



# Memorandum

**TO:** TRANSPORTATION AND  
ENVIRONMENT COMMITTEE

**FROM:** Kerrie Romanow  
Matt Loesch

**SUBJECT:** SEE BELOW

**DATE:** 2/12/24

Approved

Date

2/15/24

**SUBJECT: SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY  
CAPITAL IMPROVEMENT PROGRAM ANNUAL STATUS REPORT**

## RECOMMENDATION

Accept the annual status report on the San José-Santa Clara Regional Wastewater Facility (RWF) Capital Improvement Program (CIP) for the period of January through December 2023.

## BACKGROUND

The San José and Santa Clara City Councils adopted the Plant Master Plan (PMP) in November 2013 and December 2013, respectively. The PMP identified more than 100 capital improvement projects totaling over \$2.1 billion to be implemented at the RWF over 30 years. A validation process was completed in early 2014 to update and prioritize the recommended PMP projects and additional gap projects into 33 projects to be initiated over ten years. Beginning in fiscal year 2014-2015, the validation process was used to inform the five-year CIP and ten-year funding strategy. The 2024-2028 Adopted CIP includes approximately \$816 million in funding, of which approximately \$639 million is for construction. To provide visibility and accountability for this significant CIP effort, staff began providing formal semiannual status reports to Transportation & Environment Committee, the Treatment Plant Advisory Committee, and City Council in spring 2013, and annual status reports starting in 2023.

The first semiannual status report was published in April 2013 and focused on progress and activities from July 2012 through December 2012. This report is the 21st in the report series and highlights key program and project accomplishments in the 2023 calendar year. This report also complements CIP status reports that staff issued monthly from April 2014 through April 2021 and quarterly beginning in May 2021; these reports provide more frequent and time-relevant updates. Through December 2023, 94 monthly and quarterly reports have been issued. Copies of these reports are available at: <https://www.sanjoseca.gov/your-government/departments->

[offices/environmental-services/water-utilities/regional-wastewater-facility/capital-improvement-program/cip-document-library/](#)

## **ANALYSIS**

During this reporting period, dedicated staff and contractors continued to make progress on critical CIP projects. No incidents were reported to the State's Division of Occupational Safety and Health from January through December 2023.

The CIP reached significant milestones during this reporting period:

### **A. Headworks Project Completed**

The Headworks project, one of the largest CIP projects with a total budget of \$172 million, was completed on budget in December. This project upgraded the equipment for raw wastewater pre-treatment to enhance and protect downstream treatment processes. The project replaced Headworks 1, one of the oldest systems in RWF, with a new Headworks 3. It also modified Headworks 2, which is the wet-weather headworks that provides extra capacity during storms.

The Headworks project was the CIP's second progressive design-build project. It involved an integrated team of City staff from Environmental Services and Public Works, engineering and program management consultant staff, and the design-builder (CH2M HILL Engineers). The project team had to navigate technical challenges, such as coordinating the hydraulics of nine raw sewage influent pipes with the new and existing headworks and routing a 96-inch pipe through over 200 utility conflicts. They also had to ensure construction did not interfere with endangered species such as burrowing owls and nesting raptors. The team accomplished all of this while working through COVID-19 restrictions.

### **B. State of the CIP**

In the fall, staff celebrated ten years of the CIP. Over the past decade, the CIP team has reached significant milestones, including completing 26 critical rehabilitation and upgrade projects and earning numerous awards and recognition. Major project accomplishments include construction of a new cogeneration facility and headworks, rehabilitation and conversion of digesters, and completion of the RWF's plant electrical reliability projects. Looking at the next ten years, the CIP still has important work to do, including three large rehabilitation projects that are underway or will soon be initiated:

1. Additional Digester Facility Upgrade,
2. Aeration Basin Modifications, and
3. Primary Rehabilitation

Staff continues to develop the scope, as well as delivery and funding strategies, for these major undertakings. Planning also continues on other critical capital improvement projects as staff work to ensure the reliable treatment of wastewater at the RWF.

On the project delivery front, there were 20 active projects at various stages of the project delivery model during this reporting period.

*A. Feasibility/Development Highlights*

Five projects were in the feasibility/development phase during the 2023 calendar year.

Key activities completed during this period include the following:

- **Additional Digester Facility Upgrade:** During this period, the project team advertised a Request for Proposals for owner's advisor services and selected a consultant. The agreement was approved by Council in January 2024.
- **Yard Piping Improvements - Phase 3:** During this period, the consultant performed condition assessments of several large-diameter pipes. The project team finalized the project scope and started to evaluate rehabilitation methods and develop the conceptual design report.

