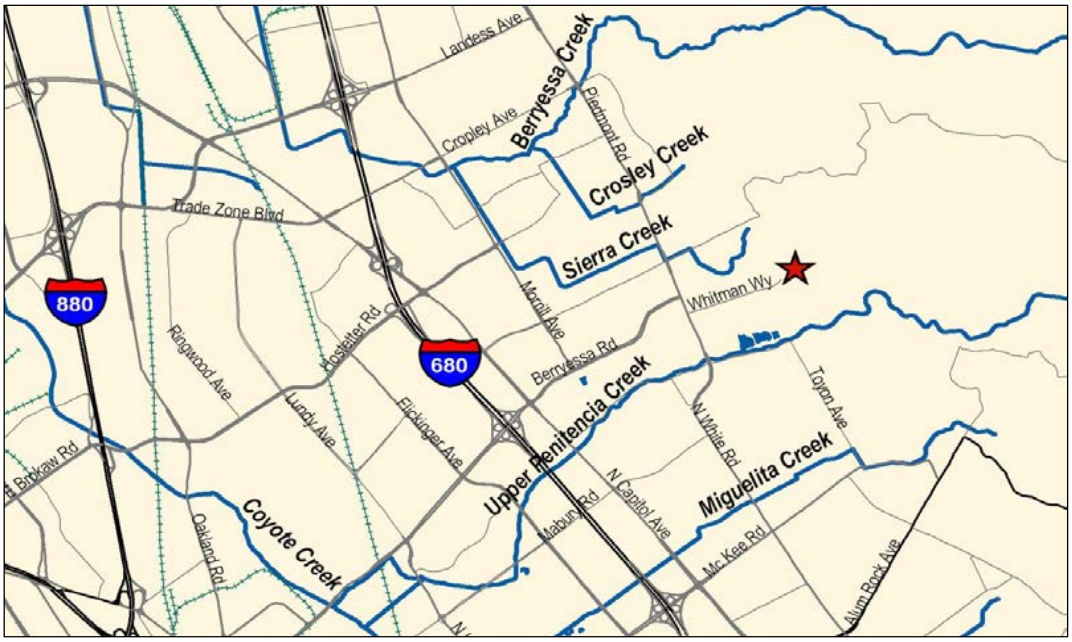
Existing belt press to be replaced with new residuals management facility

PROJECT DESCRIPTION

This project plans, designs, and constructs modifications to the Penitencia Water Treatment Plant (PWTP) residuals management process to accomplish the following objectives:

- Extend the useful life of the treatment plant.
- Improve the efficiency of the residual management processes.
- Minimize or eliminate (existing) operational constraints and impacts to the drinking water treatment process.
- Minimize risk of discharge violations.
- Improve the reliability of PWTP.

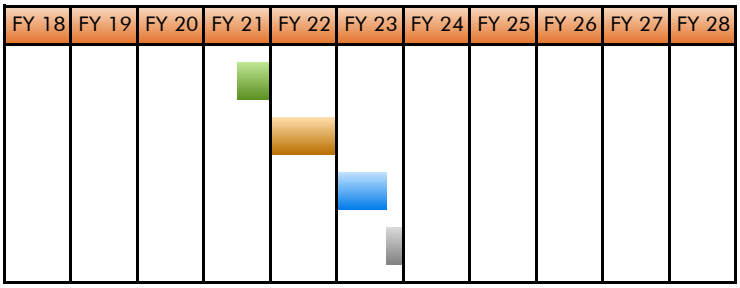
PROJECT LOCATION



SCHEDULE & STATUS

January 2019 to June 2021

Phase	Cost
Plan	650
Design	1,300
Construct	6,925
Closeout	-
	8,875



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93234044-PWTP Residuals Management	0	0	0	0	650	1,300	6,925	0	8,875
with inflation	0	0	0	0	742	1,550	8,279	0	10,571

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93234044-PWTP Residuals Management	0	0	0	0	0	742	1,550	8,279	0	10,571

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	10,571
Other Funding Sources	0
Total	**10,571**

OPERATING COST IMPACTS

Operating cost impacts will be determined during the construction phase.

