Valley Water

FY 2026–2030

DRAFT

Water Utility Enterprise Asset Renewal Plan

FY2026-2030
Water Utility Enterprise
Asset Renewal Plan

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List of Acronyms

AHY = Anderson Hydroelectric Facility
CAD = Campbell Distributary
CDL = Coyote Discharge Line
CPL = Central Pipeline
CPP = Coyote Pumping Plant
CVP = Cross Valley Pipeline
DPP = Dutard Pumping Plant
GPP = Greystone Pumping Plant
LEN = Lenihan Dam
PAC = Pacheco Conduit
PPP = Pacheco Pumping Plant
PWTP = Penitencia Water Treatment Plant
RWTP = Rinconada Water Treatment Plant
RW T&D= Raw Water Transmission and Distribution Pipelines
SCC = Santa Clara Conduit
SFI = San Francisco PUC Intertie
STWTP = Santa Teresa Water Treatment Plant
SVA = Silicon Valley Advanced Water Purification Center
ULT = Uvas-Llagas Transfer Pipeline
VPP = Vasona Pumping Plant
WSMS = Water Supply Management Systems (e.g., pond systems)

EXECUTIVE SUMMARY

Report Overview

The Water Utility Enterprise Asset Renewal Plan (WUE AR Plan) outlines Valley Water's Water Utility strategy for future asset renewal projects and requirements. This plan also provides a brief summary of the activities and costs associated with maintaining Valley Water's Water Utility infrastructure for the next five fiscal years. Specifically, the WUE AR Plan:

- Identifies the planned asset renewal projects for the Water Utility Enterprise between fiscal years 2026 and 2030 and provides guidance for planning, scheduling, and budgeting this work in Valley Water's operations or capital budgets.
- Summarizes the asset renewal work completed in the prior fiscal year, 2025.
- Documents the baseline and unfunded operations and maintenance project resource needs for the Raw and Treated Water Operations Divisions over the next five fiscal years, from 2026 to 2030, and provides an explanation of unfunded needs.

This is a rolling five-year WUE AR Plan, updated annually. Throughout the plan, the term 'baseline' refers to activities that provide current service levels and are assumed to be funded in fund forecasts prepared by Valley Water's Financial Planning and Management Services Division. ***The FY26-27 budget requests and unfunded needs here are preliminary and will be evaluated throughout the budget and groundwater charge (rate) setting processes through May 2025.*** The plan will be finalized following Board adoption of Valley Water's budget. The final plan will document the budgeted amounts for each project for FY26, planned amounts for FY27, as well as any remaining unfunded needs following the budget and groundwater charge setting process.

Work Planning and Execution

Work is planned annually to align with the budget process. Each year, staff generates a list of all renewal activities required for water utility assets for the next five years from the Asset Management Planning Tool database. Operations, maintenance, engineering, and asset management validate the list by evaluating field conditions and estimating remaining asset life. If assets are in good condition, renewal projects are rescheduled to future years. The renewal projects are selected to optimize asset performance, maintain or improve reliability within an acceptable risk tolerance, and minimize asset life-cycle costs.

Once the decision has been made to schedule forecasted work, it will be included in this plan and the budget. The Business Support and Asset Management Unit (411) creates work orders at the start of the fiscal year. The work is executed by a combination of Engineering, Maintenance, and Operations staff. It is typically completed through a small or large capital improvement project.

Planned Asset Renewal Work

A total of 74 planned asset renewal projects are scheduled for the Water Utility Enterprise facilities in fiscal year 2026 (FY26). This estimated cost for these projects is nearly $10.1 million. These projects are included in the approved FY26 budget under project numbers, such as small capital project numbers (i.e. 93764004 Small Capital Improvements, Water Treatment and 91214010 Small Capital Improvements, San Felipe). A complete list of the planned work is included in Appendix A. Some planned asset renewal work includes:

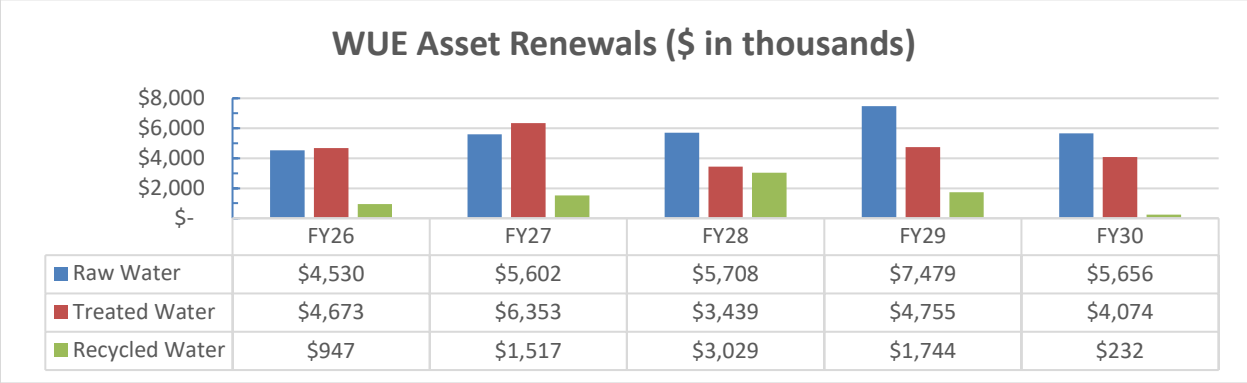
1. Replacements of uninterruptible power supplies at RWTP
2. Refurbishment of adjustable speed drives for PPP pumps

3. Rebuilding two pumps at Coyote Pumping Plant
4. Rebuilding one pump at Pacheco Pumping Plant

FY2026 – FY2030 Summary

Figure 1 summarizes costs of projected asset renewal projects to be completed in fiscal years 2026-2030 (FY26-30) based on forecasts in the Asset Management Planning Tool. Over the next five fiscal years, Valley Water estimates $59.8 million of planned asset renewal work.

Figure 1: Forecasted FY26-30 WUE Planned Asset Renewal Work



	FY26	FY27	FY28	FY29	FY30
Raw Water	$4,530	$5,602	$5,708	$7,479	$5,656
Treated Water	$4,673	$6,353	$3,439	$4,755	$4,074
Recycled Water	$947	$1,517	$3,029	$1,744	$232

Note this plan does not include individual/large capital projects as these are included in Valley Water's Five-Year Capital Improvement Program.

In addition, Valley Water is undertaking infrastructure master planning efforts for its water treatment plants, distribution system, and SCADA system. These efforts will identify major facility renewal projects for future years. The projects that come from the master plans may be too large for maintenance to execute and if so, will be done as individual capital improvement projects and not included in this plan. Forecasted asset renewal project projections will change once the three Master Plan Implementation plans are completed and integrated within the Asset Management Planning Tool and Capital Improvements Project Schedule.

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I. INTRODUCTION

Report Overview

The purpose of this Water Utility Enterprise Asset Renewal Plan (WUE AR Plan) is to provide a summary of activities and costs associated with renewing and maintaining Valley Water's Water Utility Infrastructure for the next five fiscal years. Specifically, this plan:

- Identifies the planned asset renewal projects for the Water Utility Enterprise between fiscal years 2026 and 2030 and provides guidance for planning, scheduling, and budgeting this work in Valley Water's operations or capital budgets.
- Summarizes the asset renewal work completed in the prior fiscal year, 2025.
- Documents the baseline and unfunded operations and maintenance project resource needs for the Raw and Treated Water Operations Divisions over the next five fiscal years, from 2026 to 2030, and provides an explanation of unfunded needs.

