SAN JOSÉ/SANTA CLARA TREATMENT PLANT ADVISORY COMMITTEE

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PAT KOLSTAD, VICE CHAIR
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DAVID SYKES, MEMBER
DEV DAVIS, MEMBER
MARSHA GRILLI, MEMBER
DEBI DAVIS, MEMBER
STEVEN LEONARDIS, MEMBER
JOHN GATTO, MEMBER

AGENDA/TPAC

4:00 p.m. April 12, 2018 Room 1734

1. ROLL CALL

2. APPROVAL OF MINUTES

A. March 8, 2018

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

A. Director's Report (verbal)
- Monthly Progress Report

5. AGREEMENTS/ACTION ITEMS

A. Master Consultant Agreement with Black & Veatch for Owner's Advisor Services for the 8142- Yard Piping Improvements Project at the San Jose- Santa Clara Regional Wastewater Facility

Staff Recommendation:
Approve a Master Consultant Agreement with Black & Veatch to provide owner's advisor services for the 8142 – Yard Piping Improvements Project at the San José-Santa Clara Regional Wastewater Facility from the date of execution through June 30, 2026, in a total amount not to exceed $9,750,000 subject to the appropriation of funds.

This item is scheduled for consideration by the City Council on April 24, 2018.

B. San José- Santa Clara Regional Wastewater Facility Capital Improvement Program Semiannual Status Report

Staff Recommendation:
Accept the semiannual status report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program for the period of July 2017 through December 2018.

This item was accepted by the Transportation and Environment Committee on April 2, 2018, and is scheduled to be considered by the City Council on April 24, 2018.

C. Open Audit Recommendations from the Audit of Environmental Services Department Consulting Services

Staff Recommendation:
Review and accept the status of open audit recommendations from the September 2017 Audit of Environmental Services Department Consulting Services: Agreements Require Additional Oversight

This item was accepted by the Transportation and Environment Committee on April 2, 2018, and is scheduled to be considered by the City Council on April 24, 2018.

6. OTHER BUSINESS/CORRESPONDENCE

A. Information Memo on Final Proposer Rankings and Intent to Negotiate the Design-Build Contract for the Headworks Project at the San Jose- Santa Clara Regional Wastewater Facility

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

A. Actions Related to the Purchase Order for Weed Abatement Services

Staff Recommendation:

1. Execute a Purchase Order with Long's Custom Discing, Inc. (San Jose, CA) for weed abatement services at the San Jose/Santa Clara Regional Wastewater Facility buffer lands for an initial twelve-month period, starting on or about March 14, 2018 and ending on or about March 13, 2019, for an amount not-to-exceed $166,300.
2. Execute up to four one-year options to extend the term of the Purchase Order, with the last option year ending on or about March 13, 2023, subject to the annual appropriation of funds

The proposed recommendation was approved by the City Council on March 13, 2018.

B. Master Service Agreements with HydroScience Engineers, Inc., and with MNS Engineers, Inc. for Consultant Engineering Services for the South Bay Water Recycling Program

Staff Recommendation:

Approve master service agreements for consultant engineering services with HydroScience Engineers, Inc. and MNS Engineers, Inc. for a term through June 30, 2020 for a total maximum compensation of $750,000.

The proposed recommendation was approved by the City Council on March 13, 2018.

8. REPORTS

A. Open Purchase Orders Greater Than $100,000 (including Service Orders)

The attached monthly Procurement and Contract Activity Report summarizes the purchase and contracting of goods with an estimated value between $100,000 and $1.17 million and of services between $100,000 and $290,000.

9. MISCELLANEOUS

A. The next monthly TPAC Meeting is on **May 17, 2018, at 4:00 p.m.**, City Hall, Room 1734.

10. OPEN FORUM

11. ADJOURNMENT

NOTE: If you have any changes or questions, please contact Eva Roa, Environmental Services (408) 975-2547.

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Availability of Public Records. All public records relating to an open session item on this agenda, which are not exempt from disclosure pursuant to the California Public Records Act, that are distributed to a majority of the legislative body will be available for public inspection at San Jose City Hall, 200 East Santa Clara Street, 10th Floor, Environmental Services at the same time that the public records are distributed or made available to the legislative bod

MINUTES OF THE
SAN JOSÉ/SANTA CLARA
TREATMENT PLANT ADVISORY COMMITTEE
San José City Hall, T-1734
Thursday, March 8, 2018 at 4:00 p.m.

1. ROLL CALL

Minutes of the Treatment Plant Advisory Committee convened this date at 4p.m. Roll call was taken with the following members in attendance:

Committee Members: Debi Davis, Dev Davis, Lan Diep, John Gatto, Marsha Grilli, Kip Harkness (alternate), Pat Kolstad, Steven Leonardis, Sam Liccardo 4:11p.m.

2. APPROVAL OF MINUTES

A. February 8, 2018
Item 2.A. was approved to note and file.
Ayes – 8 (Debi Davis, Dev Davis, Diep, Gatto, Grilli, Harkness, Kolstad, Leonardis)
Nayes – 0
Abstain – 0
Absent – 1 (Liccardo)

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

A. Director's Report (verbal)

- Monthly Progress Report

Director Romanow noted the inclusion of the monthly progress report in the packet. Committee Member Gatto asked whether there is a necessity of a monthly report and instead if there should be a six month table or snapshot instead. Director Romanow said that she could look in to it and would discuss it with her team.

5. AGREEMENTS/ACTION ITEMS

A. Actions Related to the Purchase Order for Weed Abatement Services

Staff Recommendation:

1. Execute a Purchase Order with Long's Custom Discing, Inc. (San Jose, CA) for weed abatement services at the San Jose/Santa Clara Regional Wastewater Facility buffer lands for an initial twelve-month period, starting on or about March 14, 2018 and ending on or about March 13, 2019, for an amount not-to-exceed $166,300.
2. Execute up to four one-year options to extend the term of the Purchase Order, with the last option year ending on or about March 13, 2023, subject to the annual appropriation of funds

This item is scheduled for consideration by the City Council on March 13, 2018.

On a motion made by Committee Member Dev Davis and a second by Committee Member Debi Davis, TPAC recommended approval of staff's recommendation for Item 5.A.

Ayes – **8** (Debi Davis, Dev Davis, Diep, Gatto, Grilli, Harkness, Kolstad, Leonardis)
Nayes – 0
Abstain – 0
Absent – 1 (Liccardo)

B. Master Service Agreements with HydroScience Engineers, Inc., and with MNS Engineers, Inc. for Consultant Engineering Services for the South Bay Water Recycling Program

Staff Recommendation:

Approve master service agreements for consultant engineering services with HydroScience Engineers, Inc. and MNS Engineers, Inc. for a term through June 30, 2020 for a total maximum compensation of $750,000.

This item is scheduled for consideration by the City Council on March 20, 2018.

On a motion made by Committee Member Dev Davis and a second by Committee Member Debi Davis, TPAC recommended approval of staff's recommendation for Item 5.B.

Ayes – **8** (Debi Davis, Dev Davis, Diep, Gatto, Grilli, Harkness, Kolstad, Leonardis)
Nayes – 0
Abstain – 0
Absent – 1 (Liccardo)

6. OTHER BUSINESS/CORRESPONDENCE

A. Information Memo on Biosolids Transition at the San José- Santa Clara Regional Wastewater Facility

Deputy Director Julia Nguyen presented.

Committee Member Gatto had a few questions but first gave some history for those in attendance who did not know the background. Gatto asked about the odor issue, why the City was changing how it was dealing with Biosolids and what alternatives were looked at.

Committee Member Kolstad discussed some of the information on the memo for clarification.

Director Romanow discussed the issues of changing regulations.

B. Update on Construction Contingency Use for Capital Improvement Projects at the Regional Wastewater Facility

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

A. Second Amendment to the Master Service Agreement with HydroScience Engineers, Inc. for Regional Wastewater Facility

Staff Recommendation:
Adopt a resolution authorizing the City Manager to execute a Second Amendment to the Master Service Agreement with HydroScience Engineers, Inc. to extend the term of the Agreement through December 31, 2018.

The proposed recommendation was approved by the City Council on February 13, 2018.

8. REPORTS

9. MISCELLANEOUS

A. The next monthly TPAC Meeting is on **April 12, 2018, at 4:00 p.m.**, City Hall, Room 1734.

10. OPEN FORUM

David Wall spoke regarding the Wastewater plant.

11. ADJOURNMENT

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San José-Santa Clara Regional Wastewater Facility

Capital Improvement Program
Monthly Status Report: February 2018

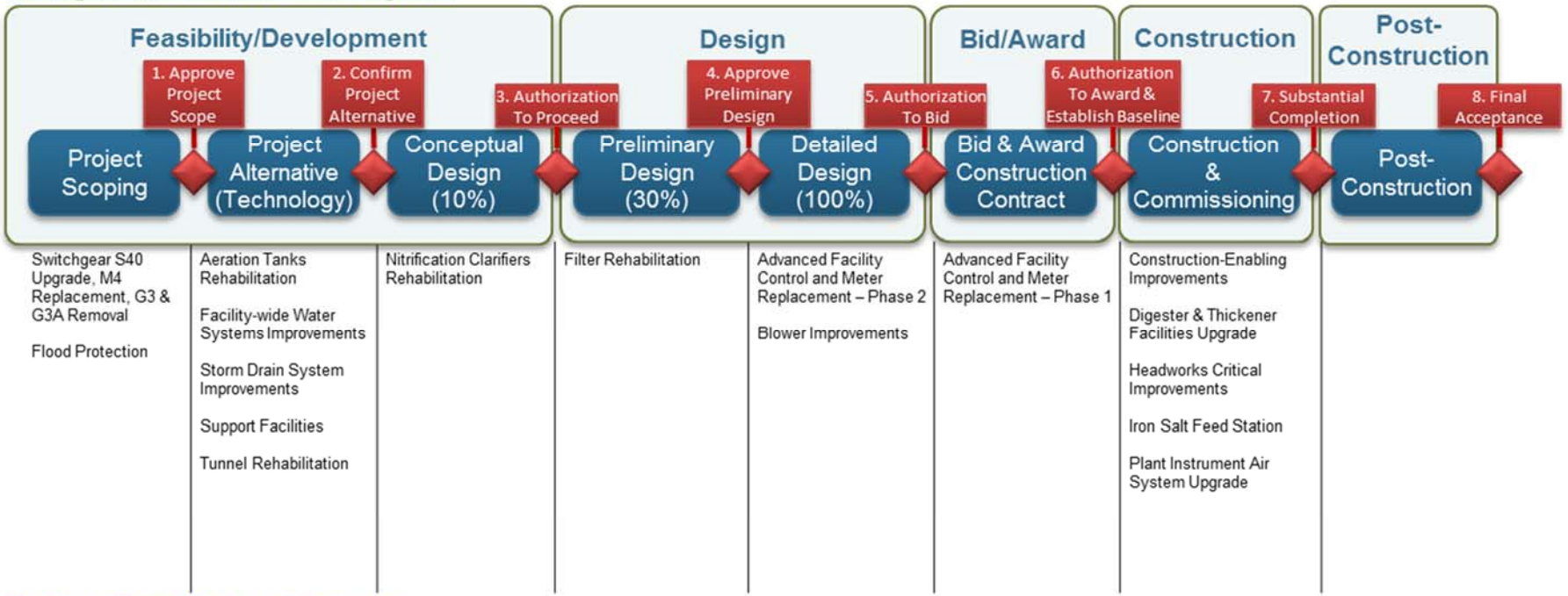
April 5, 2018

This report summarizes the progress and accomplishments of the Capital Improvement Program (CIP) for the San José-Santa Clara Regional Wastewater Facility (RWF) for February 2018.

