San José-Santa Clara Regional Wastewater Facility

CIP

CAPITAL IMPROVEMENT PROGRAM

Quarterly Status Report:
January – March 2025

MISSION
Rebuild and revitalize the Regional Wastewater Facility and deliver the CIP on time and within budget.

CAPITAL IMPROVEMENT PROGRAM

HOW ARE WE DOING?

Key Performance Indicators (KPIs) Year-to-Date:

SAFETY
0 Incidents

EXPENDITURES
On Target

ENVIRONMENTAL
0 Permit Violations

LEGEND

●	On Target
▲	Alert
◆	At Risk

The San José-Santa Clara Regional Wastewater Facility (RWF) is one of the largest advanced wastewater treatment facility in the western United States. The RWF has been treating the South Bay's wastewater and protecting public health and the environment without interruption since 1956. The discharge of clean wastewater into the South San Francisco Bay contributes to diverse and thriving fish and wildlife ecosystems.

Much of the RWF's infrastructure is functioning well beyond its intended use. As a result of a long and thoughtful Master Plan process, a $2.1 billion, 30-year Capital Improvement Program (CIP) is underway to modernize and refurbish the RWF so its critical work can continue. Homes and businesses in Silicon Valley need a modern, reliable, state-of-the-art treatment plant to ensure a high quality of life and a thriving economy. The CIP is rebuilding RWF infrastructure and updating treatment processes with innovative, efficient new technologies. The first phase of the CIP started in 2014 and is nearing completion. The second phase will soon be underway.

This report summarizes the CIP's progress and highlights accomplishments from January to March 2025.

Welcoming Environmental Services' new Director, experienced utility leader Jeff Provenzano

By Mariana Chavez-Vazquez, RWF General Manager

I'm thrilled to introduce Jeffrey (Jeff) Provenzano as the Environmental Services Department's (ESD's) new Director, as of March 2025. Jeff is no stranger here, beginning his career in ESD and at the RWF over 20 years ago as a sanitary engineer. In 2014, Jeff became Deputy Director of ESD's Water Resources Division until his promotion to Assistant Director in 2023.

During his time with ESD, Jeff has built and focused his career on the environment.

In his time with ESD, Jeff has managed a host of water-related issues, including five drought-related water shortages, providing direction and leadership to both Municipal Water System and South Bay Water Recycling. Leading San José's response to these water shortages, he employed strong drought response plans implementing community outreach, engagement and enforcement strategies. He was instrumental in expanding the City's recycled water use, increasing usage a whopping 200%, supplying over five billion gallons to industrial, irrigation and municipal customers annually.

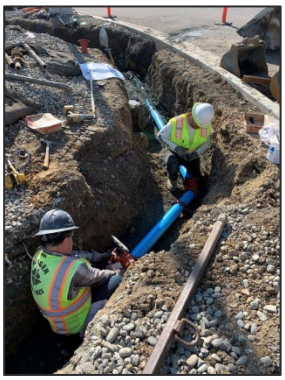
Jeff Provenzano, new ESD Director

As Assistant Director of ESD starting in 2023, he provided guidance and leadership to our core services. He led the implementation of cost-efficient provisions to our Stormwater permit that helps prevent pollutants from entering local waterways, aligning with the Clean Water Act and National Pollutant Discharge Elimination System permit requirements. As an expert in water resources, his wealth of knowledge and experience will continue to ensure San José provides the highest quality environmental and utility systems into the future, addressing challenges in environmental sustainability, With strategies centered around awareness and climate adaptation and resiliency. With strategies centered around awareness and resources, he fully supports RWF operations and its capital improvement program. I am confident that his highly collaborative approach will continue to strengthen the relationships we have with our local partner agencies, treatment plant partners, and other environmental stakeholders.

I look forward to working with Jeff in his new role and I know he will lead by example.

Facility-wide Water Systems Improvements Project - Upgrading Performance and Reliability of RWF's Water Systems

The Facility-wide Water Systems Improvements project aims to improve the performance and reliability of the water systems at the RWF including the elimination of groundwater as a water source.



Staff install process water system pipeline.

Currently, the RWF relies on five water systems constructed at different periods of the facility's expansion: potable water, groundwater, process water, fire protection water, and recycled water. Most of these systems require some degree of rehabilitation related to aging equipment conditions, increased demand of water supply, and/or updated regulations. This project involves improvements to all water systems. The potable water system upgrades will include installation of an air gap tank, pump station, and piping to help prevent cross-contamination. Groundwater system improvements include modifications to combine groundwater and process water service, ensuring dependable water supply for critical processes and eliminating groundwater dependence. Process water system rehabilitations will improve water pressure. Fire protection water system improvements will include a new pump station that will supply fire protection water from the potable water system.