USEFUL LIFE: Not Available

Project RWTP Residuals Remediation
Program Water Supply - Treatment **Priority No.** 84
District Contact Christopher Hakes CHakes@valleywater.org **Project No.** 93294051s

Centrifuge for mechanical dewatering of sludge

New gravity thickeners and mix tank for sludge thickening and blending

PROJECT DESCRIPTION

This project plans, designs, and constructs modifications to the Rinconada Water Treatment Plant (RWTP) residuals management processes and will accomplish the following objectives:

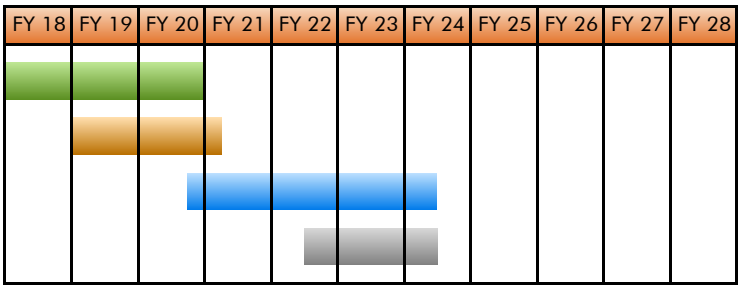
- Extend the useful life of the treatment plant.
- Improve the efficiency of the residual management processes.
- Minimize risk of discharge violations.
- Improve the reliability of RWTP.

PROJECT LOCATION

SCHEDULE & STATUS

July 2008 to March 2020

Phase	Cost
Plan	2,179
Design	11,477
Construct	47,180
Closeout	280
	61,922



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93294051-RWTP FRP Residuals Management	29,175	3,190	4,233	1,375	800	800	75	75	39,723
with inflation	29,175	3,190	4,233	1,502	913	954	93	98	40,158
93294058-RWTP Residuals Remediation	0	3,400	1,599	1,120	12,460	1,230	1,835	555	22,199
with inflation	0	3,400	1,599	1,223	13,862	1,467	2,257	723	24,531
TOTAL	**29,175**	**6,590**	**5,832**	**2,495**	**13,260**	**2,030**	**1,910**	**630**	**61,922**
with inflation	**29,175**	**6,590**	**5,832**	**2,725**	**14,775**	**2,421**	**2,351**	**820**	**64,689**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests						Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93294051-RWTP FRP Residuals Management	21,520	17,053	6,208	0	0	439	954	93	98	40,158
93294058-RWTP Residuals Remediation		5,000	1,600	0	1,222	13,862	1,467	2,257	723	24,531
TOTAL	21,520	22,053	7,808	0	1,222	14,301	2,421	2,351	820	64,689

Adjusted Budget includes adopted budget plus approved budget adjustments.

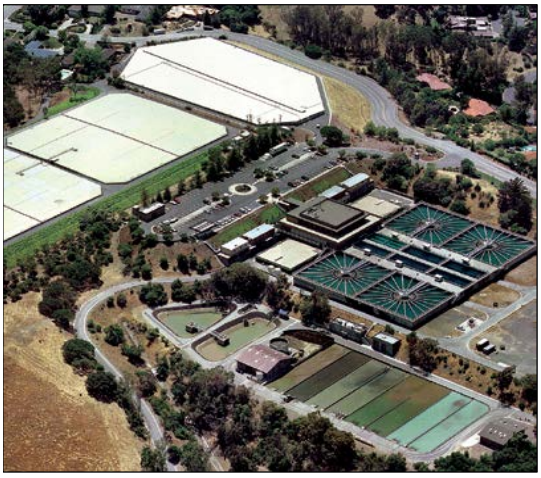
FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	64,689
Other Funding Source	0
Total	**64,689**

Project RWTP Reliability Improvement
Program Water Supply - Treatment
District Contact Christoper Hakes CHakes@valleywater.org

Priority No. 91
Project No. 93294057



Aerial view of the
Rinconada Water Treatment Plant facing west

Artist rendering of the aerial view of the Rinconada
Water Treatment Plant facing south after construction

PROJECT DESCRIPTION

This project plans, designs, and constructs new facilities at Rinconada Water Treatment Plant (RWTP) that will improve plant reliability by accomplishing the following objectives:

- Construct a new raw water ozonation facility.
- Construct a new flocculation and plate settler clarification facility.
- Implement a dual media filtration system.
- Increase plant capacity to 100 million gallons per day (MGD).

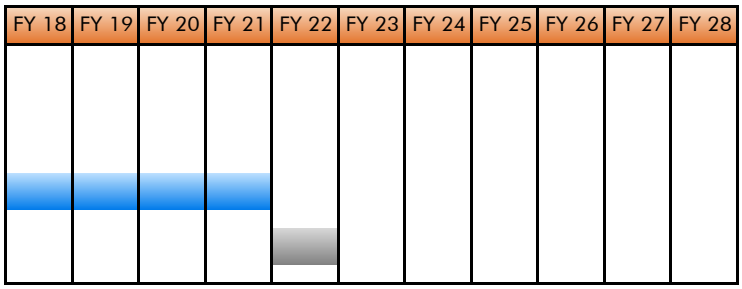
PROJECT LOCATION

★ Project Location

SCHEDULE & STATUS

July 2009 to June 2022

Phase	Cost
Plan	1,886
Design	19,473
Construct	250,656
Closeout	120
	286,779



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
93294057-RWTP Reliability Improvement	116,045	48,144	47,155	46,700	28,615	120	0	0	286,779
with inflation	116,045	48,144	47,155	47,629	30,116	143	0	0	289,232

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
93294057-RWTP Reliability Improvement	116,221	48,144	176	46,979	47,629	30,116	143	0	0	289,232

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	289,232
Other Funding Source	0
Total	**289,232**

OPERATING COST IMPACTS

The completion of this project is anticipated to increase operating costs by approximately $1.4 million per year, beginning in FY 2023. Increases are for routine maintenance and operation of new equipment.