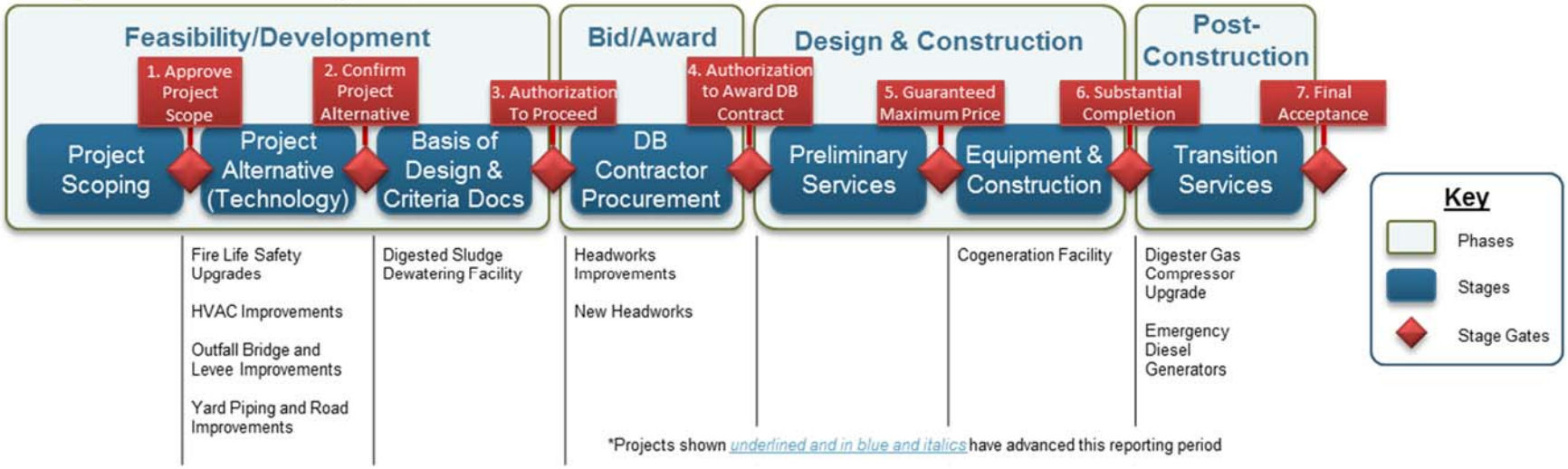
Report Contents

Project Delivery Model

Design-Bid-Build Active Projects



Design-Build Active Projects



*Projects shown underlined and in blue and italics have advanced this reporting period

Program Summary

February 2018

Nineteen CIP projects continued to progress through the feasibility/development, design, and bid/award stages of the project delivery model (PDM) in February. Alternatives analysis continued on the Aeration Tanks Rehabilitation, Facility-wide Water Systems Improvements, Fire Life Safety Upgrades, and HVAC Improvements projects. The design consultant on the Nitrification Clarifiers Rehabilitation Project submitted the conceptual design report this month. Preliminary design began on the Filter Rehabilitation Project. On the Blower Improvements Project, the project team finalized prequalification documents for construction contractors that will be advertised in March 2018. The Digested Sludge Dewatering Facility Project team finalized a Request for Qualifications (RFQ) for design-build services that will be advertised in March 2018. Additionally, the City issued a notice of final ranking of design-build firms for the Headworks Improvements and New Headworks projects. Negotiations with the highest ranked proposer began this month and staff anticipates recommending to City Council (Council) to award a design-build contract in summer 2018. This month, the City also opened bids for the Advanced Facility Control & Meter Replacement – Phase 1 Project. Three construction bids were received, all below the engineers estimate. The construction contract is expected to be awarded to the low bidder in summer 2018.

Six projects continued to progress through the construction phase. Early site work began on the Cogeneration Facility this month as the design-builder continued to develop the detailed design. The Construction-Enabling Improvements Project contractor continued to install the new construction management trailers and addressed a number of punch-list items for the project. The Headworks Critical Improvements Project contractor continued installing the second of two new bar screens and commenced functional testing of the newly installed equipment. The Iron Salt Feed Station Project contractor continued commissioning the new ferric dosing and polymer dosing stations. The Plant Instrument Air System Upgrade Project contractor continued installing the new mechanical and electrical compressor system equipment in advance of functional testing and commissioning in May 2018. The Digester and Thickener Facilities Upgrade Project contractor continued construction of the new sludge screening building, elevated pipe rack, dissolved air flotation tanks, and the temporary pumping bypass system required to allow replacement of the 78-inch settled sewage pipeline during the dry season. The City and design consultant continued to work through the seismic redesign and polychlorinated biphenyls (PCBs) risk-based mitigation plan, which is anticipated to be completed as future contract change order work

Look Ahead

The following key activities are forecast for March/April 2018:

- The following projects will seek stage gate approval:
    1. Switchgear S40 Upgrade, M4 Replacement, G3 and G3A Removal – Stage Gate 1: Approve Project Scope;
    2. Nitrification Clarifiers Rehabilitation – Stage Gate 3: Authorization to Proceed (10 percent Conceptual Design);
    3. Headworks Improvements and New Headworks projects – Stage Gate 4: Authorization to Award DB Contract;
- The City will issue an RFQ for design-build services for the Digested Sludge Dewatering Facility Project;
- A Groundbreaking Ceremony for the Cogeneration Facility Project will be held on March 1, 2018 and the Bay Area Air Quality Management District (BAAQMD) is expected to issue the air permit for the project;
- The Iron Salt Feed Station Project is expected to reach Beneficial Use;
- The Blower Improvements Project is expected to reach 90 percent design completion and advertise a construction contractor prequalification package;
- The Digester and Thickener Facilities Upgrade Project will start the excavation and removal of PCB-impacted soil; and
- Staff will make the following recommendations to Treatment Plant Advisory Committee (TPAC) and Council: (1) award a master consultant agreement (MCA) for owner's advisor services for the Yard Piping and Road Improvements Project; and (2) accept the CIP Semiannual Status Report, which highlights CIP progress for the period of July through December 2017.

In May 2018, staff will recommend approval to TPAC and Council of a second construction contingency increase for the Digester and Thickener Facilities Upgrade Project to fund the PCB clean up and seismic redesign work.

Program Highlight – Project Testing, Startup, and Commissioning

Testing, startup, and commissioning responds to the all-important question, "Does the constructed project meet the requirements of the project plans and specifications?" Determining the answer requires good documentation and a methodical approach to testing of both the project's individual components and its composite whole. Testing, startup, and commissioning begins early during the planning and design phases, then continues through the post-construction phase. This program highlight will focus mostly on the construction phase.

Figure 1: Operator Training at the new Ferric Chloride Station

Testing, startup, and commissioning usually follows a prescribed order: factory acceptance testing (if needed); pre-operational testing and inspection; functional testing; and operational testing. The construction contractor submits plans and schedules for each phase of testing. These submittals are reviewed for clarity and completeness by the designer, project manager, O&M staff, and construction management team.

Factory acceptance testing typically tests large equipment such as engine generators and electrical switchgear at the manufacturing site prior to shipping. If there are any issues with the equipment, repairs are much easier to make at the manufacturing site than once delivered onsite to the RWF. Additionally, City staff have an opportunity to witness the equipment running in a controlled environment and ask the manufacturer questions directly.

Once everything has been installed onsite, the contractor completes pre-operational testing and inspection prior to starting systems. Typical pre-operational tasks include verifying that all wiring has been inspected for continuity and grounding; that all pipework and wiring are labeled with proper identification; that paintable surfaces have been properly coated; and that all accessibility and safety requirements have been addressed. All items need to be inspected and documented for acceptance by the City's project inspector.

During functional testing, or startup, the contractor tests installed equipment or systems in the presence of the City staff to demonstrate that the equipment is operating as intended. Examples of equipment requirements for testing are noise; vibration; alignment; speed; instrumentation and control; mechanical connections; thrust restraint; proper rotation; and initial servicing. Successful passage of functional testing is a prerequisite for operational testing. The manufacturer's representative issues a Certificate of Proper Installation at the conclusion of functional testing.

Figure 2: Emergency Diesel Generator FAT for the Switchgear and Control Panels

In operational testing, also known as acceptance testing or commissioning, Operations and Maintenance (O&M) staff receive operational training for the new facility or system. Training on new process systems and control logic is typically provided by the design consultant while training on new equipment is often provided by the manufacturer's representative. During operational testing, the system must be operated continuously for a specified duration as a complete facility. If the operation fails due to malfunctioning equipment or other major problems, the operational testing is restarted.

Successful project testing, startup, and commissioning relies on the careful coordination, concerted effort, and cooperation of all parties, including City staff, design engineers, contractors, manufacturers, and manufacturing representatives. Project success is measured by both equipment performance and satisfaction of the end users: O&M staff.

Program Performance Summary

Eight key performance indicators (KPIs) have been established to measure overall CIP success. Each KPI represents a metric that will be monitored on a regular frequency. Through the life of the CIP, KPIs that best reflect the current program will be selected and measured. KPIs have been reset for this fiscal year.