Project construction began in April 2024 and covers the entire footprint of the RWF's operational area. As a result of the extensive scope, the project is installing 44,000 linear feet of pipe in areas near active underground utilities. The contractor has encountered numerous unforeseen conditions that have required complex and labor-intensive methods to protect critical systems.

"These unforeseen conditions and congestion of existing infrastructure require significant flexibility and problem-solving from the design and construction teams," said Project Manager **Dilip Gargeya**. The project is progressing on schedule, emphasizing quality, safety and regulatory compliance. It is expected to be substantially complete by February 2027.

How the CIP Delivers Projects

The CIP primarily uses two project delivery methods:

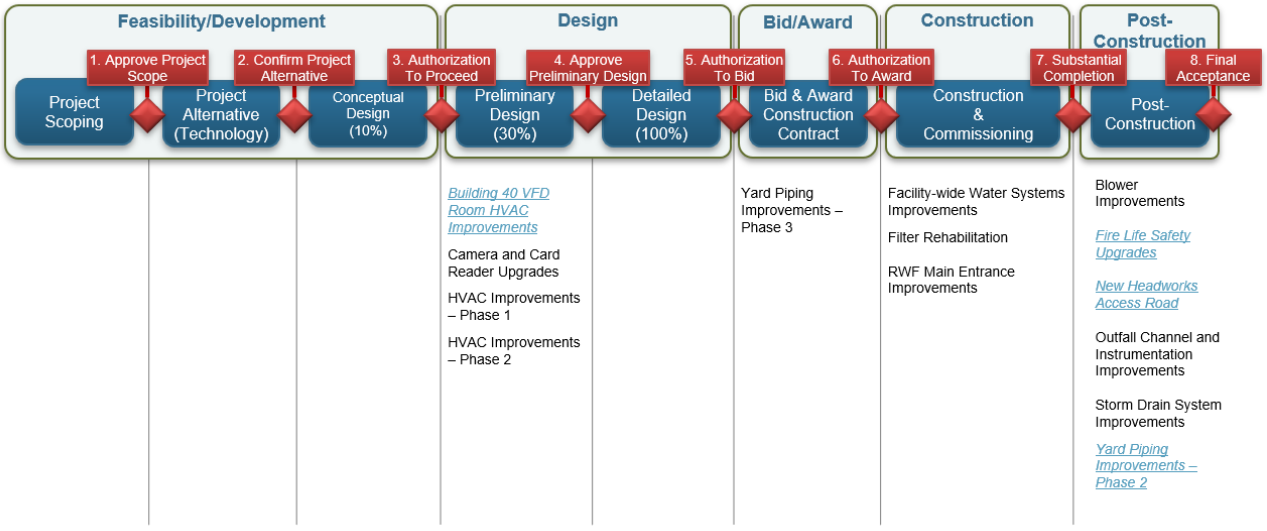
- **Design-Bid-Build** is a commonly used delivery method in which an owner first procures a professional engineering firm to prepare detailed design plans and specifications for a project. The owner then solicits bids for the project and procures a general contractor to construct the project based on the design completed by the engineer.

- **Design-Build** is a two-phase delivery method contracted with a single design-build firm in which the project's design, cost estimating, construction schedule and final guaranteed maximum price (GMP) are developed during the first phase. If the owner and design-builder agree on the schedule and the GMP during the first phase, the final design, construction and commissioning are completed during the second phase.

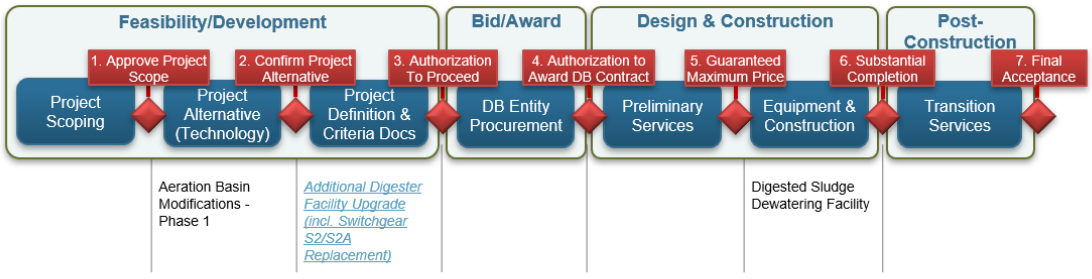
All CIP projects, regardless of project delivery method, follow a consistent process of consecutive delivery stages, each culminating in a stage gate, as presented in the project delivery models below. Stage gates are go/no-go points at which the project team must demonstrate that the project has met predefined evaluation criteria before advancing to the next delivery stage. The benefits of the stage gate process include consistency, quality assurance, ensuring that the scope continues to address existing needs, budget/schedule control, and Operations & Maintenance team engagement.