USEFUL LIFE:

Media – 20 Years, Structures – 50 Years, Equipment – 15 Years

Project	**RWTP Treated Water Valves Upgrade**
Program	Water Supply – Treatment
Priority No.	84
Project No.	93294056
District Contact	Christopher Hakes CHakes@valleywater.org

Example of a valve to be replaced or upgraded

PROJECT DESCRIPTION

This project plans, designs, and constructs modifications to the Rinconada Water Treatment Plant (RWTP), including seismically strengthening the chemical storage structures; replacing/upgrading the valves and appurtenances used to control treated water at the clearwells and the Ronconada Reservoir; repairing a damaged baffle wall in the Rinconada Reservoir; and installing a 48-inch magnetic flow meter on the treatment plant's treated water effluent pipeline. Consistent with the Facility Renewal Program (FRP), this project will accomplish the following objectives:

- Ensure plant operational reliability.
- Improve ability to maintain the plant.
- Allow for better isolation of the treated water control valves for future work.
- Achieve greater accuracy in measuring treated water deliveries.

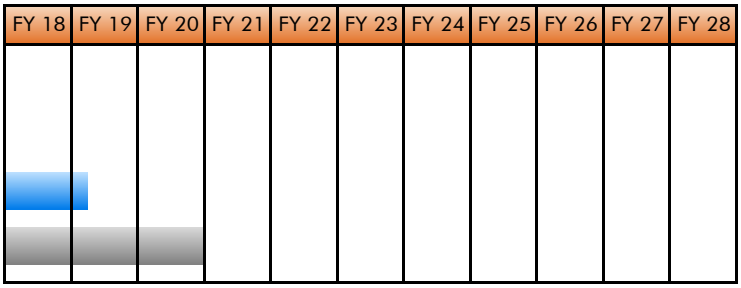
PROJECT LOCATION

★ Project Location

SCHEDULE & STATUS

July 2009 to March 2020

Phase	Cost
Plan	465
Design	1,476
Construct	6,786
Closeout	38
	8,765



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	FY17	FY18	FY19	FY20	FY21	FY22	FY23	Future	
93294056-RWTP Treated Water Valves Upgrade	8,240	353	10	191	0	0	0	0	8,794
with inflation	8,240	353	10	209	0	0	0	0	8,812

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	FY17	FY18		FY19	FY20	FY21	FY22	FY23	Future	
93294056-RWTP Treated Water Valves Upgrade	8,424	170	1	9	209	0	0	0	0	8,812

Adjusted Budget includes adopted budget plus approved budget adjustments

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	8,812
Other Funding Source	0
Total	8,812

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operations.

USEFUL LIFE: 40 Years

Project	**Small Capital Improvements, Water Treatment**
Program	Water Supply – Treatment
Priority No.	73
Project No.	93764004
District Contact	Angela Cheung acheung@valleywater.org