Program Key Performance Indicators – Fiscal Year 2017-2018

KPI	Target	Fiscal Year to Date			Fiscal Year End		
		Actual	Status	Trend	Forecast	Status	Trend
Stage Gates	80%	100% 12/12	●	→	100% 21/21 [1]	●	→
Measurement: Percentage of initiated projects and studies that successfully pass each stage gate on their first attempt. Target: Green: >= 80%; Amber: 70% to 80%; Red: < 70%							
Schedule	90%	0% 0/1	◆	→	40% 2/5	◆	→
Measurement: Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone.[2] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Budget	90%	100% 1/1	●	→	80% 4/5 [3]	▲	↓
Measurement: Percentage of CIP projects that are accepted by the City within the approved baseline budget.[2] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Expenditure	$248M	$191M	●	↑	$306M [4]	●	↑
Measurement: CIP FY17-18 committed costs. Target: Committed cost meets or exceeds 70% of planned Budget. 70% of $354M = $248M. Therefore Green: >=$248M; Amber: $194M to $248M; Red: < $194M							
Procurement	80%	100% 2/2	●	→	100% 4/4	●	→
Measurement: Number of consultant and contractor procurements advertised compared to planned for the fiscal year. Target: Green: >= 80%; Amber: 70% to 79%; Red: < 70%							
Safety	0	0	●	→	0	●	→
Measurement: Number of OSHA reportable incidents associated with CIP delivery for the fiscal year. Criteria: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Environmental	0	0	●	→	0	●	→
Measurement: Number of permit violations caused by CIP delivery for the fiscal year. Target: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Staffing[5]	80%	100% 12/12	●	→	100% 15/15	●	→
Measurement: Number of planned positions filled for the fiscal year. Target: Green: >= 80%; Amber: 70% to 79%; Red: < 70%							

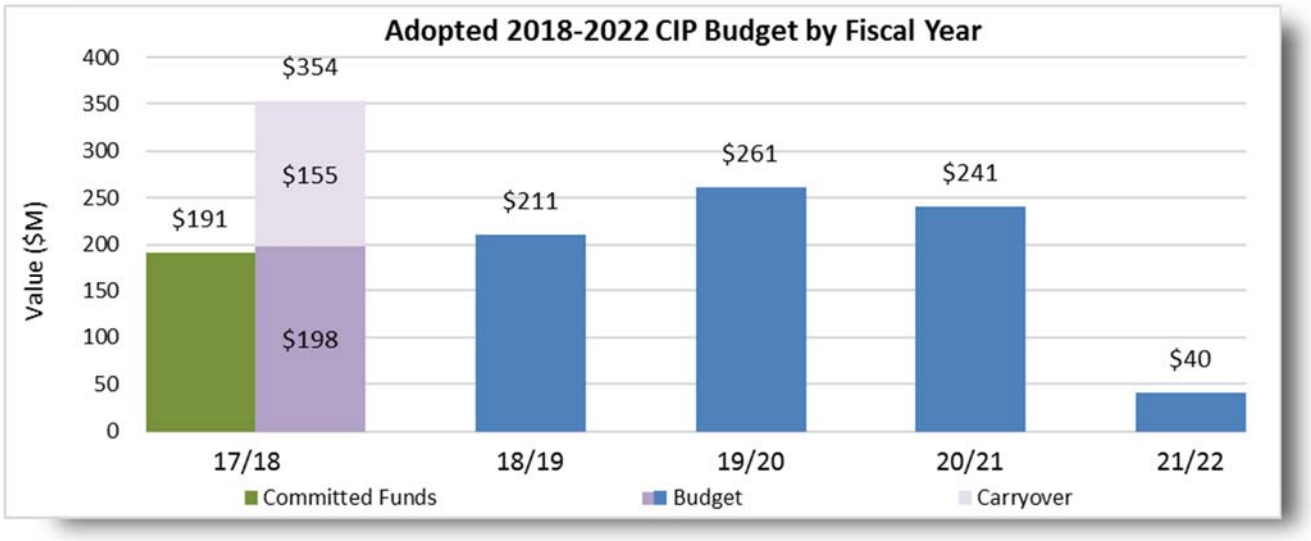
Notes

1. The fiscal year-end count has been updated to reflect a decrease in the number of planned stage gates due to the Advance Facility Control and Meter Replacement Project – Phase 1 bids coming in under the engineer's estimate, exempting the project from Stage Gate 6: Authorization to Award and Establish Baseline.
2. The baseline Beneficial Use date and the baseline budget for each project are established at construction contract award and execution.
3. The Plant Instrument Air System Upgrade Project is no longer anticipated to achieve Project Acceptance this fiscal year and has been removed from this fiscal year's Budget KPI.
4. The fiscal year-end expenditure has increased due to an increase of the anticipated encumbrances in the year.
5. The staffing KPI is measured quarterly and represents CIP recruitments planned for the fiscal year. This KPI measurement does not account for staff turnover throughout the fiscal year.

Program Budget Performance Summary

This section summarizes the cumulative monthly budget performance for fiscal year (FY) 17-18 based on the 2018-2022 CIP.

Adopted 2018-2022 CIP Expenditure and Encumbrances



Notes

Committed Funds: Total of expenditures and encumbrances.

Expenditure: Actual cost expended, either by check to a vendor or through the City's financial system, for expenses such as payroll or non-personal expenses that do not require a contract.

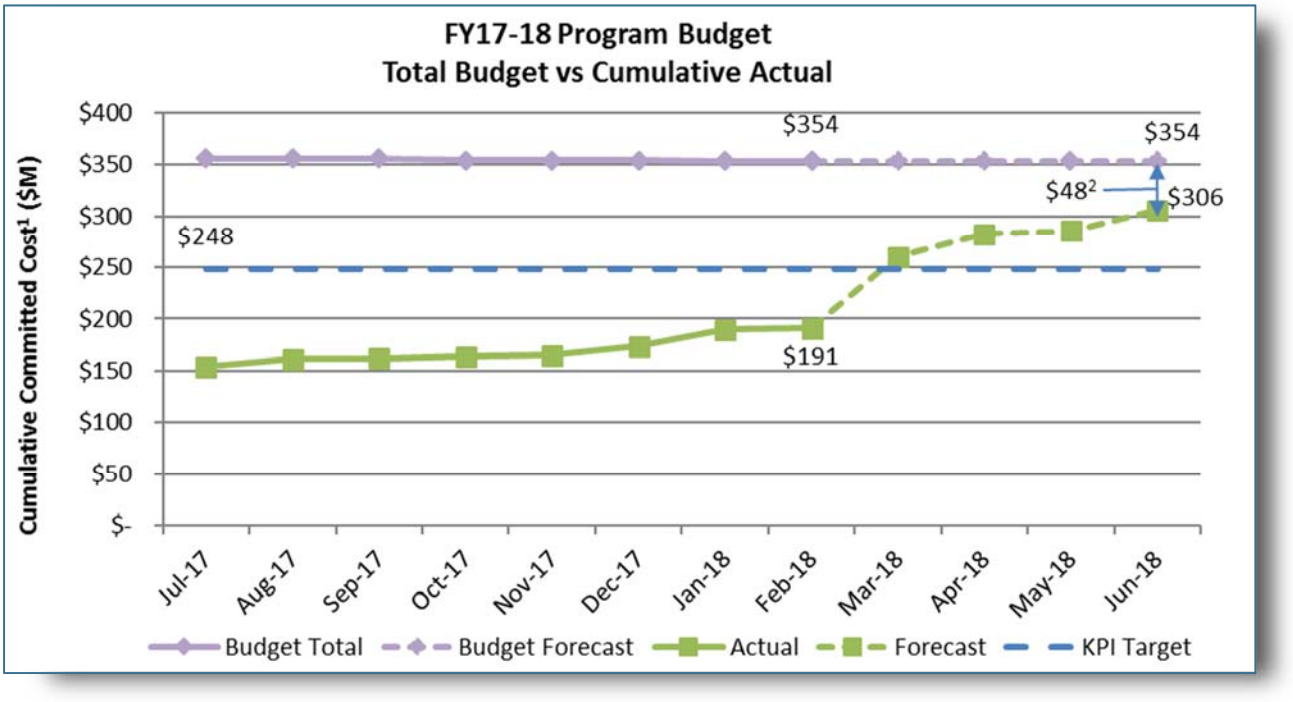
Encumbrance**:** Financial commitments such as purchase orders or contracts that are committed to a vendor, consultant, or contractor**.** An encumbrance reserves the funding within the appropriation and project.

The FY17-18 Budget is $238 million, which consists of $198 million in new funds and $40 million in rebudgets. For purposes of this monthly report, the adopted FY17-18 budget is adjusted from $238 million to $198 million due to excluding certain appropriations that are not measured as part of the expenditure KPI. Excluded appropriations include Urgent and Unscheduled Treatment Plant Rehabilitation, SBWR Extension, Debt Service Repayment for Plant Capital Improvement Projects (San José only debt service), Public Art, State Revolving Fund Loan Repayment, City Hall Debt Service Fund, Clean Water Financing Authority Debt Service Payment Fund, Equipment Replacement Reserve, and Ending Fund Balance. Similar adjustments have been made to the budgets for FY18-19 through FY 21-22. In October, the fall cleanup action increased the FY17-18 budget by $3 million.

Carryover: Encumbrance balances at the end of the previous fiscal year are automatically carried forward to the current fiscal year as carryover funding to pay invoices for approved construction contracts and consultant agreements.

Fiscal Year 2017-2018 Program Budget Performance

The FY17-18 budget is comprised of approximately $198 million in new funds plus encumbrance carryover of $155 million for a total of $354 million. This excludes Reserves, Ending Fund Balance, Debt Service, South Bay Water Recycling, Public Art, and Urgent and Unscheduled Rehabilitation items.



Notes

1. Committed costs are expenditures and encumbrance balances, including carryover (encumbrance balances from the previous fiscal year).
2. The variance between forecasted budget and forecasted commitments can be primarily attributed to the following factors:
    a. Construction contracts that are not expected to be awarded in FY17-18:
        i. Blower Improvements Project
        ii. Fire Life Safety Upgrades Project
    b. Consultant service orders that are now expected to be executed in FY18-19:
        i. Filter Rehabilitation Project – detailed design work
        ii. Facility-wide Water Systems Improvements Project - preliminary and detailed design work
        iii. Tunnel Rehabilitation Project – feasibility/development work
    c. Several other minor encumbrances for consultant services are either lower than budgeted or are anticipated to be awarded in FY18-19.
    d. Several authorized positions remain vacant, resulting in lower predicted personal services expenses than budgeted.
    e. The FY17-18 budget includes three recurring appropriations (Preliminary Engineering, Equipment Replacement, and Plant Infrastructure Improvements) that total approximately $3.66 million. These appropriations are included in the budget to implement minor capital improvement projects that may be needed during the fiscal year. No major expenditures or encumbrances are currently planned against these appropriations.

Project Performance Summary

There are currently six projects in construction and two projects in post-construction, with an additional 19 projects in feasibility/development, design, or bid and award phases (see PDM, page 2). All active projects are listed in the tables below. Projects in the construction phase have established cost and schedule baselines and are monitored using the City's Capital Project Management System (CPMS). Green/red icons are included in the table below to indicate whether these projects are on budget and schedule.

Project Performance – Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]	Cost Performance[2]	Schedule Performance[2]
1. Digester Gas Compressor Upgrade	Post-Construction	Apr 2017[3]	◆	◆
2. Emergency Diesel Generators	Post-Construction	Jul 2017[3]	●	◆
3. Iron Salt Feed Station	Construction	Apr 2018	●	◆
4. Construction-Enabling Improvements	Construction	Apr 2018	●	◆
5. Plant Instrument Air System Upgrade	Construction	Jun 2018	●	●
6. Headworks Critical Improvements	Construction	Jun 2018	●	●
7. Cogeneration Facility	Design & Construction	Jan 2020[4]	●	●
8. Digester and Thickener Facilities Upgrade	Construction	Sep 2020	◆	◆

KEY:

Cost:	● On Budget	◆	>1% Over Budget
Schedule:	● On Schedule	◆	>2 months delay

Notes

1. Beneficial Use is defined as work that is sufficiently complete, in accordance with contract documents, that it can be used or occupied by the City. Beneficial Use dates are reviewed as part of project schedule reviews.
2. An explanation of cost and schedule variances on specific projects identified in this table is provided on page 11 and 12.
3. Actual Beneficial Use date.
4. The project construction Beneficial Use date will be baselined once the contractor submits their construction schedule.