Active Projects by Delivery Model

Design-Bid-Build Active Projects



Design-Build Active Projects



*Projects shown *underlined and in blue and italics* have either been initiated or advanced this reporting period.

CIP PROJECTS

The CIP includes projects in both design and construction phases. This update outlines accomplishments for the past quarter in two sections: Projects in Design and Projects in Construction. For projects in construction and post-construction phases, the CIP uses cost and schedule baselines monitored through the City's Capital Project Management System. Access project performance information at the following link:

Project Performance Information

Projects in Design

- Additional Digester Facility Upgrade
  In January, owner's advisor Carollo Engineers completed the project definition report. In February, the design-builder request for qualifications was advertised. In March, the project scope was expanded to include the Switchgear S2/S2a Replacement, and staff received the statement of qualifications.

- Building 40 VFD Room HVAC Improvements
  During this period, consultant Brown & Caldwell submitted the final conceptual design report, and the project progressed to the preliminary design stage.

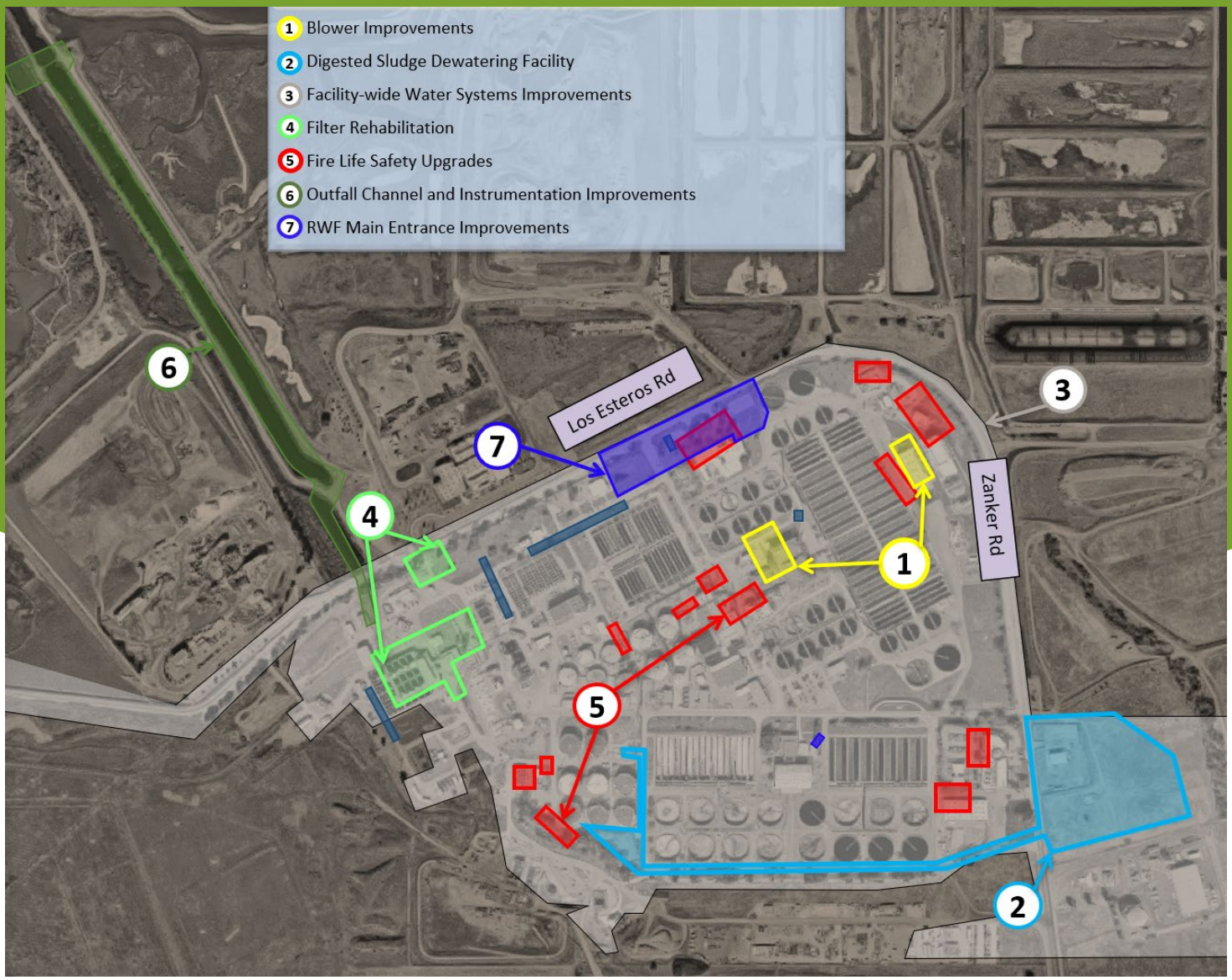
- Camera and Card Reader Upgrades
  During this period, project staff worked with consultant Jacobs to develop and submit the 50% Design and the Project Definition Report.