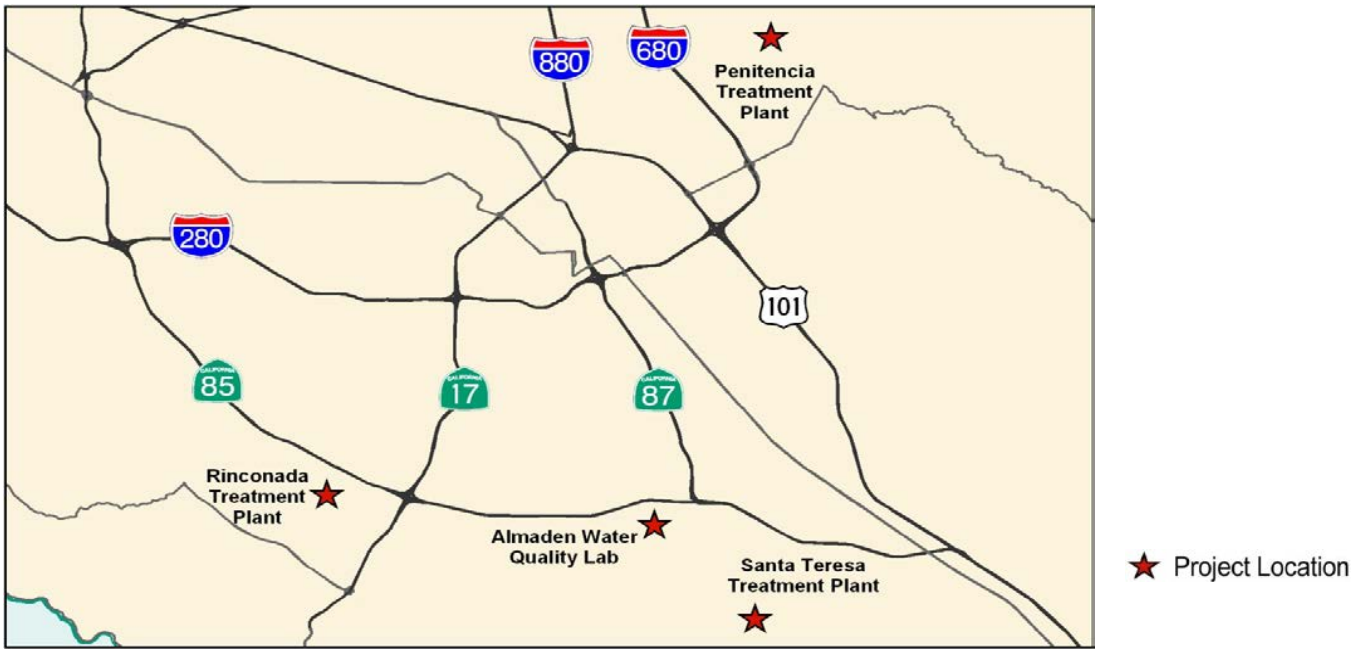
Sludge pond sediment removal at Santa Teresa Water Treatment Plant

PROJECT DESCRIPTION

This project provides resources for small capital improvements that replace or extend the life of an asset. This project implements a systematic approach of equipment replacement and renewal at the three water treatment plants and laboratory by designing and constructing improvements identified as part of the District's 10-year asset management program. Typical activities included in this project include pump, motor, instrumentation and valve replacement; chemical tank repairs; and large-scale renewal and replacement activities like clarifier mechanism overhaul and replacement. Planned projects to complete for Santa Teresa Water Treatment Plant (STWTP), Penitencia Water Treatment Plan (PWTP), Rinconada Water Treatment Plant (RWTP), West Pipeline, and Silicon Valley Advanced Water Purification Center (SVAWPC) include:

- Provide engineering, supplies, and services support for the Sulfuric Acid Water Quality project.
- Purchase Laboratory Information Management System (LIMS).
- Complete Small Capital Projects at STWTP, RWTP, PWTP and Campbell Well Field.

PROJECT LOCATION



SCHEDULE & STATUS

This project is part of a regularly scheduled 10-year maintenance and asset management program.

Traditional planning, design, and construction phases do not apply.

Phase	Cost
Plan	n/a
Design	n/a
Construct	n/a
Closeout	n/a
	n/a

FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28

EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93764004-Small Capital Improvements, Water Treatment	n/a	2,512	3,578	7,014	6,732	3,247	253	11,208	34,544
with inflation	n/a	2,512	3,578	7,659	7,682	3,872	315	16,943	42,562

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
93764004-Small Capital Improvements, Water Treatment	n/a	2,512	0	3,578	7,659	7,682	3,872	315	16,943	42,562

Adjusted Budget includes adopted budget plus approved budget adjustments. Small Capital Improvement projects do not carry forward unspent funds from one fiscal year to the next. Excess funds are returned to fund reserves at the close of each fiscal year and new funding is provided in the next fiscal year.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	42,562
Other Funding Source	0
Total	**42,562**

OPERATING COST IMPACTS

The completion of this project is not anticipated to increase or decrease annual operating costs, as the project does not significantly alter the existing facilities or modes of operation.

USEFUL LIFE: Not Available

Project	**Expedited Purified Water Program**
Program	Water Supply – Recycled Water
Priority No.	71
Project No.	91304001s
District Contact	Katherine Oven koven@valleywater.org