Project Performance – Pre-Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]
1. Advanced Facility Control & Meter Replacement Phase 1	Bid and Award	Dec 2020
2. Headworks Improvements	Bid and Award	Sep 2022
3. New Headworks	Bid and Award	Sep 2022
4. Blower Improvements	Design	Nov 2021
5. Filter Rehabilitation	Design	Oct 2022
6. Advanced Facility Control & Meter Replacement Phase 2	Design	Dec 2022
7. Outfall Bridge and Levee Improvements	Feasibility/Development	Dec 2020
8. Switchgear S40 Upgrade, M4 Replacement, G3 & G3A Removal	Feasibility/Development	Jan 2022
9. Flood Protection	Feasibility/Development	Mar 2022
10. Storm Drain System Improvements	Feasibility/Development	Jul 2022
11. Fire Life Safety Upgrades	Feasibility/Development	Sep 2022
12. Digested Sludge Dewatering Facility	Feasibility/Development	Oct 2022
13. HVAC Improvements	Feasibility/Development	Mar 2023
14. Facility-wide Water Systems Improvements	Feasibility/Development	Jun 2023
15. Nitrification Clarifiers Rehabilitation	Feasibility/Development	Dec 2023
16. Aeration Tanks Rehabilitation	Feasibility/Development	Aug 2025
17. Support Facilities	Feasibility/Development	Dec 2026
18. Tunnel Rehabilitation	Feasibility/Development	Dec 2026
19. Yard Piping and Road Improvements	Feasibility/Development	Jan 2027

Notes

1. Beneficial Use is defined as work that is sufficiently complete, in accordance with contract documents, that it can be used or occupied by the City. Beneficial Use dates are reviewed as part of project schedule reviews.

Significant Accomplishments

Biosolids Package

Digester Thickener and Facilities Upgrade

- The contractor Walsh Construction completed preparations for PCB excavation around the digesters, including submittal of air monitoring and decontamination plans. Design consultant Brown and Caldwell (B&C) will submit the EPA Phase 2 application which includes substrate (concrete) sampling results and additional soil sampling results to the City for review before submitting to the EPA for final approval.
- The contractor completed the dissolved air flotation thickener tanks' subnatant channel concrete placement and successfully passed the hydrotest.
- The contractor continued to install the settled sewage (SES) bypass system, completing the fusing of several sections of the high-density polyethylene piping, as well as completing the installation of 48-inch valve at the SES wet well. The bypass system is expected to be completed by May 2018 to allow repairs on the 78-inch SES to begin. The repairs are anticipated to be completed by the end of Oct 2018.

Facilities Package

Cogeneration Facility

- The project team continued to finalize the terms and conditions of the Definitive Contract Amendment with design-builder Jacobs (formally CH2M), which is anticipated to be approved by the City Manager in April 2018.
- The design-builder began construction activities for the site work to prepare the foundation for the cogeneration engines.

Construction-Enabling Improvements

- Contractor Teichert Construction continued installation of the construction management trailers and guard shack at the Zanker Road construction entry gate.

Liquids Package

Advanced Facility Control and Meter Replacement – Phase 1

- The City opened construction bids on February 8. In May, the project team will recommend that Council award a construction contract to the low bidder. The project team will also complete a detailed bid analysis since all 3 bids received came in well below the engineer's estimate.

Aeration Tanks Rehabilitation

- Design consultant B&C held a workshop with stakeholders to further prioritize rehabilitation objectives and select the alternative for meeting future nutrient limits in RWF effluent.

Headworks Critical Improvements

- Contractor Overaa Construction continued bar screen replacement work, which is expected to be completed in April 2018.

Headworks Improvements and New Headworks

- The City issued a notice of final ranking of design-build teams and began negotiations with Jacobs (formally CH2M), the highest-ranked firm.

Iron Salt Feed Station

- Contractor Anderson Pacific continued to conduct functional testing of the ferric chloride and polymer systems. The contractor completed installation of temporary polymer injection piping to allow final testing of the polymer station. Next month, testing is expected to continue to resolve control issues.

Nitrification Clarifiers Rehabilitation

- Design consultant HDR finalized conceptual design. Next month, the project team will present the project to the stage gate panel and request authorization to proceed with preliminary design.

Power and Energy Package

Plant Instrument Air System Upgrade

- Contractor Anderson Pacific completed conduit work to the control panels and is continuing to install the interconnecting piping.

Explanation of Project Performance Issues

Construction-Enabling Improvements

This project was originally scheduled to be substantially complete by mid-February 2017. Due to the extremely wet 2016-17 winter season, contractor Teichert Construction was unable to perform site work for several weeks from October 2016 through April 2017. Teichert has been granted 47 extra work days for weather-related delays. Teichert has also been granted additional time to remove and replace asphalt pavement in damaged areas of Zanker Road; install traffic-rated pull boxes for the streetlight system; install underground conduits for the fiber optic system; and make additional changes.

Delays in the fabrication and delivery of portable trailers required for the project continue to impact the schedule. The trailer to be used for badging and training was delivered in August; trailers to be used for construction management personnel were delivered in mid-January. Installation of the foundations and utilities for these trailers is underway. Teichert estimates that it could take several more weeks to obtain required materials, which could result in another six to nine weeks to complete the installation and setup of the trailers. These delays would place the Beneficial Use date in April 2018. The City notified Teichert that the number of contract work days has been exceeded and that liquidated damages are in effect. By the end of this reporting month, liquidated damages were $179,000.

Digester and Thickener Facilities Upgrade

This project is over budget due to numerous unforeseen conditions, seismic design modifications, and hazardous material issues that are currently being investigated.

Unforeseen conditions are also impacting the project schedule. These conditions, detailed below, are resulting in an estimated five-month delay to the Beneficial Use date:

- Contractor Walsh Construction encountered major corrosion of an existing, below-ground 78-inch settled sewage pipeline and junction structure during construction. This corrosion has impacted the dissolved air floatation tank piping connections, two new pressurization flow boxes, and utility relocation work. All repairs have been postponed until the 2018 dry season, when a bypass pumping system can be safely installed to allow repair work to continue. Pricing and submittal review of bypass pumps and piping is in progress.
- An unidentified, 36-inch biochemical oxygen demand pipe was discovered during preparation of the foundation for the new sludge screen building. The contractor removed this pipe and relocated several unforeseen digester and landfill gas drain vaults and associated piping.
- Multiple unforeseen utility conflicts with water, natural gas, digester gas, landfill gas, storm drain, and sanitary sewer pipelines have impacted progress. These conflicts have caused numerous utility pipe, conduit, and duct bank relocations across the site, and have also impacted the new digester gas pipe rack footings, causing rerouting and other design changes.
- Digester gas bypass work was delayed approximately six months due to BAAQMD venting restrictions. Work on digester gas bypass connections was completed and the digester gas bypass is now in service.

In November 2017, the Council approved a contingency increase of $15 million. The City has issued change orders against the increased contingency for delays associated with the above conditions, including an increase of 140 working days to the project schedule. The 140 working days delay is current as of September 15, 2017.

The following additional outstanding issues are currently being evaluated and are expected to result in additional costs and delays:

- Digester structural design is being revised for seismic safety. The revised design details will result in schedule delays and increased coordination with ongoing construction.
- Planned excavations for digesters five through eight are on hold. A reference document is in progress that will provide guidance to Contractor identifying limits of excavation for hazardous material contamination around the surrounding work areas. Testing of soils and concrete for PCBs is complete. The project team has submitted soil and concrete samples for testing and have determined disposal location options. The consultant is preparing a hazardous material survey report that will summarize the overall results of all sampling completed for the project.

Digester Gas Compressor Upgrade

This project is over budget by approximately 3 percent due to higher than anticipated project delivery costs associated with increased construction inspection requirements and an extended project timeline.

The contractor achieved Beneficial Use in April 2017; final acceptance is scheduled for early 2018. This schedule delay was primarily due to the following factors:

- The compressor skids were required to be reclassified from Class 1, Division 2 to Class 1, Division 1. This issue was resolved in May 2015.

- BAAQMD delayed approval of the digester gas flaring during the tie-in of the new gas piping. This issue was resolved in November 2016.
- Functional testing of the automation system took longer than anticipated. Multiple competing process shutdowns with other projects contributed to the delay.
- Final project acceptance is delayed due to outstanding minor work items and the record drawing submittal.

Emergency Diesel Generators

This project reached Beneficial Use in July 2017; final acceptance is anticipated by spring of 2018. The schedule shows a project completion delay of approximately one year from the Notice to Proceed (NTP) completion date. The City granted a schedule addition of 189 working days through the change order process due to additional scope. The project has extended beyond the original schedule due to the following factors:

- Caterpillar, the supplier of the emergency diesel generator system, took longer than expected to develop the controls and network switches that interface with existing RWF controls. Caterpillar has completed their outstanding items. Peterson Control completed their outstanding items and has obtained O&M final signoff.
- Additional time was required for PG&E to review the third-party protective devices testing report and schedule the witness test for the new emergency diesel generators. PG&E has now completed this work.
- A no-cost time extension change order was required to split the commissioning sequence into two phases and ensure RWF backup power during engine modification work. The contractor completed both phases of the project, including modifications to the existing EG1 engine; an eight-hour load test for the four new generators; installation of the fueling and diesel exhaust fluid systems; and upgrades to the existing EG2 and EG3 engines and M4 switchgear.

The project is now in the post-construction phase and will be accepted once negotiations regarding liquidated damages have been completed.

Iron Salt Feed Station

The Iron Salt Feed Station Project construction has been delayed by seven months due to a combination of heavy winter rain in 2016-17; longer than anticipated time to fabricate the double containment pipeline and leak detection system; piping modifications to resolve a pump operational issue at the ferric chloride station; and the installation of additional piping to allow Operations to dose polymer at an alternative location. In addition, operational testing and commissioning of the new equipment has taken longer than anticipated. Staff anticipate that the project will reach Beneficial Use in April 2018.

Project Profile – Advanced Facility Control and Meter Replacement

The RWF relies on control equipment such as flow meters; valves and actuators; and sensors for accurate measurement and effective process control. Reliable, state-of-the-art controls are vital to maintaining compliance with the National Pollutant Discharge Elimination System (NPDES) permit. Most of the RWF controls were installed in the 1960s and 1970s and are in poor condition, requiring excessive maintenance. In addition, maintaining the equipment has become difficult because original manufacturers no longer provide support for the outdated equipment. In 2014, CIP and O&M staff assessed and prioritized the existing control equipment and prioritized for repair or replacement. This collaborative effort brought together O&M experience and a technical engineering approach to validate the need for the project. In 2016, the City selected Black & Veatch as the design consultant to provide engineering services for the project. Figures 4-7 illustrate the type of existing control equipment to be replaced.