This is a rolling five-year plan that is updated annually. In the past, Valley Water's Water Utility developed three separate plans that are now combined into this Water Utility Enterprise Asset Renewal Plan (WUE AR Plan). The three plans were:

- Five-Year Operations and Maintenance Plan: Documented five-year forecasts of all Water Utility operations project costs and unfunded needs
- Five-Year Maintenance Work Plan: Identified asset renewal projects for the coming five fiscal years
- Maintenance Work Plan Review Report: Summarized asset renewal projects completed in the prior fiscal year

This year's plan, covering FY26-30, has been reformatted to primarily focus on asset renewal needs while briefly reporting on O&M activities and funding at a high level. This approach aims to provide a comprehensive view of the funding needs required to preserve our assets at an acceptable level of risk. Consequently, the plan title has been renamed the Water Utility Enterprise Asset Renewal Plan. It was previously titled "Water Utility Enterprise O&M and Asset Renewal Plan" and before that, "Water Utility Enterprise Operations and Maintenance Plan."

Water Utility Enterprise (WUE) asset renewal and O&M activities are carried out to meet the following Board of Directors (Board) Ends Policies:

- Ends Policy E-2: Valley Water provides a reliable, safe, and affordable water supply for current and future generations in all communities served.

The WUE Raw and Treated Water Operations Divisions achieve the Board's Ends Policies by:

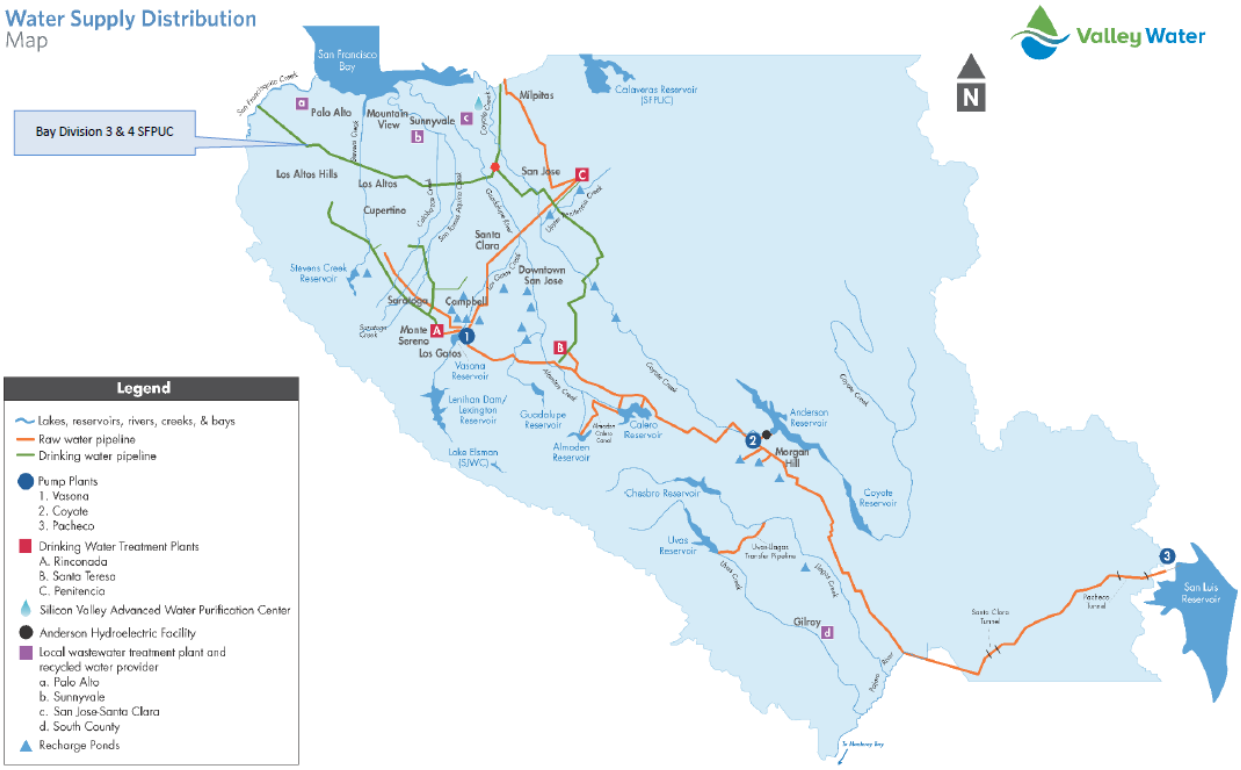
- Monitoring and protecting the groundwater basins.
- Conveying local and imported source water to water treatment plants, recharge facilities, and streams.
- Treating and delivering water to retail customers.
- Maintaining the infrastructure needed to conduct the above listed activities.
- Ensuring services are carried out in way that protects the environment.

Water Utility Enterprise Infrastructure

Valley Water manages an integrated water resources system to provide a supply of clean, safe water, flood protection, and stewardship of streams in Santa Clara County (County). Valley Water operates and maintains complex infrastructure and integrates natural and constructed systems to capture, treat and convey raw and treated water for a reliable water supply. Valley Water's system has the capacity to deliver up to 300 million gallons of raw water and 220 million gallons of treated drinking water every day (subject to water demand and hydrologic changes).

Valley Water's Water Utility infrastructure includes the following, shown on the map below:

- 10 surface water reservoirs and outlet works
- 11 miles of raw water canals (excluding inactive canals)
- 285 acres of groundwater recharge ponds
- 98 miles of controlled in-stream recharge
- 150 miles of raw, treated, and recycled water pipelines
- 3 raw water pumping stations
- 3 drinking water treatment plants
- 1 advanced water purification center



Overview of Asset Renewal Activities

Asset renewal projects are defined as rehabilitation or repair projects that maintain the current level-of-service, but is beyond the scope, time windows, resources, and/or permits of typical maintenance work. On the other hand, projects that improve the level of service are considered *improvement* projects, which are often conducted in the CIP. However, CIP also implements asset renewal projects.

The types of asset renewal projects include:

- ***In-kind Replacement*** – Typically, in-kind replacements are performed for pumps, motors, valves, flow meters, and level indicators.
- ***Rehabilitation*** – An activity where the existing asset is repaired to like-new condition.
    - For example, expensive pumps and motors undergo rehabilitation. A rehabilitation can be scheduled when performance data indicates deteriorated performance or a broken or failing component (i.e. vibration testing can indicate if there is a failed bearing).
    - Concrete assets, like flocculators and sedimentation basins, may also undergo rehabilitation activities (i.e., repair concrete).
- ***Storage Tanks Inspections—***Storage tanks will have an in-service external and an out-of-service internal inspection by a certified inspector. Pending the appropriate standard, these inspections may occur every 5, 10, 15, or 20 years.

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Related Documents

Documents related to this plan include:

- FY25-29 Capital Improvement Program (CIP): The CIP is a rolling five-year plan that identifies major capital improvements. This WUE AR Plan feeds directly into the CIP, as it identifies the scope and costs of five Water Utility small capital improvement projects and upcoming large or individual capital projects. The CIP includes master planning efforts to further define future asset renewal needs for the Water Utility: Water Treatment Plant Implementation Plan, Distribution System Implementation Plan, and the SCADA System Implementation Plan. These plans will identify major future improvements for Water Utility infrastructure.

- FY25-29 Watersheds Operation and Maintenance Asset Renewal Plan: The Watersheds Operations and Maintenance Plan is a rolling five-year plan that describes operations and maintenance activities for the Watershed Operations and Maintenance Division for the next five years. It is similar to this WUE AR Plan FY26-30.

- FY25-39 Long-Term Forecast: The long-term forecast is prepared as the first step of the budget process each year to forecast future funding needs for operations projects. This WUE AR Plan links to the long-term forecast in two ways. First, it identifies asset renewal costs for the next five years, which is incorporated into long-term forecast for appropriate projects. Second, the operations project five-year forecasts provided in this report are taken from the long-term forecast data. The draft report is prepared using long-term forecast data and unfunded needs requests as of December 2024. The budget requests and unfunded needs are further evaluated by the Board throughout the budget and groundwater charge (rate) setting processes through May 2025.