Reverse osmosis membranes used for water purification

PROJECT DESCRIPTION

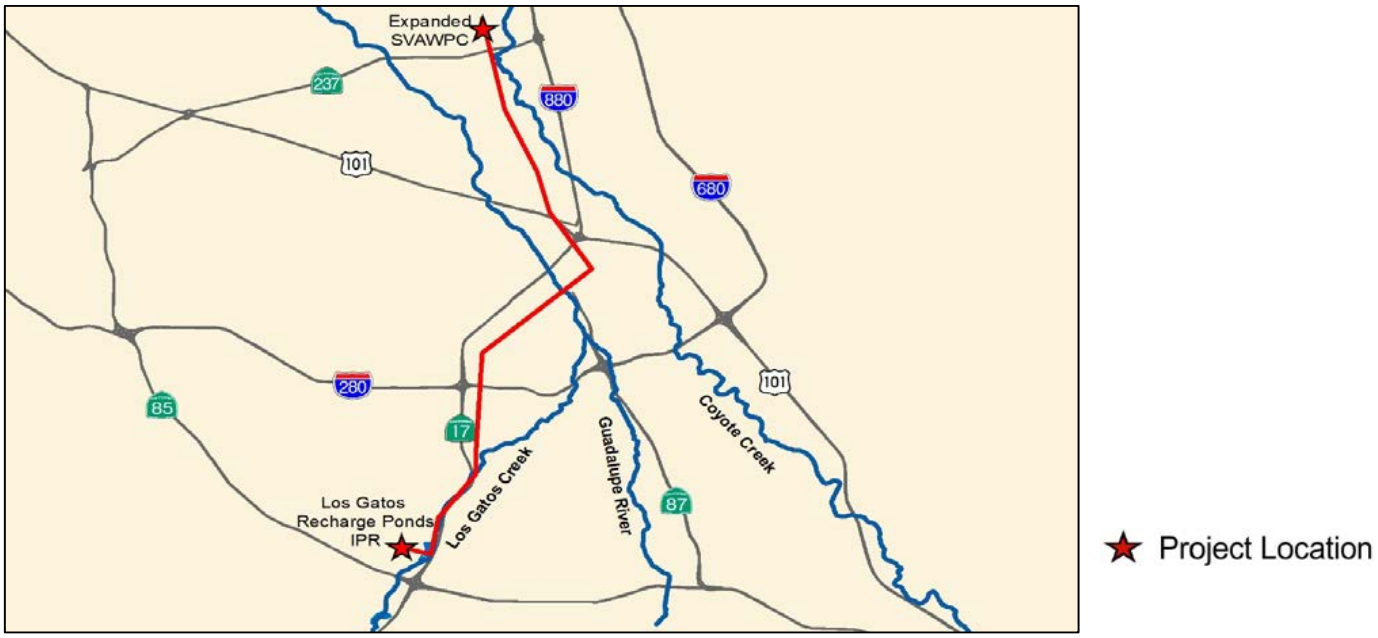
This project plans, designs, and constructs new infrastructure, proposed in the District's 2012 Water Supply Master Plan, using a P3 delivery method, to accomplish the following objectives:

- Expand the District's long-term water supply portfolio.
- Ensure a drought-proof and reliable water supply for Silicon Valley.

Project elements may include, but are not limited to:

- Expansion of the Silicon Valley Advanced Water Purification Center to produce up to an additional 24 million gallons per day (MGD) of advanced purified water.
- Installation of pipelines to convey advanced purified water to the District's existing groundwater recharge ponds for indirect potable reuse, or to the District's conventional surface water treatment plants for use as raw water augmentation (direct potable reuse).
- Installation of purified water injection wells at strategic locations to improve groundwater basin management.

PROJECT LOCATION

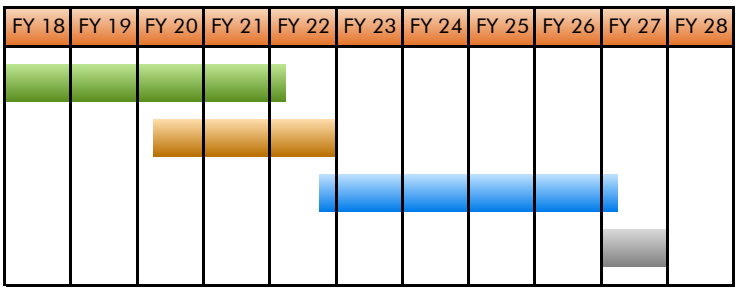


SCHEDULE & STATUS

April 2015 to June 2027

This project will be designed and constructed through a P3 delivery method.

