

Memorandum

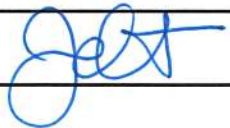
TO: TRANSPORTATION AND
ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Matt Cano

SUBJECT: SEE BELOW

DATE: September 18, 2019

Approved



Date

9-25-19

**SUBJECT: SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY
CAPITAL IMPROVEMENT PROGRAM SEMIANNUAL STATUS
REPORT**

RECOMMENDATION

Accept the semiannual status report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program for the period of January 2019 through June 2019.

OUTCOME

The purpose of this semiannual status report is to provide an update on the implementation of the Capital Improvement Program (CIP) at the San José-Santa Clara Regional Wastewater Facility¹ (RWF) by highlighting key accomplishments during the second half of fiscal year 2018-2019 to the Transportation and Environment Committee (T&E), the Treatment Plant Advisory Committee (TPAC), and City Council (Council).

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 the next 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 10 years. Beginning in fiscal year 2014-2015, the validation process was used to inform the five-year CIP and ten-year funding strategy. The 2019-2023 adopted CIP includes approximately \$1.4 billion in funding, of which approximately \$895 million is for construction. To provide visibility and accountability

¹ The legal, official name of the facility remains San José/Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.

for this significant CIP effort, staff began providing formal semiannual status reports to T&E, TPAC, and Council in spring 2013.

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 fourteenth in the report series and highlights key program and project accomplishments from January 2019 through June 2019. This report also compliments monthly CIP status reports, which staff began issuing in April 2014 to provide more frequent and time-relevant updates. Through June 2019, 63 monthly reports had been issued. Copies of the monthly reports are available at

<http://www.sanjoseca.gov/Archive.aspx?AMID=190>

ANALYSIS

Significant progress was made in key program areas from January 2019 through June 2019.

A. Biosolids Disposition Market Assessment and Procurement Strategy

In January, as one of the first steps of the RWF's biosolids transition efforts, staff held a kickoff meeting for the biosolids market assessment. During March, the project team surveyed 11 wastewater agencies and 16 potential service providers, including soil blenders and product marketers, to gather information on the current and future market for biosolids transportation and disposition services in the Bay Area. This was followed by several site visits in April and May to validate the survey responses received. In May, staff held a workshop to present the findings and conclusions of the market assessment. Staff will present an update on the market assessment to the Treatment Plant Advisory Committee (TPAC) in September. The project team will continue to develop the procurement strategy and implementation plan during the first half of fiscal year 2019-2020.

B. Recruitments

During the second half of fiscal year 2018-2019, staff successfully filled 13 vacant positions including a principal engineer, a senior engineer, three associate engineers, two civil engineers, a sanitary engineer, a principal construction inspector, a supervising environmental services specialist, two engineering technicians, and a staff specialist. Recruitment for senior engineer, sanitary engineer, and civil engineer positions to support project delivery will continue to be a priority during the first half of fiscal year 2019-2020.

On the project delivery front, there were 20 active projects across various stages of the project delivery model.

A. Feasibility/Development Highlights

Five projects were in the feasibility/development phase during the second half of fiscal year 2018-2019. Key activities completed during this period include the following:

- **Facility-Wide Water Systems Improvements:** In April, the design consultant began conceptual design and development of construction documents to procure a contractor to perform subsurface utility investigations for the project in spring 2020.
- **HVAC Improvements:** The design consultant completed the conceptual design report and began a hazardous materials survey for the project.
- **Storm Drain System Improvements:** In May, the design consultant completed the alternatives analysis report for existing pump stations and storm drain pipes.
- **Yard Piping and Road Improvements:** The project team conducted a series of workshops to review the findings and recommendations from condition assessments completed in summer 2018. The team also began planning the process shutdowns needed to perform condition assessments in summer 2019.

B. Design Highlights

Nine projects were in the design phase during the second half of fiscal year 2018-2019.

Key activities completed during this period include the following:

- **96-inch and 87-inch Settled Sewage Pipes Rehabilitation:** The design consultant completed the 50 percent design in January and final design in May. In April, the City completed a pre-qualification process for the project and determined that three of the six interested firms were qualified to bid on the contract, which will be advertised in July.
- **Advanced Facility Control & Meter Replacement – Phase 2:** During this period, the project team developed the contractor pre-qualification documents, which is anticipated to post in July. The design consultant continued detailed design work, which will be completed in August.
- **Digested Sludge Dewatering Facility:** The project team conducted interviews with three proposers to select a design-builder, and in February began negotiations for preliminary services with the top-ranked design-build entity. The project team will recommend to award the preliminary services contract to Council in September 2019.
- **Filter Rehabilitation:** The design consultant progressed the detailed design. In February, the design consultant completed site investigation work including geotechnical drilling, structural reconnaissance, and electrical infrastructure verification. The project team also began developing the contractor prequalification documents.
- **Fire Life Safety Upgrades and Outfall Bridge and Instrumentation Improvements:** The design consultants for both projects completed conceptual design and began preliminary design work.
- **Headworks:** In May, the design-builder completed the Basis of Design Report and 30 percent design documents. The design-builder also began subsurface investigations of the new headworks site, which will be completed in July. During this period, project workshops continued with the project team and design builder focusing on startup and acceptance testing, cost estimate reviewing, process control, condition assessment planning, equipment selection, and project risks.