- FY2023-24 and FY25-26 Operating and Capital Rolling Biennial Budget: Valley Water prepares and adopts an annual Operating and Capital Budget. It publishes a rolling biennial plan that identifies the planned operations and capital expenditures, as well as funding sources. The plan provides an overview of both operations and capital expenses, as well as revenues. This WUE AR Plan identifies both operations and capital expenditures that are included in the Operating and Capital Budget.

- Protection and Augmentation of Water Supplies (PAWS) Report: The PAWS report is produced each year in accordance with requirements in the District Act section 26.5, and documents the activities undertaken to provide a reliable, clean water supply for the coming fiscal year as a basis for the proposed maximum groundwater production charges. The PAWS report provides an overview of both operations and capital expenses for the next fiscal year, while this plan provides an overview of selected operations and maintenance activities for the next five fiscal years.

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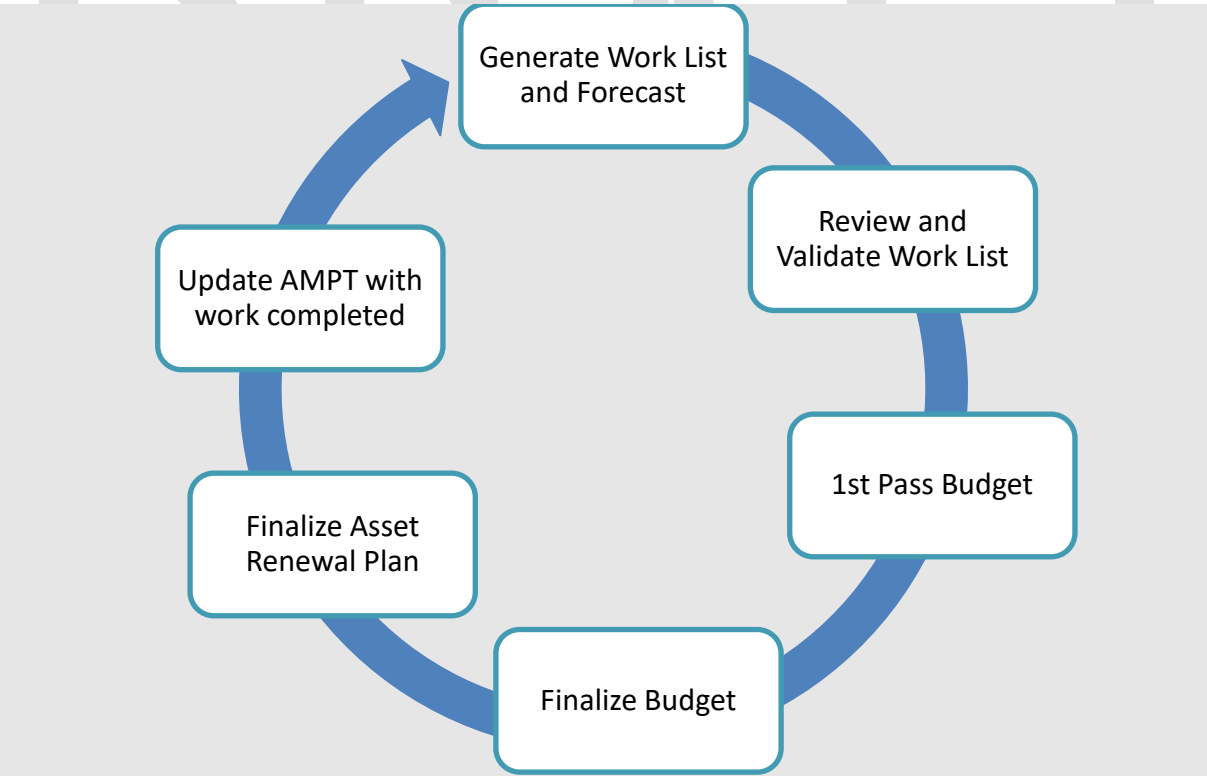
II. WORK PLANNING AND EXECUTION

Work Planning

The Asset Management Program develops forecasts of asset renewal activities and costs using a web-based software tool, Web Asset Management Planning Tool (AMPT). AMPT contains the database of water utility assets and their planned renewal activities and costs. Asset renewal activities are planned at specific intervals, such as every 5 or 10 years, and are validated as the due dates approach. The renewal projects are selected to optimize asset performance, maintain or improve reliability within an acceptable risk tolerance, and minimize asset life-cycle costs.

Work is planned annually to align with the budget process. Each year, staff generates a list of all renewal activities required for water utility assets for the next five years from the AMPT database. Operations, maintenance, engineering, and asset management validate the list by evaluating field conditions and estimating remaining asset life. If assets are in good condition, renewal projects are rescheduled to future years.

Work is planned annually, according to the diagram below, to align with the budget process.



The following assets are excluded from the work planning process:

- An asset that has a value less than $5,000 or is not critical for performance
- An asset that is easily accessible (e.g., spare kept on the shelf)
- An asset that is replaced if it fails calibration
- Consumable assets (e.g., air filters)

The following table shows examples of assets that are not included in the work planning process:

Asset Class	Asset Type
Mechanical	Sump pumps, transfer pumps, metering pumps, sludge pumps and motors, sample pumps, air pressure regulating valve[1] , leak detectors[2]
Instrumentation	Analyzers, turbidimeters, level instruments/indicators, portable leak detectors, wet well float switch, staff gauges, mass flowmeters
Civil	Pump out risers, manholes, drain valves, water supply trash racks, underground petroleum storage tanks[3]

Notes
[1] Ozone air pressure regulating valves are included
[2] Leak detectors preventative maintenance is scheduled and replaced if not functioning.
[3]These tanks are inspected annually and maintained by a trained and certified contractor. Valley Water Staff does not perform maintenance on these tanks and their appurtenances.

Work Execution

Execution of the asset renewal projects is predominately performed through the following units:

- Treatment Plant Maintenance Unit 555
- Raw Water Field Operations and Pipeline Maintenance Unit 585
- Additional technical support is provided by:
  - Raw Water & Pipeline Maintenance Engineering 435
  - Raw Water Operations Unit 455
  - Plant Maintenance Engineering and Commissioning Unit 516
  - Utility Electrical and Control Systems Engineering Unit 545
  - Other Valley Water units including Watershed Field Operations units, Facilities management and the Environmental Health and Safety Unit.
  - Outside contractors as needed.
- Capital Project Delivery Units

Refer to Appendix C for more information about each unit.

Individual/Large Capital Project Recommendations

The work planning process recommends some activities for execution as individual or larger capital projects. Individual/large capital projects represent major work efforts that are beyond the capabilities of the maintenance units to perform and meet one of the following criteria: exceeds $5 million, duration greater than 2 years, or requires right-of-way purchase. Generally, these projects require multi-year planning and extensive design efforts, which include preparing plans and specifications for bidding.

Master Plan Implementation Plan

Valley Water is undertaking infrastructure master planning efforts for its water treatment plants, distribution system, and SCADA system. These efforts will identify major facility renewal projects for future years. The projects from the master plans may be too large for maintenance to execute, and if so, they will be done as large/individual capital improvement projects. For example, with several assets within the water treatment plants due for replacement in FY2026-2029, the Water Utility Infrastructure Master Plan Implementation Project is working on combining and bundling the replacements into project(s) to be executed under the CIP.

10-Year Pipeline Rehabilitation Project

Raw and treated water pipeline renewal work is included in Valley Water's five-year CIP in the 10-Year Pipeline Rehabilitation Project, and therefore financial forecasts of planned work are not included in this plan.