*B. Design /Bid and Award Highlights*

Five projects were in the design or bid/award phase at the end of December 2023. Key activities completed during this period include the following:

- **Facility-wide Water Systems Improvements:** During this period, staff completed the design and advertised the construction contract. Bids were received in August and Council awarded the contract in January 2024. Construction is expected to start in spring 2024 with substantial completion in fall 2026.
- **RWF Main Entrance Improvements:** During this period, the project team completed hazardous materials testing of soil samples. The consultant continued to progress the design. Final 100% design and advertisement of the construction contract are expected in January and February, respectively.
- **New Headworks Access Road:** In 2023, the project team completed the final 100% design. Staff expect to advertise the construction contract in February.

*C. Construction Highlights*

Ten projects, totaling approximately \$438 million, were in construction during the period ending December 2023 (see Attachment A). Two of the ten projects are being delivered using the progressive design-build method, with the remaining eight projects being delivered using the design-bid-build approach. Also, two projects, Advanced Facility Control & Meter Replacement – Phase 2 and Headworks, reached beneficial use.

Key activities completed during this period include the following:

- **Advanced Facility Control & Meter Replacement – Phase 2:** During this period, the contractor completed 28-day operational testing on various equipment installed in the East Primaries and Secondary Battery A areas. Substantial completion was achieved in June.
- **Blower Improvements:** In January, the contractor completed the 28-day operational testing on Secondary Blower Building Blowers #2 and #3. In May and June, the contractor completed asbestos and lead remediation, as well as demolition and removal of old blower equipment and piping in the A-side of the Secondary Blower

- Building. In the fall, punch list, warranty work and project close-out activities continued. Through December, construction was approximately 97% complete. Substantial completion is expected in January 2024.
- **Digested Sludge Dewatering Facility:** In the beginning of the year, the design-builder completed dewatering of the site, and completed concrete work in various areas. In May and June, the design-builder completed tank foundations in the sludge storage and pump station area and completed piping in the east section of G Street. In the fall, work in the sludge storage tank, the main dewatering facility, and the truck loadout facility continued. Through December, construction was approximately 50% complete.
  - **Filter Rehabilitation:** In February and March, the contractor installed new media and air scour piping and completed testing for Filters B3 and B4. In April, the conduits for the new valves in Filter Gallery A were installed. Additional potholing and excavation work was completed at the Switchgear S6 location, and abandoned duct banks and other facilities were removed. In August, the contractor completed functional and operational testing of the A-side filters, which were returned to service. In September, work on the B-side filters continued, and installation of all Filter Gallery B valves was completed, which allowed an additional eight filters to be brought online before the onset of the wet-weather season. Replacement of old electrical equipment continued, and power was migrated to the new devices as they became available through closely coordinated short-term shutdowns. Through December, construction was approximately 80% complete.
  - **Fire Life Safety Upgrades:** This year, the contractor completed fire alarm systems installation in eight buildings and continued installation work in five other buildings. Through December, construction was approximately 70% complete.
  - **Headworks:** In February, the design-builder commenced operational testing for the new headworks (Headworks 3) and continued equipment tuning and other minor works. Substantial completion was achieved for Headworks 3 in June. The design-builder continued other work including installation of a 24-inch storm drain pipe, dewatering of a 102-inch pipe, installation of new sump pumps in the P&E Building, meter replacement at the South Meter Vault, and cap-off of Headworks 1 inlet and outlet pipes. Substantial completion for the entire project was achieved in December.
  - **Nitrification Clarifiers Rehabilitation - Phase 1:** In January, the project team completed 28-day operational testing on Clarifiers A2, A5 and A8. The team also installed mechanisms in Clarifiers A4, B3 and B5 and nine dewatering wells. Factory acceptance testing for the new Battery B motor control center was also completed. In June, the contractor installed mechanisms, weir baffles and deflectors in Clarifiers B3 and B5, repaired underground conduits, poured a concrete pad and installed a new motor control center. In August, wire pull, termination and energization of the new motor control center for Battery B Clarifiers was completed. In September, grouting of Clarifier B7 continued and operational testing of Clarifiers B3 and B5 began. Operational testing of the new electrical and control systems for the Battery B nitrification clarifiers was completed in October. In the fall, punch list, warranty work

and project close-out activities continued. Substantial completion for the project was achieved in October.

