



Memorandum

TO: TRANSPORTATION AND
ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Barry Ng

SUBJECT: SEE BELOW

DATE: 04-16-15

Approved

Date

4/21/15

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

RECOMMENDATION

Accept the semiannual status progress report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program (CIP) for the period July through December 2014.

OUTCOME

The purpose of this semiannual status report is to provide the Transportation and Environment Committee (T&E), the Treatment Plant Advisory Committee (TPAC), and Council with a progress update on capital program implementation at the San José-Santa Clara Regional Wastewater Facility, and more specifically, to highlight key accomplishments achieved during the first half of fiscal year 2014-2015.

BACKGROUND

The San José and Santa Clara City Councils adopted the Plant Master Plan (PMP) in November and December 2013, respectively. The PMP identified more than 100 capital improvement projects totaling over \$2.1 billion to be implemented at the San José-Santa Clara Regional Wastewater Facility (RWF) over the next 30 years. A validation process was completed in early 2014 to update and prioritize the recommended PMP projects into 33 construction packages to be initiated in the next ten years. The validation process was used to inform the five-year CIP and ten-year funding strategy. The 2015-2019 adopted CIP includes funding in the amount of \$926 million, of which approximately \$702 million is for construction projects. To provide visibility and accountability for this significant CIP effort, staff began providing formal semiannual status reports to the 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 through December 2012. Three subsequent semiannual reports were

published in October 2013, April 2014, and October 2014, respectively. With the establishment of the MWH/Carollo consultant program management team, a new monthly CIP status report was established to provide more frequent and time-relevant updates. The first CIP monthly status report was issued to TPAC in April 2014 with a total of 11 monthly reports issued to date. This semiannual status report is provided to T&E, TPAC, and Council to highlight key program and project accomplishments achieved for the period July through December 2014 and serves to complement the monthly reports. Copies of the monthly reports are available online at <http://www.sanjoseca.gov/Archive.aspx?AMID=190>.

ANALYSIS

For the period July through December 2014, significant progress was made in several program areas including:

A. *Development of a Preliminary Ten-Year CIP Funding Strategy*

Staff continued its work on a ten-year funding strategy to support implementation of the 33 construction packages identified through the project validation effort. A special session was held with the Technical Advisory Committee (TAC), which includes staff representing the City of Santa Clara and Tributary Agencies, on September 22, 2014 to discuss guiding principles, approach for the ten-year funding strategy including policy considerations and financing best practices, and key assumptions and next steps for development and implementation of the funding strategy. In October, staff also met with the State Water Resources Control Board to discuss the use of the Clean Water State Revolving Funds as a potential funding source.

B. *Biosolids Transition Strategy*

The proposed transition from the current open air sludge lagoons and drying bed operations to a new enclosed mechanical dewatering and thermal drying process is one of the most technically significant and costly process and operational changes recommended by the PMP. At the April 10, 2014 Biosolids Study Session, staff presented preliminary information on the Biosolids Transition Strategy and was directed by TPAC to continue its work to further evaluate the impact on operations and maintenance costs, explore options for producing Class A biosolids instead of Class B biosolids and expandability of the facility in the future, and evaluate the impacts of odors. A special TPAC meeting was held on November 20, 2014 to summarize the outcome of a market research analysis to determine market interest in the processing and/or disposition of Class A and/or Class B biosolids, discuss options for producing Class A biosolids, present business case analysis, including site alternatives and cost implications for the biosolids transition. On December 2, 2014, Council approved two of seven staff recommendations as related to the Biosolids Transition with direction to bring back all other recommendations in spring 2015.

C. *RWF Odor Control Study Approval of an Odor Control Strategy*

Staff commissioned an Odor and Corrosion Control Study in August 2014 to validate the odor control goals assumed in the PMP, establish the odor fence line at which the odor

goal is to be met, build upon previous sampling efforts to inform the baseline odor dispersion model, and develop a detailed odor control implementation plan. The odor control strategy for the RWF was presented to the TPAC on November 13, 2014 and approved by Council on December 2, 2014, respectively.