The following table list the currently planned work for the 10-Year Pipeline Rehabilitation Project:

Fiscal Year	Planned Work
FY26	• West pipeline inspection and rehabilitation from RWTP to Cox
FY27	• West pipeline inspection and rehabilitation from Cox to Mountain View line valve • East pipeline inspection and rehabilitation from PWTP to Thompson line valve
FY28	• AVP Replacement Phase I • Santa Teresa Force Main Pipeline Inspection and Rehabilitation • Snell Pipeline Shutdown for Obert Line Valve Installation (STWTP to Coyote Creek Line Valve)
FY29	• AVP Replacement Phase II • Milpitas PL Inspection & Rehab including installing new line valve (TWISO)
FY30	• Santa Clara Distributary inspection and rehabilitation • Campbell Distributary inspection and rehabilitation

Note: The information is from the Water Utility Operations Long-Term Shutdown Schedule (LTSS) and the information on the schedule is preliminary. This information is from the November 8,2024 LTSS.

Planned Work Tracking

Scheduling, execution, and reporting on the planned asset renewal projects are primary responsibilities of the assigned units' work within the Maximo work order system. These units communicate the status to the Asset Management Unit staff, which perform QA/QC and reviews at the close of each fiscal year to assess what work was successfully completed. The Asset Management Program tracks asset renewal that is not undertaken since it increases the risk of asset failures.

A review of completed asset renewal work planned in FY25 is provided in Appendix B.

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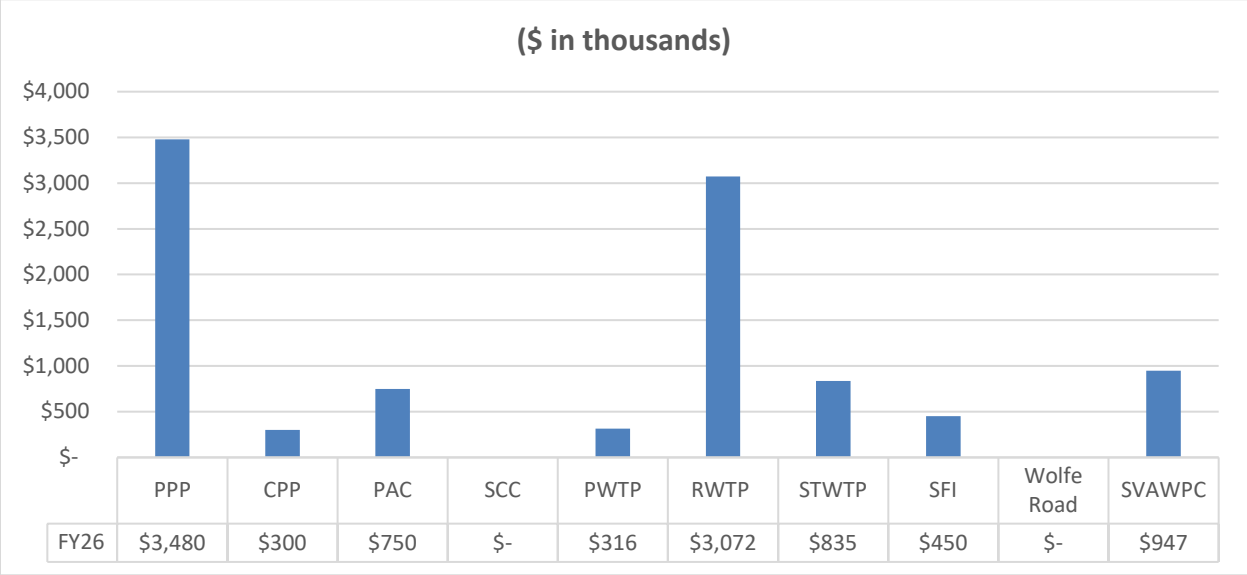
III. FIVE-YEAR PLANNED ASSET RENEWAL WORK

The key output of the work planning process is the list of asset renewal work to be conducted over the upcoming five fiscal years. The work identified in this process is incorporated into capital and operations budgets as described in Section II. The work list for the upcoming fiscal year (FY26) is fixed, whereas the work forecasted for the remaining four years of the five-year rolling plan is adjusted based on changing conditions.

FY26 Summary

For FY 26, a total of 74 asset renewal work orders were identified, with an estimated total cost of $10.1 million; refer to Figure 2. Note this cost includes materials and equipment plus a multiplier for labor and installation costs. The details of the asset renewal work orders are included in Appendix A.

Figure 2: FY26 WUE Planned Asset Renewal Work Orders



	PPP	CPP	PAC	SCC	PWTP	RWTP	STWTP	SFI	Wolfe Road	SVAWPC
FY26	$3,480	$300	$750	$-	$316	$3,072	$835	$450	$-	$947

Note: See Table of Acronyms for Facility Names

FY26 – 30 Summary

Figures 3-6 summarize the projected asset renewal to be completed in future fiscal years 2026-2030. The total cost of asset renewal work orders over five years is $59.8 million. The forecasted projects will change once the three Master Plan Implementation plans are completed and integrated with in the Asset Management Planning Tool and Capital Improvements Project Schedule.

The asset renewal work order costs provided in the figures include equipment and material costs. Labor costs are included as a multiplier of the equipment and material costs.

Asset renewal work for the raw and treated water pipelines scheduled for FY 26 - 27 is included in the 10-year Pipeline Rehabilitation Project, a capital project included in Valley Water's five-year CIP. Because the costs are included in the CIP, this plan does not included the forecasts.