- HVAC Improvements - Phase 1
  In March, staff authorized consultant CDM Smith to begin preliminary design tasks.

- Yard Piping Improvements - Phase 3
  In February, staff received one responsive bid on the construction contract and posted the Notice of Intent to Award. Council award of the construction contract is anticipated in April.

Projects in Construction

This aerial map of the RWF shows the CIP's active construction projects.



1 Blower Improvements: Oxygenating wastewater with greater energy efficiency

Secondary Blower with Improvements

RWF's aeration blower systems, which supply oxygen for breaking down organic material in wastewater, are more than 30 years old. This project will replace blower engines, gearboxes, and associated control equipment, extending the system's life and enhancing its energy efficiency.

Project Budget: $49.7 million
Achieved Beneficial Use: June 2024
Update:

- During this period, contractor Monterey Mechanical continued to address punch list and warranty items, and compile remaining final deliverables. Final acceptance is expected in May 2025.

2 Digested Sludge Dewatering Facility: Drying biosolids more efficiently and effectively

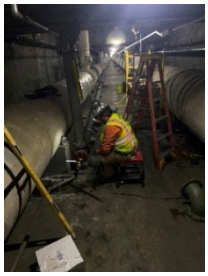
Truck loadout building approaching construction completion

The RWF currently uses an open-air lagoon and drying bed process to stabilize biosolids before landfill disposal. The 2013 Plant Master Plan recommended moving to an enclosed mechanical dewatering process. This project will build a mechanical dewatering facility and support facilities.

Project Budget: $177.0 million
Expected Beneficial Use: October 2025
Update:

- In the main dewatering building, design-builder Walsh completed the channel glass and roofing membrane installation. Polymer, process water, firewater, and storm drain piping systems were installed and successfully pressure tested. Walsh also began installing acoustical panels on the interior siding of the building.
- At the truck loadout facility, the roof installation of electrical conduits for power, control, and lighting was finalized, along with the completion of seismic support welding for the cake bins.
- Walsh also completed interior piping installation within the sludge storage tanks and installed digester gas piping, electrical conduit, and supports atop both tanks. Above-ground piping at the transfer and transport pump stations was installed and pressure-tested, and electrical cable pulling to local panels continued at both stations.
- The pre-commissioning plan was completed.

3 Facility-wide Water Systems Improvements: Improving performance and reliability



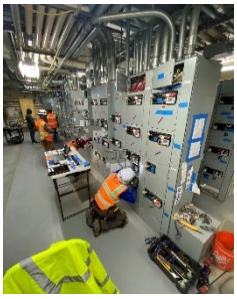
Maintenance in progress on underground piping.

The RWF has five water systems: potable water, groundwater, process water (3W), fire protection water, and recycled water. These systems were constructed at separate times as part of various expansions. The aim of this project is to rehabilitate, replace, and/or extend the RWF's water systems to improve current and future performance and reliability.

Project Budget: $90.4 million
Expected Beneficial Use: June 2027
Update:

- During this period, contractor Ranger Pipelines completed pipe and valve replacement in several areas around the RWF. Electrical conduit work at the cogeneration building progressed, and form and rebar were installed for an airgap tank.