D. Project Delivery and Procurement Strategy

Staff continued to explore the viability of alternative project delivery methods including following developments at the State legislature level on Senate Bill 785 (Wolk) which will consolidate various design-build authorities for special districts, local and state agencies, and authorize the use of design-build, using either a low bid or best value selection method, for projects over \$1,000,000. The intent is to provide maximum flexibility and efficiency in project delivery method and professional services procurements. Staff also organized a Vendor Open House in September that offered a tour of the RWF and outlined the upcoming projects and contracting opportunities. Over 80 vendors attended the event.

E. Advancement of Nine Programmatic Studies

Six new service orders were awarded totaling approximately \$4 million to advance nine programmatic studies: 1) Design and Criteria Basis, 2) Aeration and Biosolids Assessment, 3) Odor and Corrosion Control Study, 4) Automation Master Plan and Process Control Approach, 5) Yard Piping Condition Assessment Plan, 6) Facility-wide Heating and Cooling Demands, 7) Facility-wide Process Risk Assessment, 8) Asset Management Strategy and Approach, and 9) Architectural Guidelines. Most of this work is expected to be completed by summer 2015.

In addition, 25 active projects progressed through various phases of the project delivery model as further discussed below:

A. Construction Activity Highlights

The fiscal year kicked off with eight projects totaling more than \$34 million entering into active construction. Two of the eight projects are being delivered using design-build low bid project delivery method, with the remaining six projects being delivered utilizing conventional design-bid-build project delivery method. Projects under active construction are summarized in Attachment A.

Key construction activities highlighted for this period include:

- Digester Gas Storage Replacement – contractor mobilization, approval of major equipment submittals, approval of foundation design, demolition of existing foundation and installation of new foundation, permitting approval and gas holder fabrication.
- Digester Gas Compressor Upgrades – submittal review of the gas compressor equipment package, early site work including relocation of the utility conflicts, and start of construction to install 42 drilled piers.

- Two projects reached substantial completion and two projects were formally accepted.

As significant construction activity gets underway, the program continues to promote a safety culture that helps ensure all staff and contractor personnel work in a safe manner. There were no reported or recorded safety incidents or claims filed during this reporting period.

B. Design Activity Highlights

Four projects were under active design. Two of the four projects are being designed utilizing design-builder services, with the other two remaining projects being designed using traditional professional consultant design services.

Key design activities highlighted for this period include:

- **Digester and Thickener Facilities Upgrade** – This project design involves rehabilitation of four digesters, including new covers and mixing systems; structural repairs and seismic retrofits; heating system and gas collection conveyance system upgrades; and retrofit of six Dissolved Air Flotation Thickeners (DAFT) units. Staff accepted the conceptual design report in July. In October, the design consultant submitted the draft preliminary design report (30%) for review. The project team conducted design review workshops in November and December. In addition, in December, the project team received approval from City Council to proceed with temperature-phased anaerobic digestion (TPAD).
- **Iron Salt Feed Station** – This project design includes two new chemical dosing stations for iron salt and polymer addition to ensure the Facility can continue to meet its air permit requirements as related to the emission of toxic gases (i.e., hydrogen sulfide gas from the digestion process). The project also has the added benefit of improved solids settling performance in the primary treatment process and energy efficiency in secondary biological treatment process. Staff accepted the conceptual design report in September and the preliminary design report (30%) was completed in December.
- **Digester Gas Compressor Upgrades** – Numerous coordination meetings and design workshops were held between City staff and the design-builder to establish design requirements for the new gas compressor building foundation and layout.
- **Emergency Diesel Generators** – A full-day partnering workshop was held between City staff and design-build team to establish project goals, expectations, communications, and issues resolution protocol. Submittal review for the generator set also got underway, including early consultation and coordination with PG&E.