Figure 3: Five-year Forecasted Projects for Water Utility Enterprise

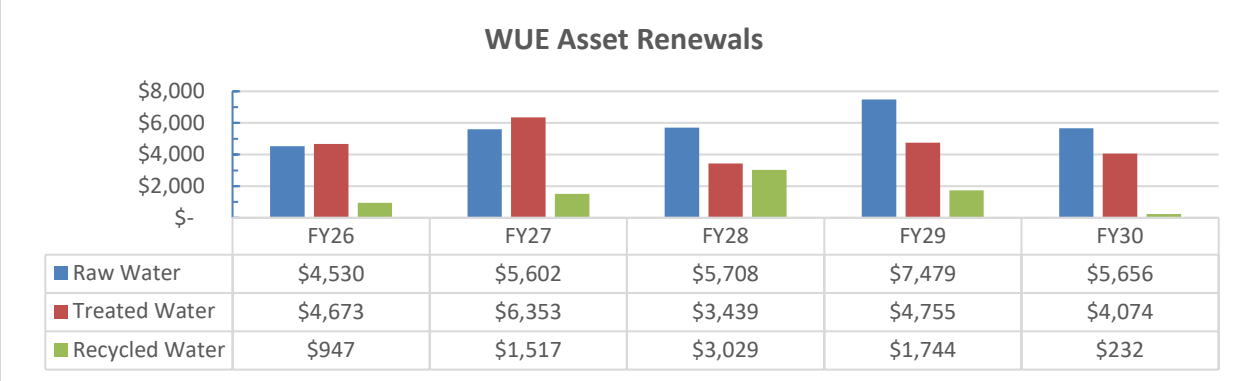


Figure 4: Five-year Forecasted Projects for Raw Water

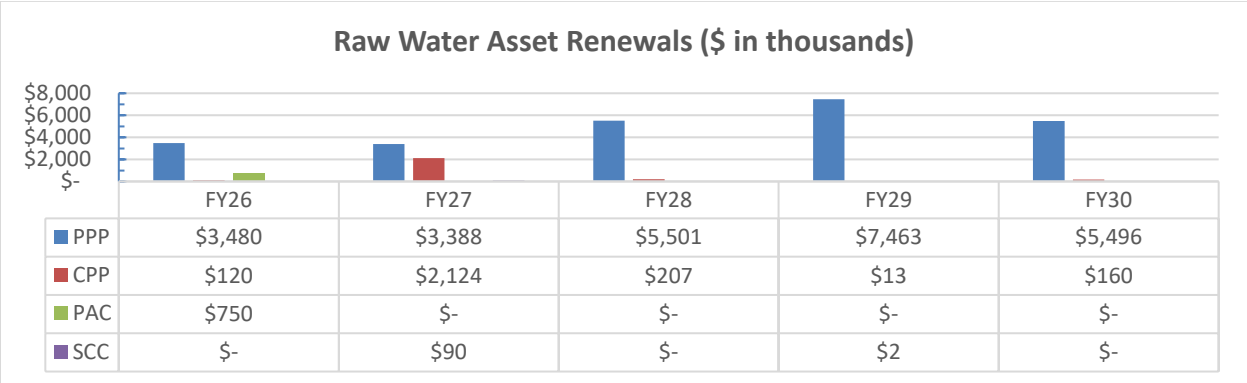


Figure 5: Five-year Forecasted Projects for Treated Water

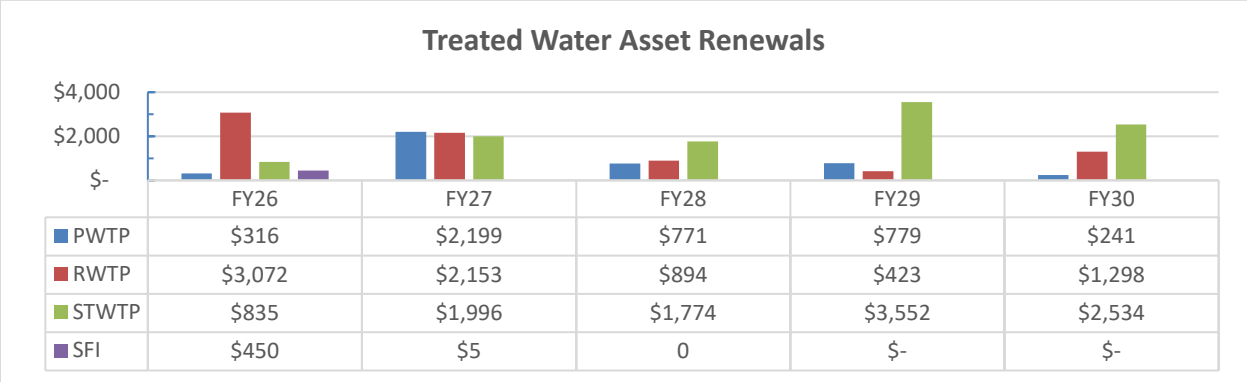
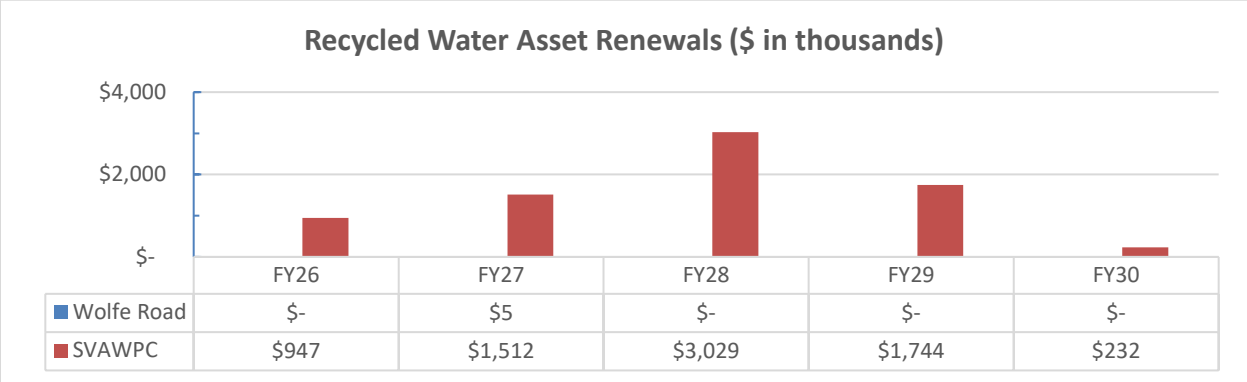


Figure 6: Five-year Forecasted Projects for Recycled Water

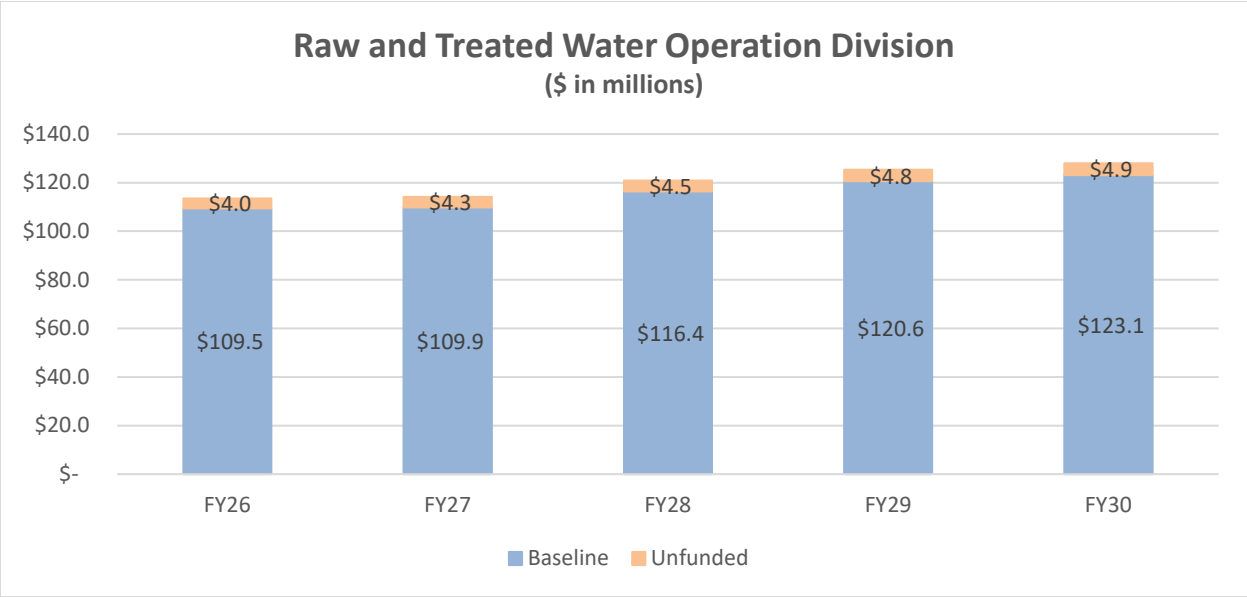


IV. FIVE-YEAR OPERATIONS FORECAST

In addition to supporting asset renewal work, Valley Water maintenance staff also plans, budgets and executes operations activities in operations projects and maintenance work. Appendix B provides an overview of O&M activities and explains what type of work is budgeted in operations projects.

An overview of the budgeted (FY26 and FY27) and forecast (FY28 through FY30) expenses and unfunded needs for the operations and maintenance activities and associated operations engineering support conducted by the Raw and Treated Water Operations Divisions for the next five fiscal years is shown in Figure 7. For FY 2026, the Raw and Treated Water Operations Divisions have budgeted baseline resource needs of $109.5 million for current service levels and identified $4 million of unfunded needs. As of November 2024, the Raw and Treated Water Operations Divisions have identified funded resource needs of $579.5 million and an additional unfunded need of $22.5 million for the next five years.

Figure 6: Raw & Treated Water Operation Division Forecasts*



*Data as of November 2024.