4 Filter Rehabilitation: Protecting health and the environment, increasing reliability and capacity



Master Control Center AF2 Installation Work

The filtration process is one of the final steps in wastewater treatment. The RWF's tertiary filtration process consists of 16 granular media filters and ancillary equipment. Built in the 1970s and 1980s, these components are near the end of their useful lives. The project will rehabilitate structural, mechanical, electrical and instrumentation elements of the system.

Project Budget: $60.0 million
Expected Beneficial Use: May 2025
Update

- During this period, contractor Walsh successfully installed and energized a new motor control center (MCC). This included completing the electrical tie-in with an existing MCC and migrating loads to the new system.
- Walsh also continued to migrate other electrical loads, perform minor equipment demolition and repairs, and compile final deliverables.

5 Fire Life Safety Upgrades: Improving worker health and safety and the environment

Upgrading fire system within Building 40

Several RWF buildings currently lack automated fire alarm systems to monitor and send out a notification in the event of a fire. Fire life safety upgrades are needed to bring the RWF into compliance with current building safety and fire codes.

Project Budget: $7.8 million
Achieved Beneficial Use: October 2024
Update:

- During the period, contractor Blocka Construction continued to work on punch list items and prepare remaining final deliverables. Final acceptance is expected in May 2025.

6 Outfall Channel and Instrumentation Improvements: Reliable water quality reporting at the edge of the Bay

New service station and articulating light pole

The end product of the wastewater treatment process travels through the outfall channel to the Artesian Slough and South San Francisco Bay. This project will replace older technology with a fiber optic system, install new instruments, improve the integrity of the weir structure, and construct a large vault structure to install new flow meter technology, making the meters accessible to staff.

Project Budget: $10.6 million
Achieved Beneficial Use: September 2024
Update:

- During this period, contractor Anvil builders continued to address punch list and warranty work, and to compile remaining final deliverables. Final acceptance is expected in May 2025.

7 RWF Main Entrance Improvements: Modernizing the RWF's main entryway

Initial site prep excavation work

Built in 1988, the existing main gate serves as the RWF's primary vehicle security checkpoint and has lasted beyond its service life. The new entrance will be upgraded to meet Americans with Disabilities Act requirements, the entry and exit lanes will be widened to improve traffic flow for large delivery trucks, and lighting will be improved for clearer nighttime visibility.

Project Budget: $14.0 million
Expected Beneficial Use: April 2026
Update:

- During this period, contractor W.E. Lyons continued underground pipe installation for potable, sanitary, storm, and fire protection water systems. The new sanitary sewer manhole on Los Esteros was completed and vacuum tested and landscaping work began.
- Foundations for the new guard shack and west canopy were excavated and formed and a base was prepared for the east-side Administration Building concrete walkway. Underground conduit installation also continued.

Newly improved outfall bridge with new weir, bridge lights and riprap

What's Ahead?

In April – June 2025:

- Obtain Council approval to award the construction contract for Yard Piping Improvements - Phase 3.
- Obtain Council approval of the Proposed FY26-30 capital and operating budgets.
- Advertise the design-builder request for proposals for the Additional Digester Facility Upgrade project.
- Achieve beneficial use on the Filter Rehabilitation project.
- File the Notice of Completion and Acceptance for three projects – Blower Improvements, Fire Life Safety Upgrades, and Outfall Channel and Instrumentation Improvements.