Phase	Cost
Plan	21,623
Design	476
Construct	152,797
Closeout	-
	183,374



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91304001 - Indirect Potable Water Reuse Projects - Planning	15,763	2,300	4,435	5,805	6,796	28,440	54,705	63,964	182,208
with inflation	15,763	2,300	4,435	6,339	7,593	32,637	64,979	78,253	212,299
91284009 - Silicon Valley Advanced Water Purification Center Expansion	679	231	0	0	0	0	0	0	910
with inflation	679	231	0	0	0	0	0	0	910
91384001 - Purified Water Pipelines	33	223	0	0	0	0	0	0	256
with inflation	33	223	0	0	0	0	0	0	256
TOTAL	**16,475**	**2,754**	**4,435**	**5,805**	**6,796**	**28,440**	**54,705**	**63,964**	**183,374**
with inflation	**16,475**	**2,754**	**4,435**	**6,339**	**7,593**	**32,637**	**64,979**	**78,253**	**213,465**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91304001 - Indirect Potable Water Reuse Projects - Planning	16,483	2,727	1,147	3,288	6,339	7,593	32,637	64,979	78,253	212,299
91284009 - Silicon Valley Advanced Water Purification Center Expansion	910	0	0	0	0	0	0	0	0	910
91384001 - Purified Water Pipelines	256	0	0	0	0	0	0	0	0	256
TOTAL	**17,649**	**2,727**	**1,147**	**3,288**	**6,339**	**7,593**	**32,637**	**64,979**	**78,253**	**213,465**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	213,465
Other Funding Sources	0
Total	**213,465**

OPERATING COST IMPACTS

Operating cost impacts are anticipated and will be determined during the planning phase.

USEFUL LIFE: Not Available

Project	**Long-Term Purified Water Program Elements**
Program	Water Supply – Recycled Water
Priority No.	71
Project No.	91C40389
District Contact	Katherine Oven koven@valleywater.org

Water is exposed to ultraviolet light in the purification process

PROJECT DESCRIPTION

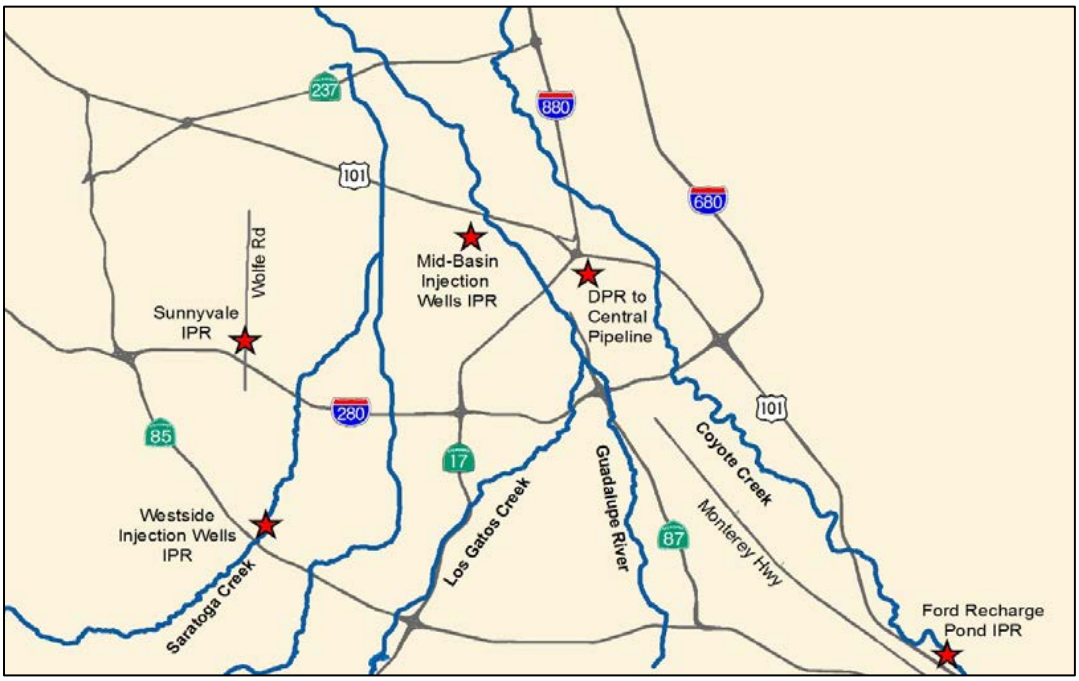
This project plans, designs, and constructs new infrastructure to accomplish the following objectives:

- Expand the District's long-term water supply portfolio beyond 2040.
- Ensure a drought-proof and reliable water supply for Silicon Valley.

Project elements may include, but are not limited to:

- Installation of purified water injection wells at strategic locations to improve groundwater basin management.
- Construction and operation of an advanced water purification center for groundwater recharge at Ford Ponds.
- Partnership with the City of Sunnyvale to implement advanced water purification facilities at the City's wastewater treatment plant for groundwater recharge.

PROJECT LOCATION



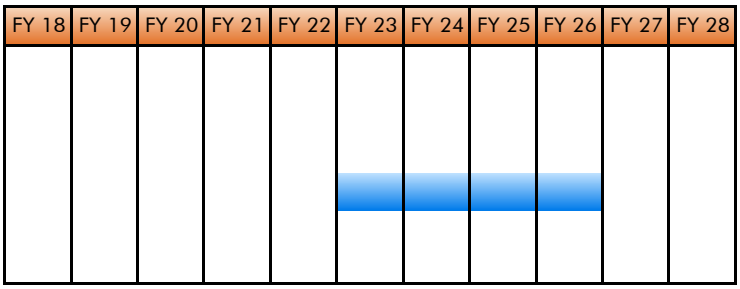
★ Project Location

SCHEDULE & STATUS

July 2022 to June 2026

This project will be designed and constructed through a P3 delivery method.