To better align construction with the planned maintenance shutdowns of the secondary and nitrification treatment areas, the work will be completed in two phases:

- Phase 1 will replace the control equipment in the secondary and nitrification B battery treatment areas (shaded in yellow in Figure 3).
- Phase 2 will replace the control equipment in areas shaded red, which includes the secondary and nitrification batteries A, the east primaries, and tertiary filters.

From October 2016 to February 2017, the project team and consultant completed feasibility evaluations and condition assessments. The project team completed the 50 percent design for both phases in April 2017.

Phase 1

After completing the 50 percent design, the project team prequalified prospective bidders for Phase 1 in October 2017. The City determined that four of the six general contractors were eligible to bid on the project. Final design was completed in December 2017 and Phase 1 was advertised for bid in January 2018. In February, the City received three bids. All bids were below the engineer's estimate of $10.4 million. The low bidder was C. Overaa & Co. with a bid amount of $5.8 million. Staff will recommend that Council award the construction contract in May 2018. Construction is expected to begin this summer with completion by winter 2020. Construction will coincide with regularly scheduled maintenance shutdowns to minimize operational impacts.

Phase 2

Detailed design of Phase 2 will continue during construction of Phase 1. Detailed design is scheduled to be completed by spring 2019, with bid advertisement expected in winter 2019. Phase 2 construction is anticipated to run from spring 2020 through winter 2022. The current preliminary construction cost estimate is $12 million.

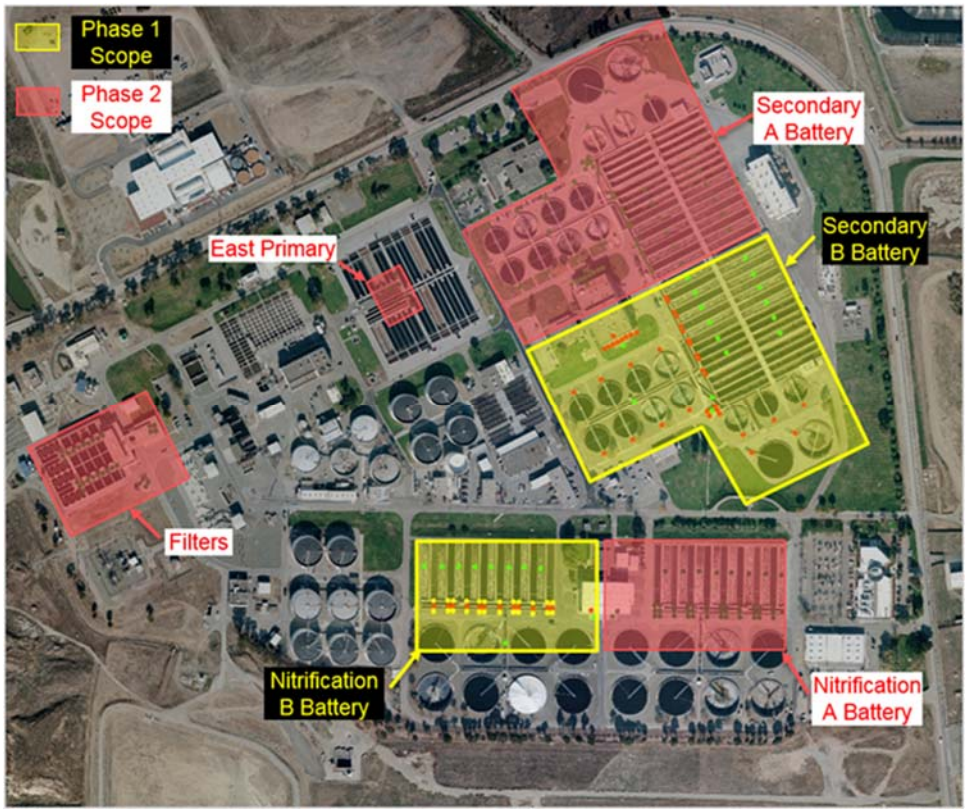


Figure 3: Project Location Plan

Figure 4: RAS Flow Meter

Figure 5: Secondary Settled Sewage Influent Flow Meter

Figure 6: Filter Building Chlorine Analyzer

Figure 7: Existing Effluent Flow Meter at the Secondary Clarifier

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Regional Wastewater Facility Treatment – Current Treatment Process Flow Diagram