Fiscal Year 2024-2025 Program Performance Summary

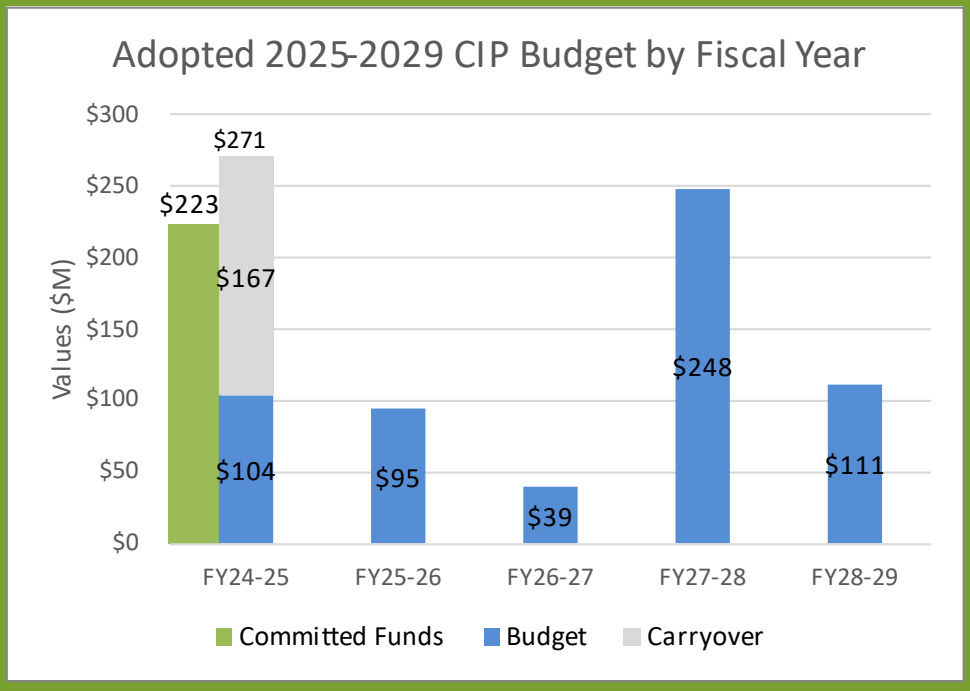
KPI	Target	Fiscal Year to Date			Fiscal Year End		
		Actual	Status	Trend	Forecast	Status	Trend
Stage Gates	90%	100% 16/16[1]			91% 20/22		
Measurement: Percentage of initiated projects and studies that successfully pass each stage gate on their first attempt. Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Schedule	90%	100% 5/5[2]			100% 6/6[3]		
Measurement: Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone.[4] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Budget	90%	80% 4/5[5]			70% 7/10[6]		
Measurement: Percentage of CIP projects that are accepted by the City within the approved baseline budget. Target:Green: >= 90%; Amber: 75% to 89%; Red: < 75							
Expenditures	$189M	$193M			$223M[7]		
Measurement: CIP FY24-25 committed costs. Target: Committed costs meet or exceed 70% of planned budget. 70% of $270M = $189M. Therefore Fiscal Year End Green: >=$189M; Red: < $189M							
Safety	0	0			0		
Measurement: OSHA reportable incidents associated with CIP Delivery for the fiscal year.Criteria: Green: 0 injuries requiring hospitalization, 0 fatality; Amber: 1 to 2 injuries requiring hospitalization, 0 fatality; Red: >2 injuries requiring hospitalization, any fatality							
Environmental	0	0			0		
Measurement: Number of permit violations caused by CIP delivery for the fiscal year. Target: Green: 0 incidents; Amber: 1 to 2; Red: > 2							
Vacancy Rate[8]	10%	15% 11/72			15% 11/72		
Measurement: Ratio of the number of vacant approved positions to approved positions. Target: Green: <= 10%; Amber: 10% to 20%; Red: > 20%							

Program KPI – Fiscal Year 2024-2025 Information

Program Budget Performance

This section summarizes the cumulative monthly budget performance for FY 2024-25 based on the Adopted 2025-2029 CIP Budget.