Phase	Cost
Plan	-
Design	-
Construct	88,765
Closeout	-
	88,765



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91C40389 - Long-term Purified Water Program Elements	0	0	0	0	0	0	22,191	66,574	88,765
with inflation	0	0	0	0	0	0	26,356	83,909	110,265

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91C40389 - Long-term Purified Water Program Elements	0	0	0	0	0	0	0	26,356	83,909	110,265
TOTAL	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26,356**	**83,909**	**110,265**

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	110,265
Other Funding Sources	0
Total	**110,265**

OPERATING COST IMPACTS

Operating cost impacts are anticipated and will be determined during the planning phase.

USEFUL LIFE:

Not Available

Project	**South County Recycled Water Pipeline**
Program	Water Supply – Recycled Water
Priority No.	52
Project No.	91094007s
District Contact	Christopher Hakes chakes@valleywater.org

Purple recycled water pipe waiting to be laid during construction of Immediate Term project

PROJECT DESCRIPTION

This project plans, designs, and constructs water recycling systems based on the South County Recycled Water Master Plan accepted in December 2004 to improve system redundancy, reliability, and capacity. The current Master Plan report presents a 20-year capital program for expanding water recycling in South County in three phases; Immediate Term, Short Term, and Long Term:

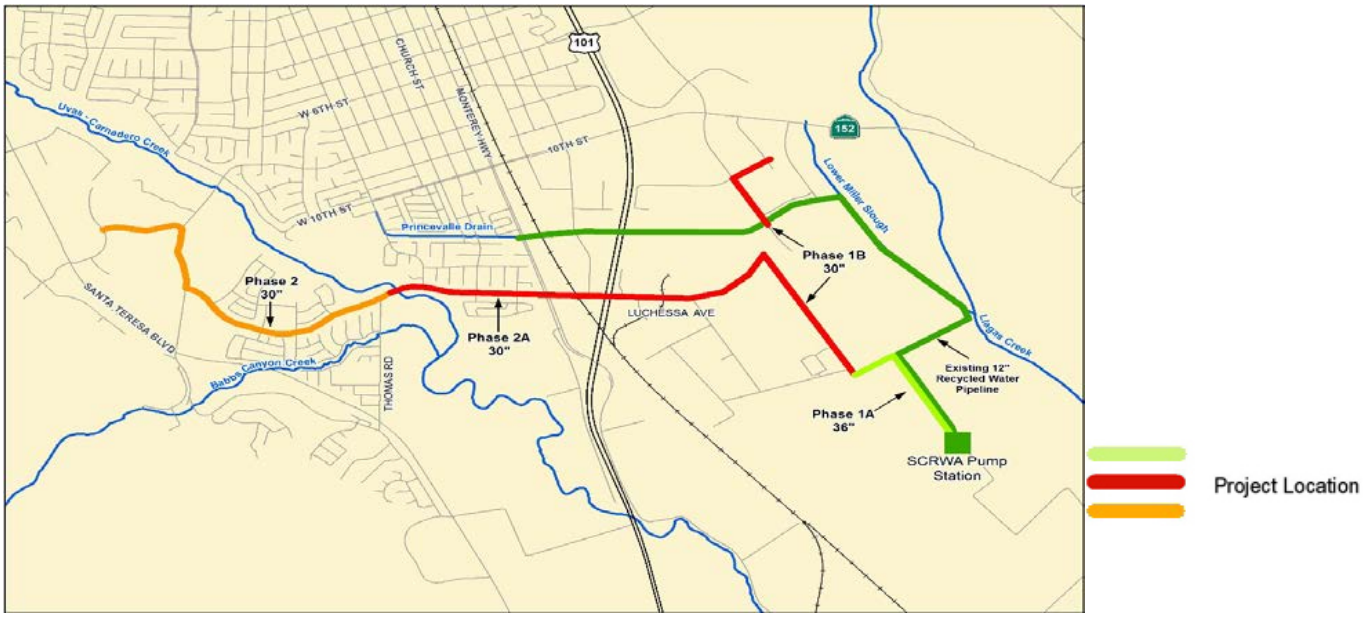
Completed:

- 91094007 Recycled Water South County Masterplan (Immediate Term) which included design and construction of recycled water storage, pumping, and distribution facilities for agricultural use near the SCRWA treatment plant.
- 91094008 Recycled Water South County Masterplan (Short Term 1A), installation of approximately 3,000 feet of 30-inch and 36-inch pipeline.