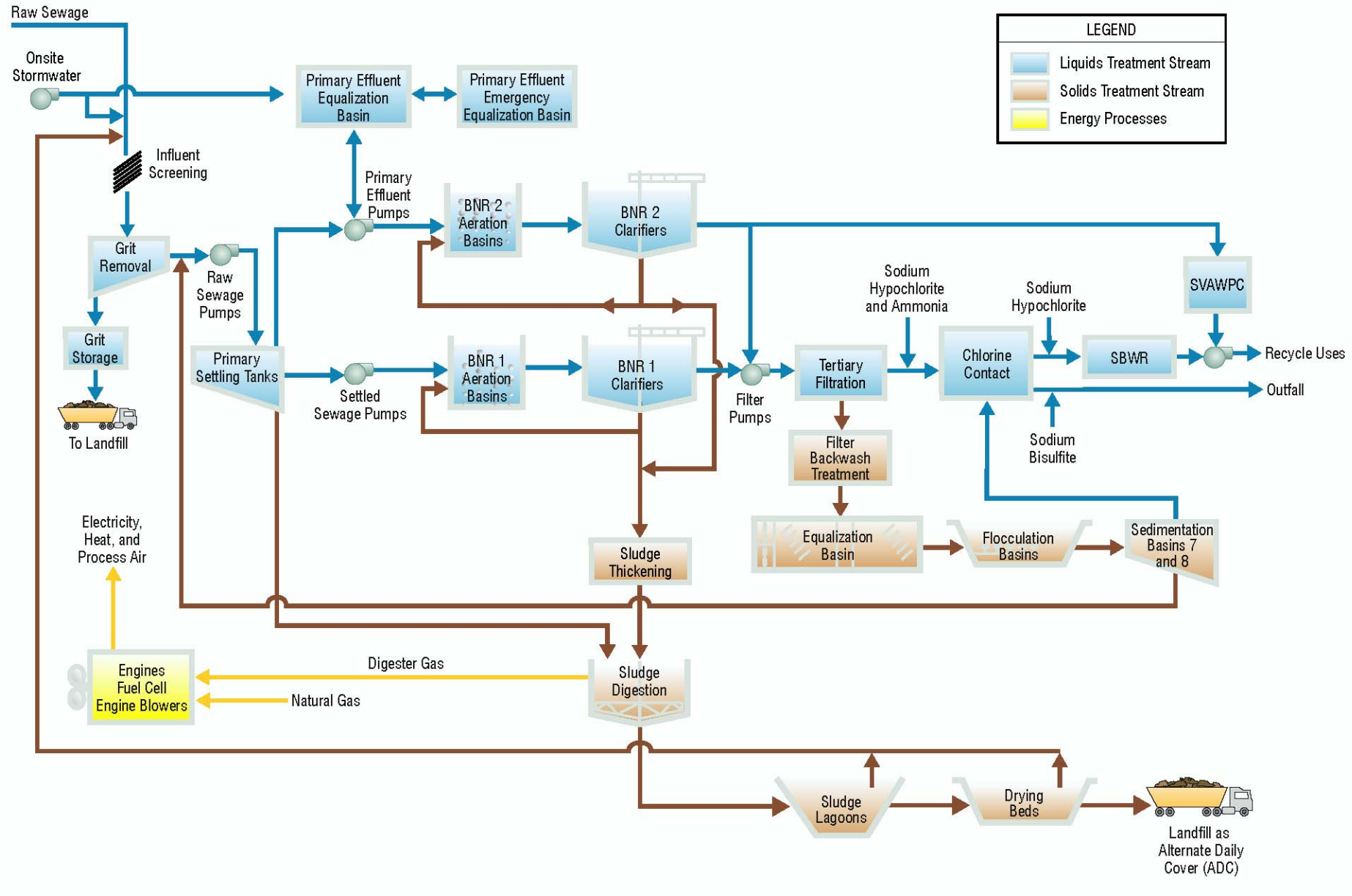


Figure 8 – Current Treatment Process Flow Diagram

Regional Wastewater Facility Treatment – Proposed Treatment Process Flow Diagram

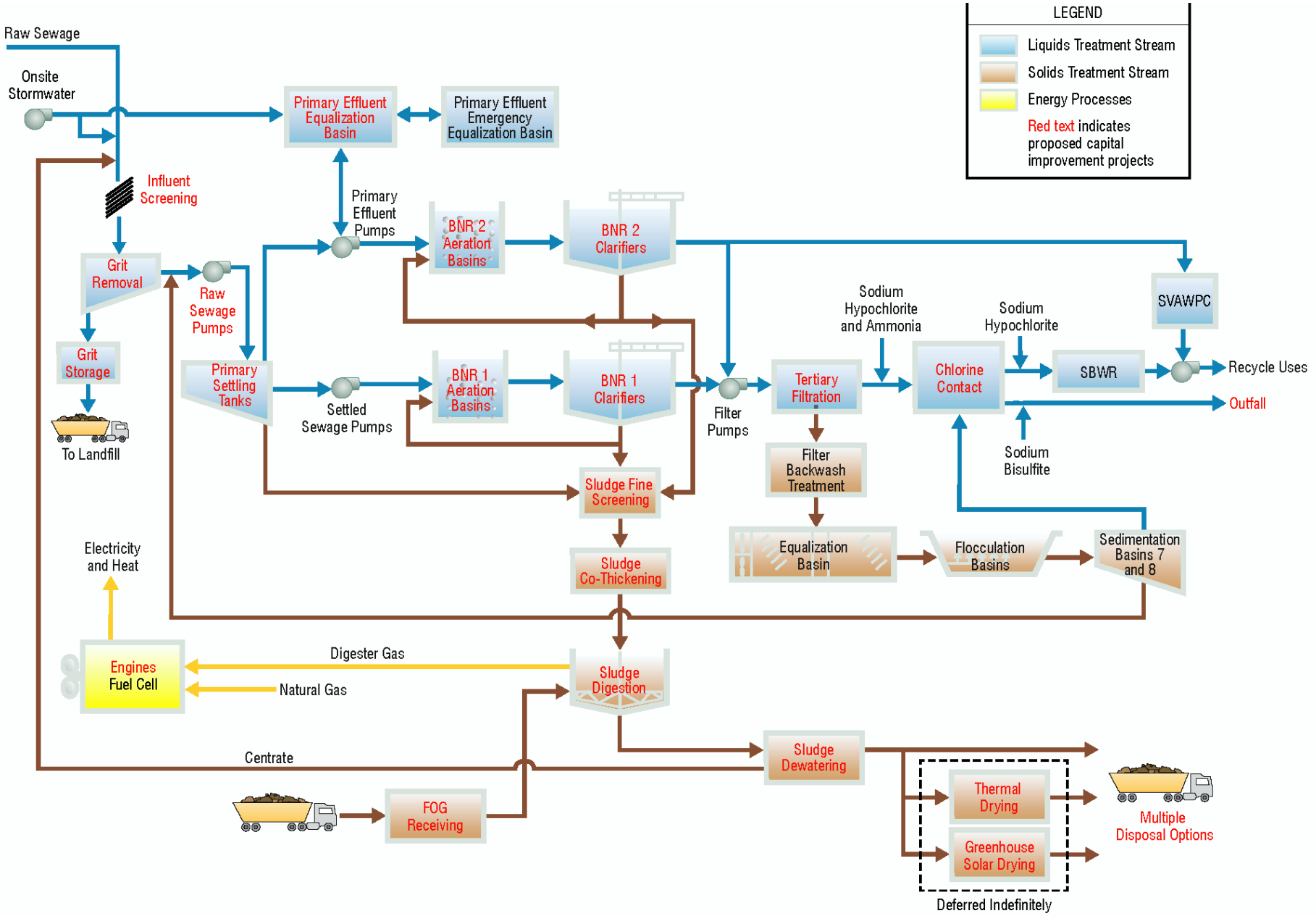


Figure 9 – Proposed Treatment Process Flow Diagram

Active Construction Projects – Aerial Plan

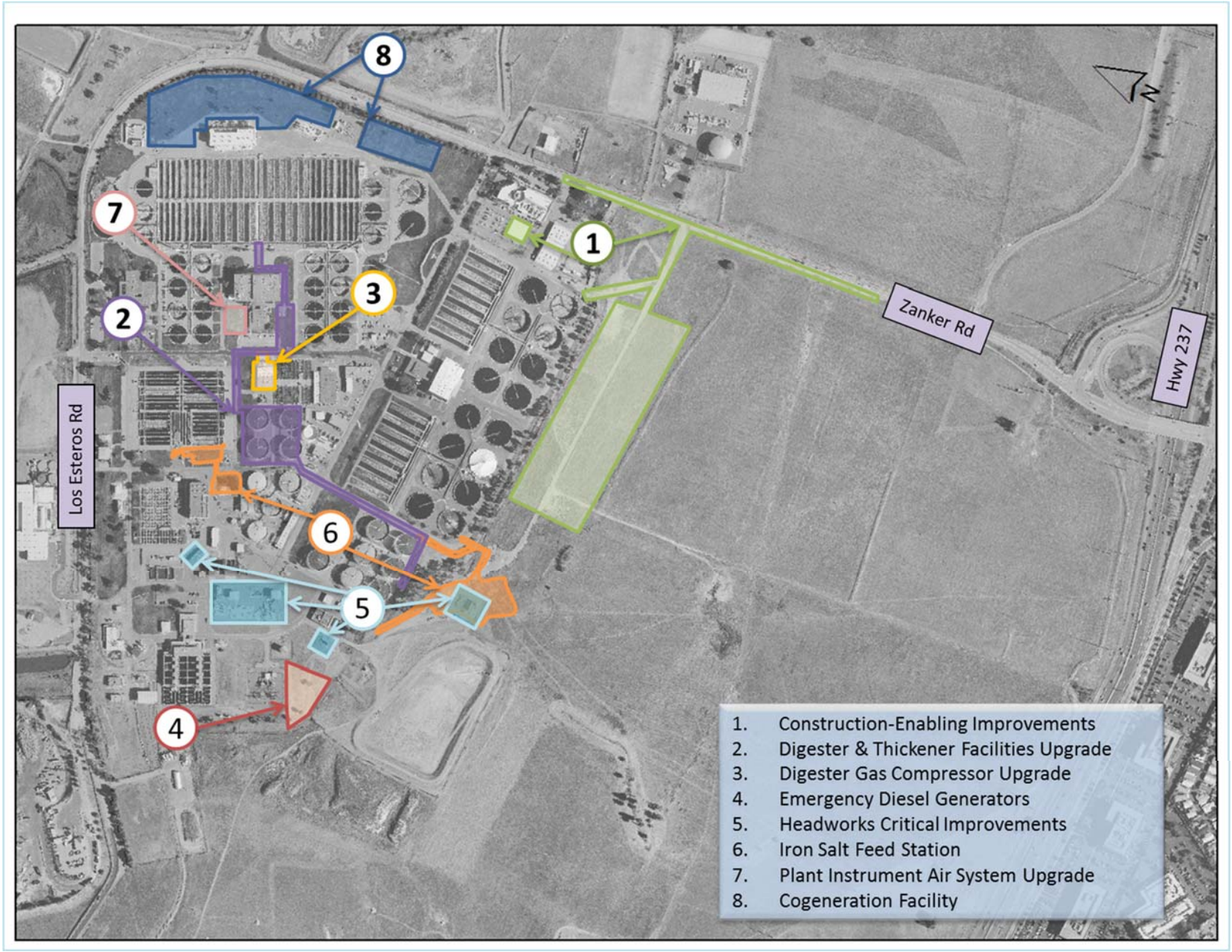


Figure 10: Active Construction Projects

COUNCIL AGENDA: 4/24/18
FILE: 18-475
ITEM:

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow
Jon Cicirelli

SUBJECT: SEE BELOW

DATE: March 21, 2018

Approved D-DSyL Date 4/4/18

SUBJECT: MASTER CONSULTANT AGREEMENT WITH BLACK & VEATCH FOR OWNER'S ADVISOR SERVICES FOR THE 8142 – YARD PIPING IMPROVEMENTS PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

Approve a Master Consultant Agreement with Black & Veatch to provide owner's advisor services for the 8142 – Yard Piping Improvements Project at the San José-Santa Clara Regional Wastewater Facility from the date of execution through June 30, 2026, in a total amount not to exceed $9,750,000 subject to the appropriation of funds.

OUTCOME

Approval of this master consultant agreement with Black & Veatch (B&V) will provide the City with owner's advisor (OA) services for the 8142 - Yard Piping Improvements Project (Project) at the San José - Santa Clara Regional Wastewater Facility (RWF). Approval of this agreement will not result in any physical changes to the environment, as the City Council will need to take additional actions before construction activities on the Project commence.

BACKGROUND

Description of existing conditions
The RWF has more than 300,000 linear feet (LF) of piping, along with associated valves and related appurtenances. Of this piping, 67,000 LF is wastewater process pipes (process pipes) that carry raw sewage, liquids, and sludge between the various unit treatment process areas. Process pipes at the RWF vary in age, material, condition, reliability, redundancy, and diameter (from 8 inches to 144 inches). Seventy percent of the process pipes at the RWF are more than 25 years old, with more than ten percent over 50 years of age.

In June 2015, the City completed a desktop study of the RWF's process pipes, which developed a risk-based framework that prioritized the condition assessment of the pipe segments based on

the likelihood and consequence of failure. Sixteen pipe segments, totaling 21,000 LF, were identified as high priority based on these criteria. In addition, the study identified 13,000 LF as medium priority and 33,000 LF as low priority. The study also provided guidelines for data collection criteria, inspection technology, and strategies for conducting condition assessments. Detailed condition assessments will need to be performed to confirm the actual condition of the process pipes, and repair and replacement priorities will be updated accordingly.

Yard Piping Improvements Description

The Project will focus on rehabilitating and/or replacing the high priority process piping within the RWF such as the 96-inch diameter settled sewage line and the 87-inch by 136-inch oval settled sewage line. Rehabilitation of medium and lower priority pipe segments will be done as part of a separate, future project. The Project scope will include subsurface investigations, condition assessments, temporary pipe bypasses, new pipes where redundancy is required, and associated road repairs. Staff anticipates the Project will need to be completed in multiple construction packages due to the volume of work, complicated piping network, seasonal restrictions, coordination with other CIP projects, and operational/shutdown conditions.

Project Delivery Method

Performing the needed subsurface investigations and condition assessments will require the ability to construct access points and make repairs, which may be necessary since the RWF has an extensive pipe network with overlapping underground pipes in congested areas. The Project will require extensive collaboration with RWF O&M staff to coordinate shutdowns to allow work to be completed while maintaining overall levels of service and meet permit requirements. This effort is made more difficult due to the lack of access points and redundancy for key process pipes. For these reasons, staff selected progressive design-build to deliver this Project. However, due to the criticality of some work, portions of the Project may need to be delivered using design-bid-build. A memorandum informing Council of the decision for selecting the progressive design-build method was issued on March 8, 2017.

Owner's Advisor Services

The City requires the services of a professional engineering consultant to serve as an owner's advisor to assist staff with the procurement and management of a design-build entity. The owner's advisor will provide the following services:

- Initial condition assessments and develop alternatives analysis
- Develop the project definition report
- Assist with the procurement and selection of a design-build entity
- Assist with environmental review and permit documents
- Develop process shutdowns and bypass pumping plans
- Develop construction packages and work sequencing plans
- Design and constructability reviews
- Review cost models and assist with Guaranteed Maximum Price (GMP) negotiations
- Develop technical appendices/performance requirements for the design-build contract
- Provide construction management and post-construction services

The planning-level construction estimate for the Project, excluding contingency, is $77.7 million over the Project's anticipated eight-year duration. The construction cost estimate will be updated as more information is obtained through detailed condition assessments. It is anticipated that the Project will be substantially complete in summer 2026.

ANALYSIS

The City issued a RFQ on September 29, 2017, seeking OA services for the Project. A non-mandatory pre-proposal conference was held on October 10, 2017 and attended by five engineering firms. The City received four Statements of Qualifications (SOQs) by the October 26, 2017 submittal deadline. The firms that submitted SOQs were Brown and Caldwell (BC), Black & Veatch (B&V), CDM Smith (CDM), and GHD Inc.

A technical evaluation panel, which consisted of representatives from the Environmental Services Department and the Department of Public Works, evaluated and ranked all four SOQs in accordance with the procurement process set forth in the RFQ. The SOQs were evaluated using a consistent scoring matrix based on the firm's expertise, experience, approach, cost, and Local Business Enterprise (LBE) and Small Business Enterprise (SBE) status. Each firm received a total score comprised of their SOQ score, cost, LBE/SBE status, and interview score as shown below.

Description	Weight
SOQ	
Submittal Responsiveness	Pass/Fail
Minimum Qualifications	Pass/Fail
Expertise	10
Experience	20
Project Approach	20
Cost	10
Local Business Enterprise	5
Small Business Enterprise	5
Interview	30
TOTAL	**100**

All four firms met the minimum qualifications and their SOQs were deemed responsive. The three top ranked firms were invited to interview based on their SOQ scores. The interviews were conducted on December 6, 2017. The final ranking and rounded scores for each firm were as follows.

Rank	Firm	Expertise	Experience	Approach	Cost	LBE	SBE	Interview	Total
1	B&V	9.3	16.8	17.0	9.3	5.0	0.0	26.7	**84.1**
2	CDM	8.2	14.7	16.7	9.8	5.0	0.0	23.3	**77.7**
3	BC	8.5	13.2	16.7	9.3	5.0	0.0	17.7	**70.4**

In accordance with City policy, ten percent of the total evaluation points were reserved for local and small business enterprise status. All firms qualified for the LBE status. None of the firms qualified for the SBE status.