The unfunded resources would provide for the following services:

- Support for the operations planning and analysis of surface water reservoirs and stream diversions for water supply and environmental benefits, including the flow implementation of the Fish and Aquatic Habitat Collaborative Effort (FAHCE) Program.
- Support for enhanced laboratory operations driven by State Water Board accreditation standards and emerging contaminants such as PFAS, microplastics, and golden mussels.
- Support for mechanical engineering work required at three treatment plants, one purification center, three pump stations, SFPUC-VW Intertie, and other related transmission facilities and infrastructures.
- Support for enhanced WU corrosion control and cathodic protection analysis, planning, and design.
- Support for enhanced long-term WU pipeline condition assessment, emergency preparedness, and management.

- Support for enhanced water quality monitoring driven by regulatory tracking, assessment, and compliance provided through the Water Quality program
- Support for the operations of RWTP to provide safe clean drinking water 24/7 to approximately 1 million people on the west side of Santa Clara County

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Valley Water

Water Utility Enterprise Asset Renewal Plan
Fiscal Year 2026-2030

APPENDIX A: WATER UTILITY ENTERPRISE ASSET RENEWAL LIST FOR FY26

Overview

Appendix A contains tables conveying the FY26 planned asset renewal work per facility. Work orders will be generated in Maximo, Valley Water's computerized maintenance management system, at the start of FY26 and **effective July 1,2025.**

Description	Section No.
Overview of FY2026 Asset Renewal Work	A-1
FY26 Asset Renewal Work for:	
91214010: SFR1 Small CIP PPP	A-2
91234010: SFR3 Small CIP SCC and CPP	A-3
93764004: Treated Water Small CIP	A-4
91281008 SVAWPC General Maintenance	A-5
91241001 Wolfe Road Recycled Water Facility	A-6

Section A-1: Overview of FY26 Asset Renewal Work

Project Number	Project Description	Performance Testing	Rehabilitation	Replacement	Grand Total
91214010	SFR1 Small CIP (PPP)	$40,000	$1,400,000		$3,294,380
91234010	SFR3 Small CIP (SCC and CPP)		$300,000		$300,000
93764004	Treated Water Small CIP		$575,000	$3,236,015	$8,695,138
91281008	SVAWPC General Maintenance				
91241001	Wolfe Road Recycled Water Facility				

Section A-2: FY26 Asset Renewal Work for 91214010: SFR1 Small CIP PPP

Facility and Asset Renewal Details Including cost estimates and project type	**Performance Testing**	**Rehabilitate**	**Replacement**	**Grand Total**
PPP	**$40,000**	**$2,150,000**		**$3,294,380**
AR42134 - PPP - MAIN PUMP SYSTEM CNTFGL PUMP UNIT #12		$ 1,400,000		$1,400,000
Performance testing at PPP	$ 40,000			$ 40,000
Various - Replacement/Rebuild of PPP ASDs				$1,104,380
Vault repairs at PAC		$750,000		$750,000

Section A-2: FY26 Asset Renewal Work for 91234010: SFR1 Small CIP SCC and CPP

Facility and Asset Renewal Details Including cost estimates and project type	**Performance Testing**	**Rehabilitate**	**Replacement**	**Grand Total**
CPP		$300,000		$300,000
Rebuild of 2 pumps		$300,000		$300,000

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Section A-4: 93764004: FY26 Asset Renewal Work for Treated Water Small CIP

Facility	Rehabilitate	Replacement	Grand Total
PWTP		$120,000	$4,718,000
RWTP	$475,000	$2,450,000	$2,925,000
STWTP	$100,000	$216,015	$602,138
SFI		$450,000	$450,000
94764006 - TW T&D Small Cap	**$575,000**	**$3,236,015**	**$8,695,138**

Facility and Asset Renewal Details **Including cost estimates and project type**	**Rehabilitate**	**Replacement**	**Grand Total**
PWTP		**$120,000**	**$120,000**
AP10021 - PWTP ALUM PUMP #1		$20,000	$20,000
AP10033 - PWTP; AMMONIA FEED RM; NH4 METER PUMP #1		$20,000	$20,000
AP10035 - PWTP; AMMONIA FEED RM; NH4 METER PUMP #2		$20,000	$20,000
AP10294 - PWTP NON-IONIC POLY METER PUMP #301		$20,000	$20,000
AP10296 - PWTP NON-IONIC POLY METER PUMP #501		$20,000	$20,000
AP10301 - PWTP NON-IONIC POLY METER PUMP #401		$20,000	$20,000
AP46890 - PWTP OCB OZONE BASIN 54 in BUTTERFLY VALVE (OW-1)		$ -	$ -
AP46892 - PWTP OCB OZONE BASIN 54 in BUTTERFLY VALVE (OW-2)		$ -	$ -

Facility and Asset Renewal Details Including cost estimates and project type	**Rehabilitate**	**Replacement**	**Grand Total**
RWTP	**$475,000**	**$2,450,000**	**$2,925,000**
Various - Repair of RWTP floc/sed basin concrete	$475,000		$ 475,000
AP52073, AP52074, AP52075, AP52076 - Replacement of 4 RWTP UPS		$450,000	$450,000
AP68600 and AP69593- Replacement of RWTP Sludge Line		$2,000,000	$2,000,000

Facility and Asset Renewal Details Including cost estimates and project type	**Rehabilitate**	**Replacement**	**Grand Total**
STWTP	**$ 386,122**	**$ 216,015**	**$ 602,138**
AP30058 - STWTP CAT POLY NEPTUNE METER		$ -	$ -
AP30101 - STWTP CARBON MAG METER		$6,000	$ 6,000
AP30163 - STWTP OCL FEED ROOM EAST FILTERED MAG METER		$6,000	$ 6,000
AP30164 - STWTP OCL FEED ROOM EAST SETTLED MAG METER		$6,000	$ 6,000
AP30165 - STWTP OCL FEED ROOM WEST FILTERED MAG METER		$6,000	$ 6,000
AP30166 - STWTP OCL FEED ROOM WEST SETTLED MAG METER		$6,000	$ 6,000
AP30167 - STWTP OCL FEED ROOM STATIC MIXER MAG METER		$6,000	$ 6,000
AP30240 - STWTP FILTER #4 EAST LOW LEVEL INSTRUMENT LE 241-EFW		$ -	$ -
AP30260 - STWTP FILTER #6 EAST LOW LEVEL INSTRUMENT LE 261-EFW		$ -	$ -
AP30273 - STWTP FILTER #1 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30283 - STWTP FILTER #2 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30293 - STWTP FILTER #3 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30303 - STWTP FILTER #4 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30313 - STWTP FILTER #5 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30323 - STWTP FILTER #6 WEST LOW LEVEL INSTRUMENT		$ -	$ -
AP30325 - STWTP POLY FILTER MAG METER		$6,000	$ 6,000
AP30773 - STWTP Instrumentation - Influent Flowmeter		$6,000	$ 6,000
AP30822 - STWTP WWR Pump Motor VFD #1 P-15		$5,000	$ 5,000
AP30828 - STWTP WWR Pump Motor VFD #2 P-16		$5,000	$ 5,000
AP30834 - STWTP SURFACE ROADS	$100,000		$100,000
AP30840 - STWTP WWR Pump Motor VFD #3 P-17		$5,000	$ 5,000
AP30887 - STWTP ACTIVATED CARBON TANK - NORTH - LEVEL TRANSMITTER		$6,008	$ 6,008
AP30888 - STWTP ACTIVATED CARBON TANK - SOUTH - LEVEL TRANSMITTER		$6,008	$ 6,008
AP30891 - STWTP CARBON MAGMETER		$6,000	$ 6,000
AP42823 - STWTP OZONE GEN TURBINE WATER FLOWMETER UNIT 1 (GCW-FIT-311)		$6,000	$ 6,000
AP42824 - STWTP OZONE GEN TURBINE WATER FLOWMETER UNIT 2 (GCW-FIT-321)		$6,000	$ 6,000
AP42825 - STWTP OZONE GEN TURBINE WATER FLOWMETER UNIT 3 (GCW-FIT-331)		$6,000	$ 6,000
AP45175 - STWTP WWC RETURN PUMP #1; MOTOR VFD-11 (50 HP)		$10,000	$10,000
AP45176 - STWTP WWC RETURN PUMP #2; MOTOR VFD-12 (50 HP)		$10,000	$10,000
AP45177 - STWTP WWC RETURN PUMP #3; MOTOR VFD-13 (100 HP)		$12,500	$12,500
AP45178 - STWTP WWC RETURN PUMP #4; MOTOR VFD-14 (100 HP)		$12,500	$12,500
AP46473 - STWTP OZQ MAGNETIC FLOW METER (FE-301-0QA)		$6,000	$ 6,000
AP46475 - STWTP OZQ MAGNETIC FLOW METER (FE-302-0QA)		$6,000	$ 6,000
AP50104 - STWTP FILTER 4W FILTERED WATER FLOWMETER (FW-10)		$6,000	$ 6,000
AP50105 - STWTP FILTER 3W FILTERED WATER FLOWMETER (FW-9)		$6,000	$ 6,000
AP50106 - STWTP FILTER 2W FILTERED WATER FLOWMETER (FW-8)		$6,000	$ 6,000
AP50107 - STWTP FILTER 1W FILTERED WATER FLOWMETER (FW-7)		$6,000	$ 6,000