Adopted 2025-2029 CIP Expenditures and Encumbrances

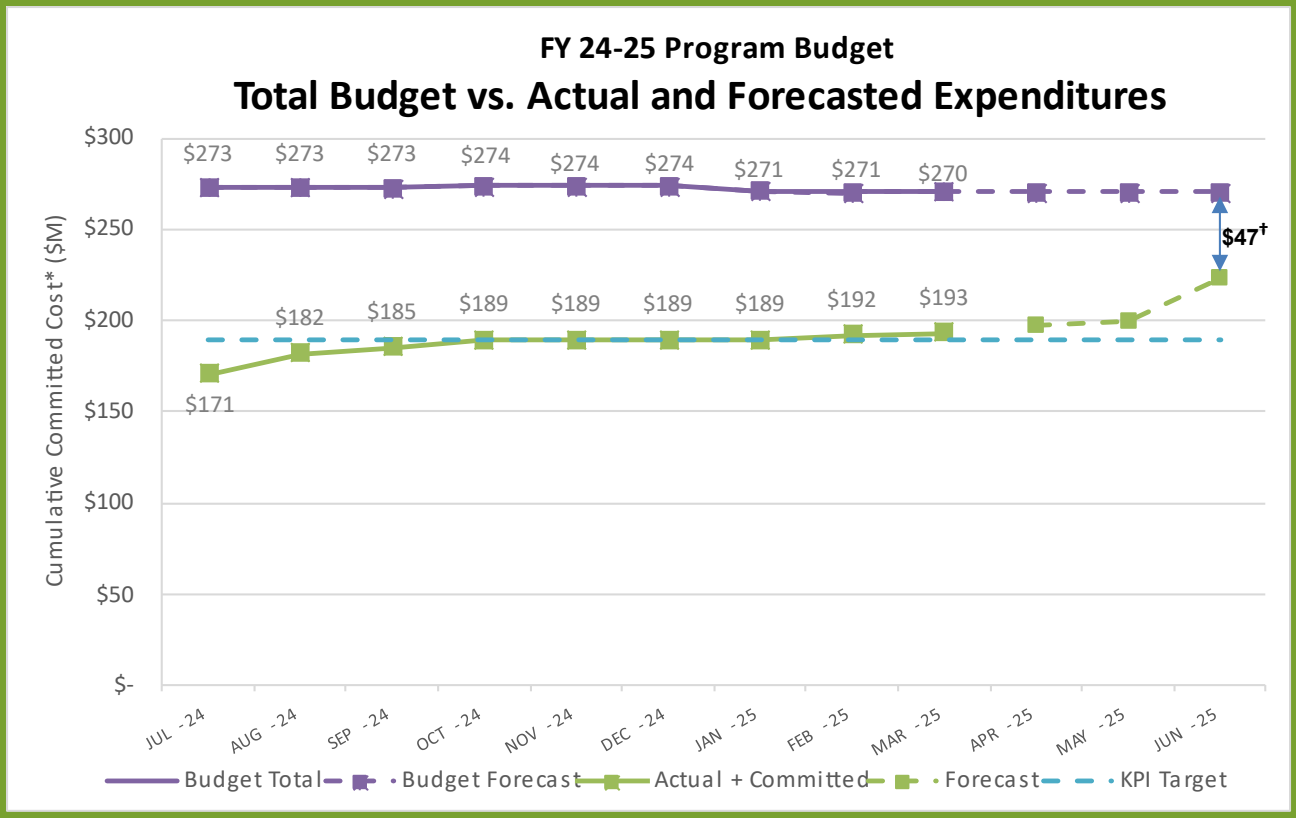


Budget Performance Information

Fiscal Year 2024-2025 Program Budget Performance

The FY 2024-25 CIP budget is composed of approximately $104 million in new and re-budgeted funds, plus encumbered carryover of $167 million, for a total of $271 million.