- **Outfall Channel and Instrumentation Improvements:** During this period, the contractor completed rip rap installation at the weir of the outfall bridge; installed control panels, electrical conduits, piping, lighting, flow meters, valves and drains, and sump pumps at various work areas including the daylight station, Sulfur Dioxide (SO<sub>2</sub>) Building and Filter Influent Building. In October, the contractor began pre-operational testing of equipment. Due to COVID-19 and other geopolitical events, the project team encountered unexpected delays in the manufacture and delivery of the electrical transformer and is coordinating closely with the contractor and manufacturer to mitigate additional schedule delays. Through December, construction is approximately 85% complete.
- **Storm Drain System Improvements:** During this period, the contractor removed and replaced several pipes on 5th Street near the main gate exit area, and along Los Esteros and Zanker Roads. The contractor also cleaned several pipe segments across the RWF. In April and May, the contractor drained, washed, sandblasted, and applied prime coat and epoxy inside the wet wells at the Stores, Los Esteros and Zanker Pump Stations. They also installed concrete light pole footings at four pump stations; connected a catch basin to a manhole; constructed concrete slab and ramp at Tunnel Entry 3; installed all necessary bollards and painted them; and constructed the access road to the Outfall Pump Station. In September, new electrical equipment was installed at the Zanker, Los Esteros, Legacy Lagoon, and Stores Pump Stations. Energization of the Outfall Pump Station was completed, and the pump station was returned to service. Through December, construction was approximately 75% complete.
- **Yard Piping Improvements – Phase 2:** In April, Council awarded the construction contract. In July, the contractor completed flow isolation, pipe cleaning, and pre-rehabilitation CCTV on the 84” primary effluent pipe. Partial depth concrete crown repair was completed on the 84” PE and 84” secondary effluent pipes. Functional and operational testing of the 84” PE and 84” SE pipes was completed, and both pipes were returned to service. The contractor began wet season work and completed the condition assessment of the existing wood structure at Effluent Junction Structure 1.

Staff expects to achieve the following by the end of December 2024:

1. Reach substantial completion on the Blower Improvements, Filter Rehabilitation, Fire Life Safety Upgrades, Nitrification Clarifiers Rehabilitation – Phase 1, Outfall Channel and Instrumentation Improvements, Storm Drain System Improvements and Yard Piping Improvements Phase 2 projects;
2. Advertise a Request for Proposals for owner’s advisor services on the Aeration Basin Modifications Phase 1 project, and construction contracts for RWF Main Entrance Improvements and New Headworks Access Road projects; and
3. Obtain Council approval to award the construction contracts for Facility-wide Water Systems Improvements, RWF Main Entrance Improvements, and New Headworks Access Road projects.

**COORDINATION**

This report has been coordinated with the Office of the City Attorney and the City Manager's Budget Office.

/s/  
KERRIE ROMANOW  
Director, Environmental Services

/s/  
MATT LOESCH  
Director, Public Works

For questions, please contact Mariana Chavez-Vazquez, RWF General Manager, Environmental Services Department at (408) 506-3759.

**ATTACHMENT:** Projects Under Construction: January 2023 – December 2023

**ATTACHMENT A**

**Projects Under Construction: January 2023 – December 2023**

#	Project Name	Contractor	Amount Awarded	Date Awarded	Actual/ Estimated Beneficial Use
1.	8868 – Advanced Facility Control Meter Replacement - Phase 2	Kiewit Infrastructure West Co.	Base Contract: \$7,046,100 Contingency: \$1,409,220	6/02/20	Summer 2023
2.	8073 – Blower Improvements	Monterey Mechanical Company	Base Contract: \$29,498,000 Contingency: \$4,425,000	10/30/18	Winter 2024
3.	7758 – Digested Sludge Dewatering Facility	Walsh Construction Company II, LLC	Base Contract: \$131,161,646 Contingency: \$12,115,379	3/01/22	Fall 2025
4.	7448 – Filter Rehabilitation	Walsh Construction Company II, LLC	Base Contract: \$33,290,577 Contingency: \$6,658,000	10/20/20	Fall 2024
5.	8781 – Fire Life Safety Upgrades	Blocka Construction, Inc.	Base Contract: \$2,839,000 Contingency: \$425,850	8/23/22	Spring 2024
6.	7701 – Headworks	CH2M HILL Engineers, Inc.	Base Contract: \$126,874,142 Contingency: \$13,569,730	6/19/18	Winter 2024
7.	7731 – Nitrification Clarifiers Rehabilitation - Phase 1	C. Overaa & Co.	Base Contract: \$26,184,000 Contingency: \$10,437,000	10/22/19	Fall 2023
8.	7745 – Outfall Channel and Instrumentation Improvements	Anvil Builders Inc.	Base Contract: \$4,297,570 Contingency: \$644,636	12/02/21	Summer 2024
9.	8748 – Storm Drain System Improvements	Ranger Pipelines, Inc.	Base Contract: \$6,333,000 Contingency: \$1,266,600	3/22/22	Summer 2024
10.	9850 – Yard Piping Improvements – Phase 2	Michels Trenchless	Base Contract: \$16,855,430 Contingency: \$2,528,314	4/25/23	Winter 2025