Award Recommendation
Staff recommends awarding a master consultant agreement to the top ranked firm, B&V, in an amount not to exceed $9,750,000. B&V is a nationally recognized engineering consulting firm, with wastewater, owner's advisor, and design-build experience. Key members of the proposed team have experience serving in the OA role on the RWF's Cogeneration Facility Project as well as other DB projects for other wastewater agencies, including Sunnyvale Cleanwater Program and Orange County Sanitation District Facility Condition Assessment project. The proposed team has experience prioritizing critical facilities, performing detailed condition assessments of process piping, coordinating and developing process shutdowns and bypass pumping plans in active operating facilities, and developing comprehensive construction sequencing plans.

The agreement not-to-exceed amount of $9,750,000 represents approximately 12.6 percent of the current construction estimate of $77,700,000 for the Project, which staff considers appropriate for the work involved. The agreement NTE, as a percentage of construction, is slightly higher than previously negotiated owner's advisor agreements for the Headworks and Digested Sludge Dewatering projects, which were 11.0 percent and 11.8 percent, respectively. The higher percentage accounts for using multiple construction packages to deliver this Project.

Depending on the type of services rendered, B&V will be compensated based on actual hourly wages times a multiplier of 3.17 or 2.84. The 2.84 multiplier will be applied for construction management services and the 3.17 multiplier will be applied for all other services performed by the consultant. The multiplier covers overhead (e.g. fringe benefits, payroll taxes, group insurance, building/rental expenses, etc.), associated project costs (e.g. routine printing and copying, computer equipment use, network and telecommunications expenses, etc.), and profit. The lower multiplier was negotiated to account for lower overhead cost to the OA for construction management staff who will be co-located at the RWF for the duration of the Project.

EVALUATION AND FOLLOW-UP

All service orders issued under this master consultant agreement will be reported to the Treatment Plant Advisory Committee (TPAC) in the monthly summary of procurement and contract activity and the quarterly CIP agreement and service order summary. A progress report on this and other RWF capital projects will be made to the Transportation and Environment Committee and City Council on a semiannual basis. Monthly progress reports on the RWF CIP will also be submitted to TPAC and posted on the City's website.

The current action is for the award of a master consultant agreement for OA services only. After the procurement process for the selection of the design-build entity, staff will return to City Council in fall 2019 for approval of a design-build contract.

POLICY ALTERNATIVES

Alternative #1: Direct City staff to provide the required services with in-house resources.
Pros: Increased work options for City staff.
Cons: City staff has limited experience with delivering progressive design build projects and does not have the full technical expertise needed to effectively perform the OA scope of services. This limitation would likely result in challenges with executing aspects of the Project and may cause delays in Project implementation.
Reason for not recommending: The challenges of implementing a project of this size, complexity, and duration and the use of the progressive design-build delivery method require a level of specialized expertise and experience that the City staff does not currently possess. The City would need to hire new staff with knowledge and expertise in a variety of disciplines, which would likely delay the project for many years.

Alternative #2: Direct City Staff to perform the work using program management consultant.
Pros: Program management consultant has experience and expertise in providing OA services for similar projects.
Cons: The current program management agreement does not include scope or budget for these services. In addition, the contract expires prior to this Project's completion.
Reason for not recommending: The program management consultant agreement would need an amendment to add scope and budget for OA services, as well as extend the agreement term, which could delay the Project.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the April 24, 2018 City Council meeting agenda. This item is scheduled to be heard at the TPAC meeting on April 12, 2018.

COORDINATION

This memorandum has been coordinated with the City Manager's Budget Office, the City Attorney's Office, Finance Department, and the Department of Planning, Building, and Code Enforcement.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the April 12, 2018 TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended April 24, 2018 City Council meeting agenda.

FISCAL/POLICY ALIGNMENT

This Project is consistent with the City Council-approved budget strategy to focus on rehabilitating aging RWF infrastructure, improve efficiency, and reduce operating costs. This Project is also consistent with the budget strategy principle of focusing on protecting our vital core services.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: $9,750,000

2. COST ELEMENTS OF MASTER AGREEMENT:

Project Management	$1,040,000
Initial Condition Assessments	$860,000
Project Definition Report	$810,000
Environmental Review/Permitting	$120,000
Design-Builder Procurement	$250,000
Preliminary Services and GMP Negotiation Support	$3,340,000
Construction Management and Post-Construction Services	$3,330,000
TOTAL AGREEMENT AMOUNT	**$ 9,750,000**

3. SOURCE OF FUNDING: 512 - San José-Santa Clara Treatment Plant Capital Fund.

4. FISCAL IMPACT: This Contract is funded through the San José-Santa Clara Treatment Plant Capital Fund and will have no impact on the San José-Santa Clara Treatment Plant Operating Fund (Fund 513).

5. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this Project is allocated between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

BUDGET REFERENCE

The table below identifies the fund and appropriation proposed to fund the master consultant agreement recommended as part of this memorandum.

Fund #	Appn. #	Appn. Name	Total Appn.	2017-2018 Amount for Contract	2017-2018 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7396	Yard Piping and Road Improvements	$3,712,000	$2,100,000	299	11/28/2017 30035

Services performed by B&V under this agreement will be authorized by service orders. An appropriation is not required for execution of the master consultant agreement, but is required for each service order authorized under this agreement. An amount of $2,100,000 is budgeted for service order issuance in 2017-2018. Future funding is subject to the annual appropriation of funds and, if needed, will be included in the development of future year budgets during the annual budget process.

CEQA

Statutorily Exempt, File No. PP18-016, Section 15262, Feasibility and Planning Studies with respect to the scope of work that is limited to this action. Any future activities resulting in a change to the physical environment would require approval of CEQA review.

\s\
JON CICIRELLI
Acting Director, Public Works

\s\
KERRIE ROMANOW
Director, Environmental Services

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

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Jon Cicirelli

SUBJECT: SEE BELOW

DATE: March 14, 2018

Approved [signature] Date 23 MARCH 2018

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 July 2017 through December 2017.

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 Facility[1] (RWF) by highlighting key accomplishments during the first half of fiscal year 2017-2018 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 2018-2022 adopted CIP includes approximately $1.5 billion in funding, of which approximately $883 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 eleventh in the report series and highlights key program and project accomplishments from July 2017 through December 2017. This report also compliments monthly CIP status reports, which staff began issuing in April 2014 to provide more frequent and time-relevant updates. Through December 2017, 45 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 several program areas from July 2017 through December 2017.

A. *Financing*

In July, the State Water Resources Control Board (SWRCB) informed staff that State Revolving Fund (SRF) funding would not be available for RWF CIP projects due to higher than expected demand for SRF loans. The updated Intended Use Plan issued by the SWRCB gave higher priority to wastewater recycling, small disadvantaged communities, and green projects. In addition, several of the standard terms of the SRF loan agreement precluded the City from obtaining short-term financing and setting rates and reserves in a cost-effective manner. Therefore, at this time, the strategy for funding the City's portion of the RWF CIP includes pay-as-you-go cash funding from ratepayer revenues, short-term financing, and proceeds from bond issuances. Staff will continue to monitor SRF loan opportunities but is not actively seeking SRF loans at this time.

In October, Council approved an interim financing program, under a three-year contract, to enable borrowing up to $300 million at any one time to fund San José's portion of the RWF CIP. In the longer term, staff anticipates that bonds will need to be issued periodically to provide sufficient funding for the 10-year CIP; the first bond issuance is expected to occur in 2021-2022.

B. *Amendment to Program Management Agreement*

In October, Council approved an amendment to the master consultant agreement with Stantec Consulting Services (formerly MWH) for program management services. The amendment increased the maximum compensation from $39 million to $78 million, and extended the term from September 30, 2018 to June 30, 2023. The amended contract will enable the continuation of program management and project management services for a number of large and complex projects in the CIP. The amendment also addressed recommendations from a 2017 audit of ESD consultant contracts.

C. *Recruitments*
During the first half of fiscal year 2017-2018, staff successfully filled 12 vacant positions: four associate engineers, three associate engineering technicians, a senior engineering technician, an engineer I/II, an office specialist, a senior process engineer, and a division manager. Recruiting for mid-level and senior engineering positions will be a priority during the second half of fiscal year 2017-2018, particularly for senior and principal engineer and construction inspector positions that support CIP project delivery.

D. *Flow Management Study*
In July, staff completed an evaluation of the flow and load projections used as the basis of design for CIP projects. Specifically, the study calibrated an existing hydraulic model of the RWF and developed strategies for accommodating extreme peak hour wet weather flows. The study identified a need to confirm the hydraulic and process capacities for various existing treatment and pumping units, which will be performed by RWF operations and process engineering staff starting in the second half of fiscal year 2017-2018. Additionally, recommendations were made to continue to monitor RWF flows during storm events and to reassess the peak flow management strategy since the hydraulic capacities have been established.

Other notable developments during this reporting period include the following.

- In August, staff posted a Notice of Determination deeming a firm pre-qualified to provide system integration programming services for CIP projects. This is the second firm to be pre-qualified as another was pre-qualified in July 2016. Having two pre-qualified firms promotes competitive pricing and ensures the availability of system integrators. System integration is critical as it enables monitoring and control of equipment from the RWF's computer room.
- In November, staff advertised a Request for Qualifications (RFQ) for on-call specialty inspection and material testing services. Staff received Statements of Qualifications (SOQs) from five interested firms in December. Staff will seek Council approval to award agreements to the three highest ranked firms during the second half of fiscal year 2017-2018.

On the project delivery front, 25 active projects progressed through various stages of the project delivery model.

A. *Feasibility/Development Highlights*
Fifteen projects were in the feasibility/development phase during the first half of fiscal year 2017-2018. Key activities completed during this period include the following.

- The **Flood Protection** and **Storm Drain System Improvements** projects were initiated in August and October, respectively. The Flood Protection project will provide protection to the RWF against flooding by building a berm in the low lying areas that connects to existing higher ground. The Storm Drain System Improvements project will upgrade the RWF's existing storm drain system to handle a 10-year 24-hour storm with no surface flooding on streets, and a 100-year 24-hour storm with all flow staying within streets (i.e., not flood any RWF buildings and structures).