- **Nitrification Clarifiers Rehabilitation - Phase 1:** In April, the design consultant completed the 90 percent and final designs. The City also completed the pre-qualification process and determined that all six interested contractors were qualified to bid on the project, which was advertised in May. Bids will be opened in July.
- **Switchgear M4 Replacement and G3 & G3A Removal:** The design consultant completed the 60 percent and 90 percent designs.

C. Construction Highlights

Four projects totaling more than \$232 million were in construction during the second half of fiscal year 2018-2019 (see Attachment A). One of the four projects is being delivered using the progressive design-build method, with the remaining three projects being delivered using the design-bid-build approach. Key activities completed during this period include the following:

- **Advanced Facility Control & Meter Replacement – Phase 1:** In January, the contractor completed the hazardous material survey, and ordered long-lead time equipment. In May, the contractor began installing new flowmeters, control valves, and associated piping in the Battery B secondary tunnels and the secondary returned activated sludge (RAS) meter vaults, aeration tank influent flow meters, and associated piping in the RAS meter vaults, and mounted stands for the dissolved oxygen sensors and transmitters. The contractor also started installing new flow transmitters, surface conduit, power and signal wires for the equipment. Through June 2019, construction was approximately 47 percent complete.
- **Blower Improvements:** In January, staff issued the Notice to Proceed (NTP) to Monterey Mechanical Construction. The contractor completed pre-assessment of all ten existing blowers to establish baseline operating conditions, and prepared critical submittals for the blower motors, switchgear, reduced voltage starters, and variable frequency drives. The existing concrete block walls in Building 40, and electrical and air filtration equipment in the Tertiary Blower Building, were demolished.
- **Cogeneration Facility:** The design-builder completed the concrete masonry unit walls of the main generator building and the power and air operations center building; and installed column anchors in the main generator building in preparation for the placement of bridge crane columns and rails. Through June 2019, construction was approximately 50 percent complete.
- **Digester and Thickener Facilities Upgrade:** During this period, the contractor completed the roofing and concrete parapet walls and installed air conditioning units and foul air collection ducts in the new sludge screening building. The contractor installed and tested the compressed digester gas piping to the cogeneration facility connection point and installed and tested gas piping from the remote digesters (9-16) to the existing flare. The contractor also poured concrete for polymer tanks and pump pads, electrical building foundations, and elevated pipe rack footings and columns. The roofs on Digesters 5, 6 and 8 were completed, and the contractor installed most of the new mechanical equipment inside them. In addition, the contractor completed the installation and pre-operation testing of two of four new master control centers in the existing sludge control building.

Seismic Redesign – The contractor made significant progress on the digester ring beam foundations and had completed the majority of concrete placement for Digesters 5-8.

Handling and Mitigation of polychlorinated biphenyls (PCBs) – In June, the contractor completed the final mitigation of PCB-impacted concrete in the last digester (Digester 7). All PCB-impacted waste material was transported off-site to landfills approved for this purpose. This marked the conclusion of PCB mitigation and the final report is due to the Environmental Protection Agency (EPA) in August.

Through June 2019, construction was approximately 75 percent complete. The project is expected to reach beneficial use in fall 2020.

Two projects were in post-construction during this period, including Construction-Enabling Improvements and Plant Instrument Air System Upgrade.

Staff, contractors, and consultants continue to work safely and there were no reportable incidents to the State's Division of Occupational Safety and Health (Cal/OSHA) during the second half of fiscal year 2018-2019.

Staff expects to achieve the following during the first half of fiscal year 2019-2020:

1. Obtain Council approval to award the preliminary services contract for the Digested Sludge Dewatering Facility project and establish a guaranteed maximum price not-to-exceed amount for Headworks project.
2. Obtain Council approval to award construction contracts for the Nitrification Clarifiers Rehabilitation Phase 1, 96-inch and 87-inch Settled Sewage Pipes Rehabilitation, and Switchgear M4 Replacement and G3 and G3A Removal projects.
3. Finish the 30 percent design and advertise the Fire Life Safety Upgrades project for bid.
4. Continue design on five projects: Advanced Facility Control and Meter Replacement Phase 2, Filter Rehabilitation, Headworks, HVAC Improvements, and Outfall Bridge and Instrumentation Improvements.
5. Prequalify contractors for the Advanced Facility Control and Meter Replacement - Phase 2, Filter Rehabilitation, and HVAC Improvements projects.
6. Amend the master consultant agreements for general engineering services and construction management services.
7. Develop a biosolids procurement strategy and implementation plan.
8. Develop a construction management strategy and testing, startup, and commissioning plan in anticipation of increased construction and commissioning activities in fiscal years 2019-2020 and 2020-2021.
9. Continue recruitment activities to fill remaining RWF CIP vacancies.

EVALUATION AND FOLLOW-UP

No follow-up action is required at this time. Staff will continue to provide regular updates to inform T&E, TPAC, and Council of significant changes or issues (particularly as related to rate impacts) as implementation of the CIP progresses. In addition to semiannual presentations, staff will continue to share monthly progress reports with TPAC.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the October 7, 2019, T&E agenda.

COORDINATION

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

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the October 10, 2019, TPAC meeting.

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Information Memos that involve no approvals of any City action.

/s/
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/s/
MATT CANO
Director, Public Works

For questions, please contact Napp Fukuda, Assistant Director, Environmental Services Department at (408) 973-5353.

Attachment A – Projects in Construction: January 2019 – June 2019