



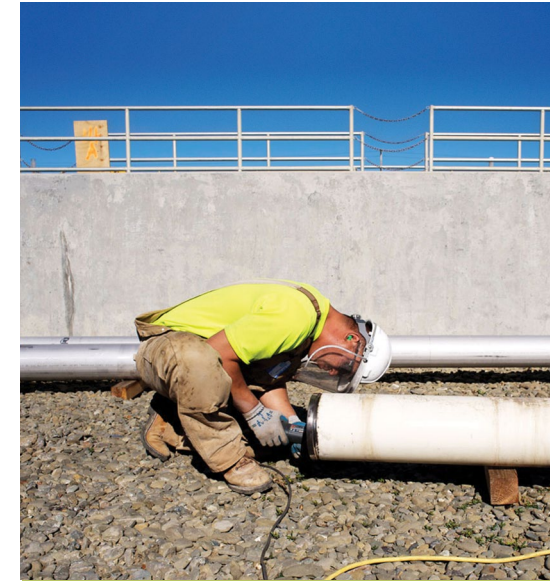
San José-Santa Clara Regional Wastewater Facility Capital Improvement Program

Rebuilding for Operational Reliability, Sustainability and Regulations

After 60 years of nonstop service, protecting public health and the environment, the San José-Santa Clara Regional Wastewater Facility (RWF) needs to be rebuilt. As with much of the nation’s infrastructure built in the 1950s and 1960s, RWF components urgently require rehabilitation or replacement. The City is rebuilding and modernizing the RWF through its Capital Improvement Program (CIP), based on the adopted 2013 Plant Master Plan (PMP), to keep the facility operating at optimal levels into the future. The PMP recommends more than 114 capital improvement projects over a 30-year planning period. San José is currently implementing the first phase of the recommendation with a

10-year, \$1.4 billion CIP to address critical rehabilitation needs and ensure operational reliability, improved process performance through newer technologies, and compliance with regulations to protect the environment and southern San Francisco Bay.

The CIP is one of the largest public works projects in the history of San José. The City has been inclusive and transparent in implementing the CIP. We are also hiring contractors and consulting firms, including small and local business, to promote a strong local economy. All CIP procurement solicitations are listed on the City’s website.



unique challenge

The RWF must remain in constant operation daily; therefore, all CIP construction must occur while ongoing facility operations are underway. Careful scheduling and project phasing are required.



San José-Santa Clara Regional Wastewater Facility

60 years of protecting public health and the environment and supporting the Silicon Valley economy

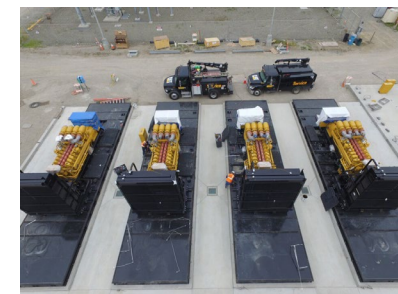
2020-2024 Project Highlights

Updated on a rolling five-year basis, the CIP includes infrastructure rehabilitation at all stages of the treatment process for optimal operations and reliability. Additional information about CIP projects, budgets and schedules is available at www.sjenvironment.org/cip.

Project Name	Benefit	Current Status	Budget Allocation	Estimated Completion
Headworks	The headworks enhances and protects RWF downstream processes by removing debris and grit from the raw wastewater entering the facility. The new headworks will replace the existing 60-year old facility to ensure future reliability.	This design-build project is progressing through 30% design. Construction is anticipated to start in early 2020.	\$167 million	Late 2022
Blower Improvements	Aeration blower systems supply the oxygen that is essential for the biological treatment process. The RWF's existing blowers and components are more than 30 years old and in need of rehabilitation. This project will replace and rehabilitate the existing aeration blower systems to increase reliability.	Construction is 15% complete.	\$47 million	Late 2022
Nitrification Clarifiers Rehabilitation - Phase 1	Clarifiers are essential components of the biological treatment process at the RWF, allowing for the separation of the solids (sludge) and liquid components of wastewater. The existing clarifier mechanisms are more than 35 years old and nearing the end of their useful life. This project will rehabilitate and replace the mechanisms for eight of the 16 clarifiers to maintain operational reliability.	Bids were received in July. Award is anticipated in October and construction is scheduled to begin in November/December 2019.	\$64 million	Late 2023
Digester and Thickener Facilities Upgrade	Separated solids (sludge) are pumped into special tanks that contain no oxygen (anaerobic digesters), where microbes decompose them to reduce the volume and produce gas that is used to make electricity. The first phase of this project will rehabilitate and modernize four anaerobic digesters to enhance gas production and energy self-sufficiency, equipment safety, odor mitigation, and future reliability.	Construction is 75% complete.	\$201 million	Late 2020
Cogeneration Facility	Large generators convert the gas produced in the anaerobic digesters into electricity for RWF operations. The existing generators are more than 35 years old and past their useful life. This project will install four new engines, a heat recovery system, and a gas treatment system to improve operational reliability and efficiency and enable full reuse of the digester biogas.	Construction is 33% complete.	\$113 million	Mid 2020
Digested Sludge Dewatering Facility	The RWF currently dries (dewater) digested solids in open-air drying beds before landfill disposal. This project will replace the existing operation with a fully enclosed mechanical drying process. The new process will enable the RWF to discontinue the practice of solids disposal at landfills in order to comply with new state regulations, produce a final product with a variety of beneficial reuse options, free up 750 acres of RWF land for alternative uses, and reduce odors in the community.	Project is in the bid and award phase. Award of a design-build contract is anticipated in late 2019, with construction starting in early 2021.	\$128 million	Early 2023

Latest Recognition for Excellence

- **2018:** The Emergency Diesel Generators project received the Project of the Year award from the Silicon Valley Chapter of the American Public Works Association (APWA)
- **2017:** The Digester and Thickener Facilities Upgrade project received the Engineering Excellence Honor award for 3D Scanning, Modeling and Mapping from the American Council of Engineering Companies (ACEC)



New Emergency Diesel Generators



Thermophilic Digesters in construction



New Cogeneration Facility in construction

Employee photos © Robert Dawson, courtesy of the City of San José Public Art Collection

Aerial photos courtesy of the CIP

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