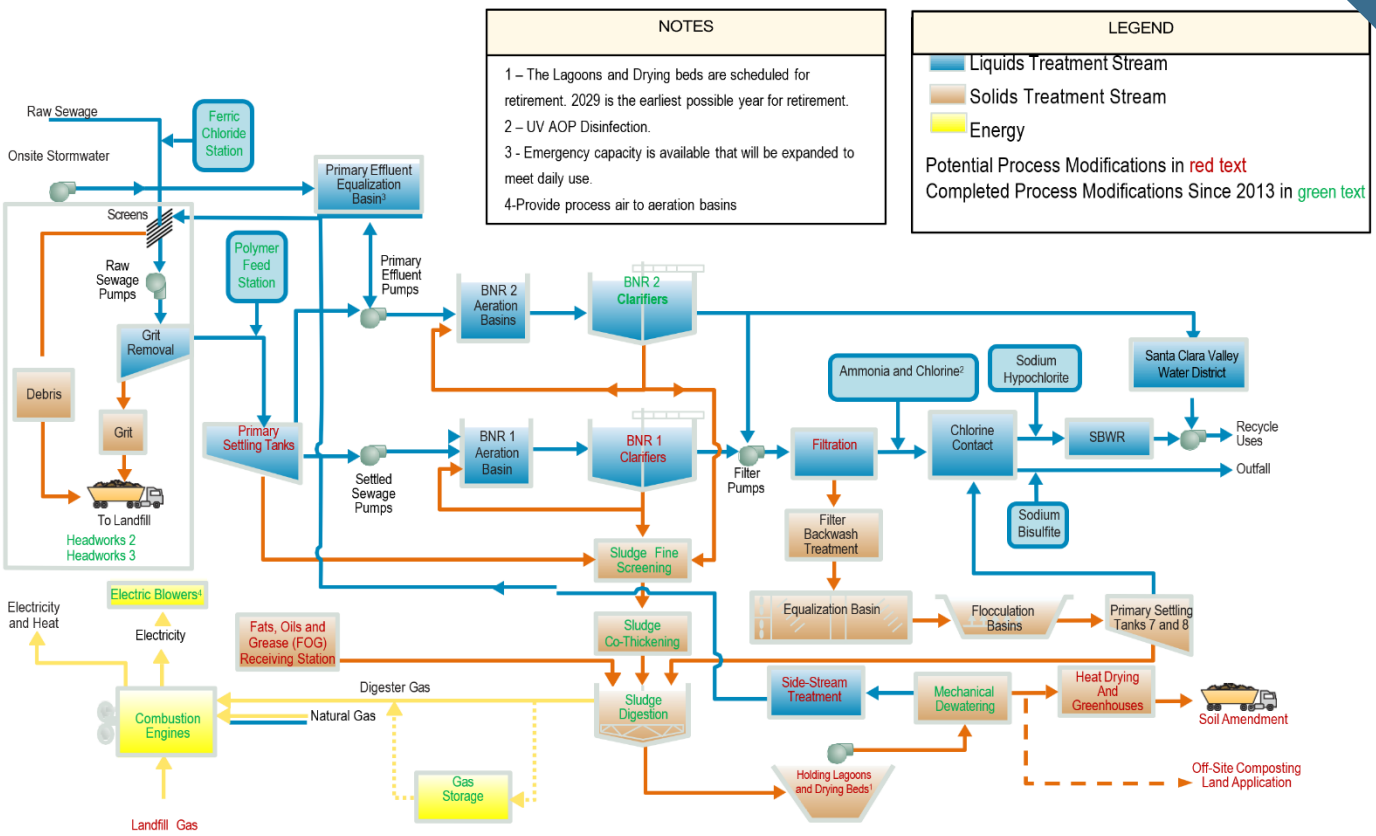
FY 2024-25 Program Budget



CIP Program Budget Information

Regional Wastewater Facility Treatment

Current Treatment Process Flow Diagram



Glossary

Beneficial Use	When a CIP project is complete in accordance with contract documents and can be used or occupied by the City, it has achieved beneficial use.
Biogas	A renewable energy source produced by the breakdown of sewage waste in the absence of oxygen. Biogas is composed of methane, carbon dioxide and small amounts of hydrogen sulfide.
Biosolids	Treated sewage sludge.
Bufferlands	Open acreage used by wastewater treatment plants as a buffer between plant operations and nearby communities. Bufferlands minimize odor and operational impacts on plant neighbors and often serve as wildlife habitat.
Commissioning	The process of assuring that all systems and components of a facility, building or plant are designed, installed, tested, operated and maintained according to the owner's requirements.
DAFT	Dissolved air flotation thickener tanks. Dissolved air flotation, or DAF, is a treatment process that clarifies wastewater by removing suspended matter.
DCS	Distributed control system. A computerized system that allows treatment plant staff to remotely monitor and control treatment processes.
EIR	Environmental Impact Report. A public document required under the California Environmental Quality Act to describe potential environmental impacts associated with a project. An EIR also describes measures to mitigate the impacts.
Effluent	Treated wastewater that is discharged from a treatment plant.
Influent	Raw or untreated wastewater that flows into a treatment plant.
FOG	The Fats, Oils and Grease program administered by the City of San José's Environmental Services Department.
Headworks	Facilities that first receive influent at a wastewater treatment plant. The headworks screen and remove sticks, grit and other solid material from influent to protect downstream equipment in the treatment process.
NPDES permit	Under the federal Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program regulates point sources such as pipes and other conveyances that discharge pollutants into water. In California, NPDES permits for the discharge of treated wastewater are issued by the Regional Water Quality Control Boards.
Polymer	Primarily used to help manage the process of drying and consolidating sludge.
Preliminary treatment	The preparatory wastewater treatment stage, in which influent passes through headworks, which screen and remove sticks, rocks and debris; and grit chambers, which remove sand and gravel.
Primary treatment	The initial treatment for incoming wastewater, in which gravity settles solid material and rotating bars skim floating fats, oil and grease from influent.
Secondary treatment	The second stage of wastewater treatment, in which aeration tanks pump air into wastewater to promote the growth of naturally occurring bacteria that remove organic pollutants.
Stormwater	Water from rain that does not seep into the ground but instead flows into storm drains as runoff.
Tertiary treatment	The final stage in advanced wastewater treatment, in which wastewater flows through filter beds, then through chlorinated tanks to become 99% clean.
Wastewater	Water that enters the sanitary sewer system for treatment at a pollution control plant.
Wastewater Cake	Sludge that is compressed after dewatering.
WAS	Waste-activated sludge, or the excess quantity of bacteria and microbes removed from the secondary wastewater treatment process.