Facility and Asset Renewal Details Including cost estimates and project type	Rehabilitate	Replacement	Grand Total
STWTP	**$ 386,122**	**$ 216,015**	**$ 602,138**
AP50108 - STWTP FILTER 1E FILTERED WATER FLOWMETER (FW-1)		$ 6,000	$ 6,000
AP50109 - STWTP FILTER 2E FILTERED WATER FLOWMETER (FW-2)		$ 6,000	$ 6,000
AP50111 - STWTP FILTER 4E FILTERED WATER FLOWMETER (FW-4)		$ 6,000	$ 6,000
AP50113 - STWTP FILTER 6E FILTERED WATER FLOWMETER (FW-6)		$ 6,000	$ 6,000
AP52029 - STWTP FILTER 3E FILTERED WATER FLOWMETER (FW-3)		$ 6,000	$ 6,000
AP54177 - STWTP OCL SUPPLY LINE MAG METER		$ 6,000	$ 6,000
AP74028 - STWTP MOTOR CONTROL CENTER SLUDGE PONDS-MCC 6M	$286,122		$286,122
AP30772- STWTP MUX #12 - NAOCL FEED ROOM			

Facility and Asset Renewal Details Including cost estimates and project type	Rehabilitate	Replacement	Grand Total
SFI		**$ 450,000**	**$ 450,000**
AP50485 - SFI PUMP UNIT #1; 14 in SUCTION ISOLATION GATE VALVE (V-1)		$ 450,000	$ 450,000
AP50486 - SFI PUMP UNIT #1; 16 in DISCHARGE ISOLATION GATE VALVE (V-2)			
AP50482 - SFI PUMP UNIT #1; 16 in DISCHARGE VALVE (CV-1)			
AP50494 - SFI PUMP UNIT #2; 14 in SUCTION ISOLATION GATE VALVE (V-3)			
AP50495 - SFI PUMP UNIT #2; 16 in DISCHARGE ISOLATION GATE VALVE (V-4)			
AP50491 - SFI PUMP UNIT #2; 16 in DISCHARGE VALVE (CV-2)			
AP50503 - SFI PUMP UNIT #3; 14 in SUCTION ISOLATION GATE VALVE (V-5)			
AP50504 - SFI PUMP UNIT #3; 16 in DISCHARGE ISOLATION GATE VALVE (V-6)			
AP50500 - SFI PUMP UNIT #3; 16 in DISCHARGE VALVE (CV-3)			
AP50512 - SFI PUMP UNIT #4; 14 in SUCTION ISOLATION GATE VALVE (V-7)			
AP50513 - SFI PUMP UNIT #4; 16 in DISCHARGE ISOLATION GATE VALVE (V-8)			
AP50509 - SFI PUMP UNIT #4; 16 in DISCHARGE VALVE (CV-4)			

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Water Utility Enterprise Asset Renewal Plan
Fiscal Year 2026-2030

APPENDIX B: REVIEW OF FISCAL YEAR 2025 (FY25) ASSET RENEWAL WORK

A review of FY2025 Asset Renewal Projects will be added to the final draft towards the end of FY2025.

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Water Utility Enterprise Asset Renewal Plan
Fiscal Year 2026-2030

APPENDIX C: OVERVIEW OF ACTIVITIES AND UNITS IN THE WUE DIVISIONS

Purpose

The purpose of this appendix is to provide a background of Operations and Maintenance (O&M) activities and the WUE Divisions.
Water Utility O&M work includes:

Operations: Operations activities include operating 150 miles of large-diameter transmission pipelines, three pumping plants, 102 ponds used to recharge the groundwater basins, three potable water treatment plants, one well field, and one advanced water purification center. Costs associated with operating these facilities include operator labor, chemical costs, power costs, laboratory operations, and water quality support. Costs associated with these operations activities are budgeted in the operations projects presented in Section V of this plan.

General Maintenance: General maintenance activities include the following, which account for the majority of maintenance labor. These activities are budgeted in the operations projects presented in Section V of this plan:

- Preventive Maintenance (PM): Planned routine maintenance to prevent premature asset failure, such as an oil change or calibration. PM activities occur weekly, monthly, quarterly, semi- annually, or annually, depending on the activity. When a PM work task becomes due for an asset, Maximo (Valley Water's computerized maintenance management system or CMMS), automatically generates a work order for maintenance staff to perform the task. The water utility completes approximately 14,000 PM work orders each year. PM work accounts for approximately 80% of maintenance labor hours.
- Predictive Maintenance Repair (PMR): This is non-routine maintenance work that is identified and addressed proactively prior to failure, instead of allowing the issue to progress and having to be addressed later by corrective maintenance. This work is first identified during inspections, where it has been determined that an asset's ability to meet its level of service is compromised. Under predictive maintenance repair, infrastructure is repaired or rehabilitated after an issue is identified in the field, but

prior to complete failure requiring corrective maintenance. An examples of predictive maintenance repair are replacing gaskets to stop minor leaks or drips to keep a machine from failing.

- Corrective Maintenance (CM): Corrective maintenance addresses unplanned asset failures. CM work accounts for approximately 10% of maintenance labor hours.
- Inspections and Testing: Projects that involve inspection or testing activities are not capital investments. They are budgeted and conducted under one of the maintenance operating projects identified in Section V of this plan. Biennial electrical testing or chemical tank inspection are examples of activities budgeted under operating projects. These projects are completed by maintenance staff and may require engineering, environmental and/or contractor support.

Engineering Support: Engineering support is needed for various operations initiatives, operations planning, and maintenance projects. Civil, mechanical, electrical and control systems engineers support the operations and maintenance of the Water Utility facilities. Engineering support is budgeted in the operations planning and engineering projects.

Raw Water Division

The Raw Water Division maintains 150 miles of large diameter transmission pipelines but only operates 94 miles of raw water pipes. In addition, the Raw Water Division maintains and operates three large pumping plants and 102 percolation ponds used to recharge the groundwater basins. The use of local and imported raw water supplies are maximized to meet treated water demands, groundwater recharge goals, and environmental needs.