Currently Underway:

- 91094009 South County Recycled Water Pipeline (Short Term) Phase 1B will construct an additional 14,000 linear feet of pipeline.
- 91094010 South County Recycled Water Pipeline (Shoert Term) Phase 2 will be completed through cost-sharing opportunities with the City of Gilroy and land developers to construct approximately 3,900 linear feet of 30-inch diameter pipe.
- 91094010 South County Recycled Water Pipeline (Long Term) Phase 1 to be completed through cost-sharing opportunities with the land developers through coordination by the City of Gilroy to construct approximately 9,200 linear feet of 24-inch diameter pipe.

PROJECT LOCATION

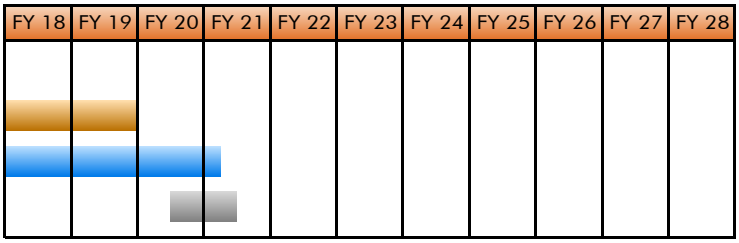


SCHEDULE & STATUS

July 2009 to December 2020

The schedule chart shows Short-Term Phase 1B and Phase 2 projects only. The Immediate-Term and Short-Term Phase 1A projects are complete.

Phase	Cost
Plan	3,032
Design	10,696
Construct	40,535
Closeout	155
	55,723



EXPENDITURE SCHEDULE

(in thousands $)

	Actuals Thru	Planned Expenditures							Total
Project	**FY17**	**FY18**	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91094007-Recycled Water South County Masterplan - Immediate Term	3,257	0	0	0	0	0	0	0	3,257
with inflation	3,257	0	0	0	0	0	0	0	3,257
91094008-Recycled Water South County Masterplan - Short Term 1A	5,391	0	0	0	0	0	0	0	5,391
with inflation	5,391	0	0	0	0	0	0	0	5,391
91094009-South County Recycled Water Pipeline - Short Term 1B	8,981	875	5,662	21,237	1,995	0	0	0	38,750
with inflation	8,981	875	5,662	22,149	2,166	0	0	0	39,833
91094010-South County Recycled Water Pipeline - Short Term 2	4,267	3,407	262	389	0	0	0	0	8,325
with inflation	4,267	3,407	262	417	0	0	0	0	8,353
TOTAL	**21,896**	**4,282**	**5,924**	**21,626**	**1,995**	**0**	**0**	**0**	**55,723**
with inflation	**21,896**	**4,282**	**5,924**	**22,566**	**2,166**	**0**	**0**	**0**	**56,834**

Actuals include project expenditures, and encumbrances.

FUNDING SCHEDULE

(in thousands $)

	Budget Thru	Adj. Budget	Est. Unspent	Planned Funding Requests					Total
Project	**FY17**	**FY18**		**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**Future**	
91094007-Recycled Water South County Masterplan - Immediate Term	3,257	0	0	0	0	0	0	0	0	3,257
91094008-Recycled Water South County Masterplan - Short Term 1A	5,391	0	0	0	0	0	0	0	0	5,391
91094009-South County Recycled Water Pipeline - Short Term 1B	16,159	0	6,303	0	21,508	2,166	0	0	0	39,833
91094010-South County Recycled Water Pipeline - Short Term 2	8,108	0	434	0	245	0	0	0	0	8,353
TOTAL	**32,915**	**0**	**6,737**	**0**	**21,753**	**2,166**	**0**	**0**	**0**	**56,834**

Adjusted Budget includes adopted budget plus approved budget adjustments.

FUNDING SOURCES

(in thousands $)

SCVWD Water Utility Enterprise Fund	50,728
South County Regional Wastewater Authority	811
United States Bureau of Reclamation (USBR) ARRA	1,295
United States Bureau of Reclamation (USBR) Title 16	4,000
Total	**56,834**

OPERATING COST IMPACTS

Estimated District share of the operating and maintenance costs are $8,000 per year for the Immediate-Term phase, beginning in FY 2007 and an additional $25,000 for the Short-Term Phase 1, beginning in FY 2019. Increases for Immediate Term are primarily labor costs for operating the new 3mg reservoir and its pump station. Increases for Short Term are labor and materials to maintain the 42,000 feet of new pipeline, exercising valves and cathodic protection.

USEFUL LIFE: Pipelines – 50 Years, Pumps – 20 Years