As significant design work gets underway, the program continues to work on developing comprehensive strategies, approaches, and tools for guiding the design development of current and future projects with the aim of establishing baselines, achieving consistency across different designers/design-builders, ensuring project interfaces are considered, incorporating operational flexibility, and considering current and future demands.

C. Planning/Feasibility Development Highlights

Eight projects were in active planning and feasibility development. Scoping began on six of the projects, as well as two additional programmatic studies in support of the Site Improvement Guidelines study.

Key planning/feasibility development activities highlighted for this period include:

- Procurement of consultant services began for four projects, including 1) Cogeneration Facility, 2) Headworks, 3) Facility-wide Water Systems Improvements, and 4) Nitrification Clarifier Rehabilitation.
- Cogeneration Facility – In October 2014, the City Council approved the use of the progressive design-build delivery method for the project. In addition, staff issued a Request for Prequalification of design-builders for the Cogeneration Facility project in November 2014.

Significant activity is expected to continue in the upcoming six-month period including:

- Complete the funding analysis for the capital program and obtain TPAC and Council approval on the Ten-Year Funding Strategy by May 2015
- Obtain TPAC and Council approval on the remaining biosolids transition strategy recommendations and present preliminary odor study results in Spring 2015
- Obtain TPAC and Council approval for the project delivery and procurement strategy in March 2015
- Continue work on and/or complete the programmatic studies
- Continue to develop a five-year staffing and transition plan
- Complete recruitment to fill several capital program vacancies
- Reach beneficial use on six active construction projects
- Continue design and/or design-build work on six projects

EVALUATION AND FOLLOW-UP

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

PUBLIC OUTREACH/INTEREST

This memorandum will be posted on the City's website for the May 4, 2015 Transportation and Environmental Committee agenda.

COORDINATION

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

CEQA

Not a Project, File No. PP10-069(a), Staff Reports / Assessments / Annual Reports / Informational Memos that involve no approvals of any City Actions.

/s/Ashwini Kantak for
KERRIE ROMANOW
Director, Environmental Services

/s/
BARRY NG
Interim Director, Public Works

For questions please contact Ashwini Kantak, Assistant Director of Environmental Services, at (408) 975-2553.

Attachments:
Attachment A – Projects in Active Construction

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| Project Name | Contractor | Amount of Award | Date of Award | Est. Beneficial Use |
|---|---|---|---------------|---------------------|
| 7157 - Digester Gas Storage Replacement | Anderson Pacific Engineering Construction, Inc. | Base Contract: \$1,825,100 Contingency: \$182,510 | 4/22/14 | Summer 2015 |
| 6998 - Fire Main Replacement Ph III | Stoloski & Gonzalez, Inc. | Base Contract: \$1,572,870 Contingency: \$157,290 | 4/22/14 | Spring 2015 |
| 7407 - BNR2 Clarifiers Guardrail Replacement | Tucker Construction, Inc. | Base Contract: \$320,792 Contingency: \$32,100 | 4/22/14 | Spring 2015 |
| 7100 - Digester Gas Compressor Upgrade (D-B Low Bid) | Anderson Pacific Engineering Construction, Inc. | Base Contract: \$11,316,000 Contingency: \$1,136,000 | 5/20/14 | Summer 2016 |
| 7249 -Training Trailer | Newton Construction & Management, Inc. | Base Contract: \$513,874 Contingency: \$51,400 | 5/20/14 | Spring 2015 |
| 7474 – RWF Street Treatment Ph III | O’Grady Paving, Inc. | Base Contract: \$388,859 Contingency: \$39,000 | 6/17/14 | Fall 2014 |
| 6833 – Filtration Building B2/B3 Pipe & Valve Replacement | Anderson Pacific Engineering Construction, Inc. | Base Contract: \$158,900 Contingency: \$31,780 | 6/17/14 | Spring 2015 |
| 7394 – Emergency Diesel Generator (D-B Low Bid) | Anderson Pacific Engineering Construction, Inc. | Base Contract: \$15,310,000 Contingency: \$1,510,000 | 6/17/14 | Summer 2016 |