Unit 408 is this Division's organizational unit and consists of the Deputy Operating Officer and one Administrative Assistant. This Division manages one project in addition to the Units listed below: 91211005 – SFD Reach 1 Administration. The following Units are included in this Division:

Raw Water & Pipeline Maintenance Engineering (Unit 435)

The Raw Water & Pipeline Maintenance Engineering Unit provides civil and corrosion control engineering and support services for all Water Utility facilities; monitors and maintains pipeline condition assessment equipment (Acoustic Fiber Optic, Transient and Cathodic Protection monitoring); supports 10-Year Pipeline Rehabilitation Program; and supports O&M, Asset Management, General Engineering, CIP and Small Cap work requests.

Raw Water Operations (Unit 455)

The Raw Water Operations Unit performs the day-to-day operations planning and remote operations of Valley Water's Raw Water System consisting of:

- 10 water supply reservoirs with a combined restricted storage capacity of 62,701 acre-feet.
- 3 raw water pump stations with 37,200 combined horsepower.
- 94 miles of large diameter raw water pipelines and tunnels.
- 102 groundwater recharge ponds.
- 98 miles of streams managed for groundwater recharge.

The Unit performs the required water right and regulatory compliance reporting to maintain and protect local water supply operations. The Unit also implements the flow regimes agreed upon

in the Fish and Aquatic Habitat Collaborative Effort (FAHCE) in order to optimize water supply and environmental benefits in the five FAHCE-governed reservoirs.

Groundwater Management (Unit 465)
The Groundwater Management Unit helps ensure continued groundwater sustainability by providing accurate and timely information on current and forecasted groundwater conditions through monitoring, modeling, and analysis; ensuring continued Valley Water compliance with California Water Code Sustainable Groundwater Management Act (SGMA) requirements; and implementing programs to protect groundwater resources.

Wells & Water Measurement (Unit 475)
The Wells & Water Measurement Unit conducts preventive, corrective, and rehabilitative maintenance for backflow prevention devices and measurement assets for treated water, raw water, and groundwater production. The Well Ordinance Program helps protect Valley Water's groundwater resource by providing services used for the implementation of Valley Water's Well Ordinance (Ordinance 90-1). Implementation of the well ordinance includes well permitting, well inspection, well data management, and violation enforcement for all wells located in Santa Clara County. Unit 475 ensures that wells and other deep excavations are constructed, maintained, and destroyed in such a manner that they do not harm the local groundwater resources.

Treatment Plant Maintenance (Unit 555)
The Treatment Plant Maintenance Unit conducts preventive, corrective, and rehabilitative maintenance required to sustain operations of the Santa Teresa Water Treatment Plant, Penitencia Water Treatment Plant (PWTP), Rinconada Water Treatment Plant (RWTP), Campbell Well Field, and San Francisco Intertie.

Raw Water Field Operations and Pipeline Maintenance (Unit 585)
The Raw Water Field Operations and Pipeline Maintenance Unit is responsible for the mechanical, electrical, and control system preventive, corrective, and rehabilitative maintenance of the distribution system infrastructure which includes three pump stations (Pacheco, Coyote, and Vasona) and 150 miles of pipeline. Also included is the operation and maintenance of recharge and water distribution systems for groundwater basins, reservoirs, canals, and other water supply infrastructure.

Treated Water Division

The Treated Water Division (Division) is responsible for managing the operation of Valley Water's three conventional drinking water treatment plants, the Campbell Well Field, San Francisco Public Utilities Commission (SFPUC) intertie, and transmission and distribution pipelines. The Division's goal is to provide a reliable, high-quality drinking water supply to the Santa Clara County residents. The Division also manages the operation and maintenance of the Silicon Valley Advanced Water Purification Center to enhance the quality and advance the use of recycled water in the county.

In addition, the Division manages business units that provide leadership and technical support in areas of laboratory services; water quality process engineering; source water quality management program and invasive mussel prevention program; electrical and control systems engineering; and plant maintenance engineering to improve the overall safety, quality, and

reliability of current facilities and the commissioning of new facilities upon capital construction handover to Operations and Maintenance (O&M). Furthermore, the Division regularly communicates with Valley Water's drinking water retailers to maintain a collaborative working relationship and conducts annual check-ins and ad-hoc meetings with the State Water Resources Control Board (SWRCB) for ongoing and annual updates of drinking and recycled water regulations.

Unit 515 is this Division's organizational unit and consists of the Deputy Operating Officer, a Senior Management Analyst, and one Administrative Assistant. The following Units are included in this Division:

Plant Maintenance Engineering and Commissioning (Unit 516)
The Plant Maintenance Engineering and Commissioning Unit leads and coordinates the commissioning and start-up activities at Valley Water's treatment plants and treated water pipelines. The unit supports and implements the integration of large capital projects, throughout all phases, to our treatment plants and treated water pipelines. The unit also provides mechanical engineering support services for operations, maintenance, asset management and capital improvements at the treatment plants and pump stations.

Water Quality (Unit 525)
The Water Quality Unit is responsible for providing operational, process, and capital and maintenance project support to the treatment plants as well as other Valley Water units regarding source water quality and water treatment. The unit conducts bench, pilot and full-scale studies to optimize the treatment process, as needed. The unit, in close coordination with the Laboratory Services and Operations Units, prepares monitoring plans for operational and regulatory compliance, and advises regarding monitoring of contaminants of emerging concern (CECs). The unit is also responsible for tracking drinking water-related regulatory development, providing recommendations for regulatory compliance strategy, and communicating with the Division of Drinking Water (DDW), under the jurisdiction of the SWRCB, on various regulatory issues. In addition, the unit oversees Source Water Quality Management and Invasive Mussel Prevention Programs in collaboration with internal and external groups.

Laboratory Services (Unit 535)
The Laboratory Services Unit is responsible for providing analytical and sampling services to the Water Utility Enterprise. The state-of-the-art laboratory is accredited with the California Environmental Laboratory Accreditation Program (ELAP), maintains a robust quality assurance and quality control program, and tests water produced from each of our drinking water treatment plants, distribution lines, the Silicon Valley Advanced Water Purification Center, surface water reservoirs and groundwater basins.

Utility Electrical and Control Systems Engineering (Unit 545)
The Utility Electrical and Control Systems Engineering Unit provides electrical, control systems, Supervisory Control and Data Acquisition (SCADA), and imported electricity management engineering services, including direct technical services, in support of Valley Water's critical infrastructure and systems used in the day-to-day (24 hours a day, 7 days a week) operations and maintenance of its complex, countywide raw and treated water conveyance system (including three raw water pump stations and pipelines), three drinking water treatment plants, one advanced purified water processing plant, the headquarters office campus, and watershed

facilities. The imported electricity management saves Valley Water a significant amount in annual electrical energy expenditures and is 100 percent carbon-free.

North Water Treatment Operations (Unit 565)
The North Water Treatment Operations Unit provides safe, clean, and high-quality drinking water to Valley Water's three (3) treated water retailers along the East/Milpitas Pipelines, including San Jose Water Company, City of San Jose, and City of Milpitas. The unit is responsible for safe and cost-effective operations (24 hours a day, 7 days a week) and management of the Penitencia Water Treatment Plant (PWTP), the joint San Francisco Public Utilities Commission (SFPUC)-Valley Water (VW) Intertie facility, and the East/Milpitas Pipeline turnouts. The unit is also responsible for cost-effective operations and maintenance of the Silicon Valley Advanced Water Purification Center (SVAWPC).

South Water Treatment Operations (Unit 566)
The South Water Treatment Operations Unit provides safe, clean, and high-quality drinking water and a backup supply of drinking water to Valley Water's seven (7) treated water retailers, and ultimately to the residents of Santa Clara County. The unit is responsible for providing safe and cost-effective operations (24 hours a day, 7 days a week) and management of the Santa Teresa Water Treatment Plant (STWTP), the Rinconada Water Treatment Plant (RWTP), the Campbell Well Field, and the West and Snell/East Pipeline turnouts.

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Valley Water

Clean Water • Healthy Environment • Flood Protection

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