- Condition assessments began for two low-bid design-build projects: **Fire Life Safety Upgrades** and **HVAC Improvements**.
- Condition assessment, modeling, and alternatives analysis efforts continued for the **Aeration Tanks Rehabilitation** and **Facility-Wide Water Systems Improvements** projects. Multiple workshops for both projects were held to discuss condition assessment findings, as well as develop and shortlist alternatives for further analysis.
- **Digested Sludge Dewatering Facility** (progressive design-build): In November, the project team completed the evaluation of alternatives for six key project components—dewatering technology, sludge storage, sludge pumping, cake storage, cake conveyance, and layout. In December, work began on the Basis of Design Report. A RFQ will be issued in early 2018 to shortlist prospective design-builders.
- The **Filter Rehabilitation** and **Nitrification Clarifiers Rehabilitation** project teams completed alternatives analysis and developed conceptual design reports.
- **Headworks Improvements and New Headworks** (progressive design-build): Three design-build firms were shortlisted in August and invited to submit proposals following the evaluation of four SOQs in July. A Request for Proposals was issued to the shortlisted firms in November and all three submitted proposals in December.
- **Yard Piping and Road Improvements** (progressive design-build): Staff advertised a RFQ for owner's advisor and engineering services in September, received four SOQs in October, and issued a final ranking in December. Council award of a master consultant agreement is expected in April.

B. *Design Highlights*

Four projects were in the design phase during the first half of fiscal year 2017-2018. Key activities completed during this period include the following.

- **Advanced Facility Control & Meter Replacement**: Upon completion of the 50 percent design in July, the project was packaged into two phases—**Phase 1** and **Phase 2**—to better align construction with planned RWF maintenance shutdowns and available budget. The project team pre-qualified four prospective general contractors for Phase 1 in November and completed the 100 percent design for Phase 1 in December.
- **Blower Improvements**: In July, the project team hosted an outreach event to familiarize prospective bidders with the project and solicit interest. Attendees included general contractors, subcontractors, and equipment suppliers. The 60% design was completed in September.
- **Cogeneration Facility** (progressive design-build): A value engineering workshop was held in July to help ensure the project is cost efficient. The project became the first to enroll in the owner-controlled insurance program that was established for the RWF CIP in June 2017. The second early work package, which consists of site preparations and foundation work was approved by the City Manager in October. Subsequently, the project team reviewed the 60 percent design and negotiated guaranteed maximum price (GMP) proposals with the design-builder for completing the design and construction. The project team also continued to coordinate with the

Bay Area Air Quality Management District (BAAQMD) regarding the project's Authority to Construct permit.

C. *Construction Highlights*

Six projects totaling more than $147 million were in construction during the first half of fiscal year 2017-2018 (see Attachment A). One of the six projects is being delivered using the low-bid design-build method, with the remaining five projects being delivered using the design-bid-build delivery method. One project reached beneficial use during this period. The remaining projects all progressed well, although a few encountered delays. Of significance, staff continued to work through several significant unforeseen conditions encountered on the Digester and Thickener Facilities Upgrade project.

Key activities completed during this period include the following.

- **Emergency Diesel Generators** (low bid design-build): On July 7, 2017, the project reached beneficial use as the design-builder completed the commission testing of the four new generators. Completion of the project provides sufficient reliable power to allow critical RWF operations to continue during a temporary utility power outage. Project acceptance is expected by spring 2018.
- **Iron Salt Feed Station**: The general contractor provided operation and maintenance training of the equipment in September, before starting commission testing of the ferric chloride and polymer dosing systems in October. Testing continued through to December. As a result of the testing, the general contractor had to make minor modifications to the in piping and programming. Through December 2017, construction was 84 percent complete. The project is expected to reach beneficial use in spring 2018.
- **Construction-Enabling Improvements**: Delays in the fabrication and delivery of the portable trailers continued to impact the project schedule. The trailer to be used for badging and site security was delivered to the RWF in August. However, delivery of the four construction management trailers was delayed as their fabrication spanned the second half of fiscal year 2017-2018. Staff has notified the general contractor that they have exceeded the amount of contractually allowed working days and that liquidated damages are accruing until full beneficial use is reached. The City has claimed partial beneficial use of a portion of the project to provide a laydown area for contractors on working on other CIP projects. Through December 2017, construction was 77 percent complete. The project is expected to reach beneficial use in spring 2018.
- **Headworks Critical Improvements**: Work began in July with mobilization and preparation of critical equipment submittals by the general contractor. By November, the general contractor had removed one of the two existing single-rake bar screens in Headworks 2 and prepared the existing bar screen channel for the installation a new multi-rake bar screen, which was installed in December. Through December 2017, construction was 25 percent complete. The project is expected to reach beneficial use in spring 2018.

- **Plant Instrument Air System Upgrade**: In July, the general contractor installed the footing for the new compressor building. Concrete for the building's floor and equipment pads was poured in August, and the building's concrete block walls were built in September. Roofing work spanned from October through December. Through December 2017, construction was 55 percent complete. The project is expected to reach beneficial use in spring 2018.
- **Digester and Thickener Facilities Upgrade**: In July, the general contractor completed foundation work for the elevated pipe rack columns and concrete work inside the digesters. In August, installation of post-tension cables was completed. Work on the new sludge screening building and dissolved air flotation thickener tanks, and installation of the pipe rack columns continued through December. Additionally, staff continued to address the unforeseen issues encountered during the second half of fiscal year 2016-2017 and began addressing new issues encountered during the first half of fiscal year 2017-2018.

  Temporary Gas Bypass System and 78-inch Pipe Replacement – Preparation for the gas bypass and primary effluent bypass to repair the severely corroded 78-inch pipe and wye structure continued. The gas bypass work was completed in September. The primary effluent bypass and pipeline repair work is scheduled to be completed during the dry weather season of 2018.

  Seismic Redesign – In July, staff was notified by the design consultant that the current structural design does not fully meet the seismic design criteria specified for the project. The design consultant evaluated various options and is working to issue a revised seismic design package that takes into account cost, constructability, and schedule impacts. Final completion of the seismic redesign package and contractor pricing is expected in spring 2018. Staff anticipates there will be significant cost and schedule delays due to the seismic redesign work, and that an additional increase to the construction contingency will be needed.

  Handling and Mitigation of PCBs – During demolition activities inside digester and dissolved air flotation thickener tanks in summer 2017, elevated levels of polychlorinated biphenyls (PCBs) were found in the joint caulking material. The contractor immediately removed and disposed of all PCB-impacted caulking material in accordance with all applicable state and federal regulations. In September, staff met with the Environmental Protection Agency (EPA) to notify them of the discovery of PCBs at the RWF and to discuss a risk-based clean-up approach for the digester project going forward. In November, an initial application (Phase 1) was submitted to EPA for review. In December, EPA approved the Phase 1 application in efforts to minimize delay impacts to the project, but also required additional soil sampling and characterization work to be performed. Excavation work around the four digesters was put on temporary hold in August 2017 pending consultation with and approval by the EPA; the general contractor will be directed to resume excavations when appropriate and safe to do so. Staff also continued to work on the final application

(Phase 2), which will include soil and concrete sampling results and other additional information.

Staff plans to seek Council approval for a second contingency increase in spring 2018 to implement the seismic retrofit solution and PCBs cleanup plan. An initial increase to the construction contingency, in the amount of $15,000,000, was approved by Council in November 2017 to address the previously encountered and unforeseen underground utility conflicts, regulatory requirements from BAAQMD, and deteriorated 78-inch pipe and wye structure, and mitigation of lead paint.

Through December 2017, construction was 39 percent complete. The project is expected to reach beneficial use in summer 2020.

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 first half of fiscal year 2017-2018.

Staff expects to achieve the following during the second half of fiscal year 2017-2018.

1. Obtain Council approval to award a master consultant agreement for owner advisor services for the Yard Piping and Road Improvements project.
2. Advertise a RFQ for design-build services for the Digested Sludge Dewatering Facility project.
3. Issue a final ranking for the design-builder procurement, commence contract negotiations with the highest ranked design-builder, and obtain Council approval to award a design-build contract for the Headworks Improvements and New Headworks project.
4. Complete preliminary design and begin detailed design on two projects: Filter Rehabilitation and Nitrification Clarifiers Rehabilitation.
5. Execute a definitive contract amendment and a negotiated GMP to complete the design and construction of the Cogeneration Facility with the project's design-builder.
6. Start construction for the new Cogeneration Facility.
7. Pre-qualify general contractors, complete design, and advertise the Blower Improvements project for construction bidding.
8. Advertise and obtain Council approval to award a construction contract for the Advanced Facility Control & Meter Replacement Phase 1 project.
9. Install the temporary bypass pumping system to allow replacement of the 78-inch settled sewage pipeline as part of the Digester and Thickener Facilities Upgrade Project.
10. Obtain Council approval for a second increase to the construction contingency for the Digester and Thickener Facilities Upgrade project.
11. Amend the master consultant agreement with Signet Testing Laboratories to continue providing special inspection and material testing services for the Digester and Thickener Facilities Upgrade project.
12. Reach beneficial use on four projects: Construction-Enabling Improvements, Headworks Critical Improvements, Iron Salt Feed Station, and Plant Instrument Air System Upgrade.

13. Obtain Council approval to award master consultant agreements for specialty inspection and material testing services during construction for various CIP projects.
14. Continue to develop longer term resource and staffing plans, particularly for the construction management group in anticipation of increased construction activities in fiscal years 2019-2020 and 2020-2021.
15. 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 April 2, 2018, 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 April 12, 2018, TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended April 24, 2018, City Council meeting agenda.

CEQA

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

KERRIE ROMANOW
Director, Environmental Services

\s\
JON CICIRELLI
Acting Director, Public Works

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

Attachment A – Projects in Construction: July 2017 – December 2017

T&E AGENDA: 4/2/2018
ITEM:
ATTACHMENT A

Attachment A – Projects in Construction: July 2017 – December 2017

#	Project Name	Contractor	Amount Awarded	Date Awarded	Estimated Beneficial Use
1.	7394 – Emergency Diesel Generators	Anderson Pacific Engineering Construction, Inc.	Base Contract: $15,310,000 Contingency: $1,531,000	6/17/2014	7/7/2017*
2.	6717 – Iron Salt Feed Station	Anderson Pacific Engineering Construction, Inc.	Base Contract: $5,205,000 Contingency: $780,750	1/26/2016	Spring 2018
3.	7382 – Digester and Thickener Facilities Upgrade	Walsh Construction Company II, LLC	Base Contract: $107,925,000 Contingency: $28,490,625**	5/24/2016	Summer 2020
4.	7987 – Construction-Enabling Improvements	Teichert Construction, Inc.	Base Contract: $3,135,910 Contingency: $314,000	6/21/2016	Spring 2018
5.	7617 – Plant Instrument Air System Upgrade	Anderson Pacific Engineering Construction, Inc.	Base Contract: $2,848,000 Contingency: $427,200	8/23/2016	Spring 2018
6.	8101 – Headworks Critical Improvements	C. Overaa & Co.	Base Contract: $1,499,000 Contingency: $224,850	5/23/2017	Spring 2018

* This is the actual date the contractor achieved substantial completion and the project reached beneficial use.
** On November 28, 2017, Council approved an increase to the initially approved construction contingency amount of $13,490,625.

T&E Agenda: 04/02/2018
Item: d (1)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: Transportation and Environment Committee

FROM: Sharon W. Erickson, City Auditor

SUBJECT: **Open Audit Recommendations from the Audit of Environmental Services Department Consulting Services**

DATE: March 23, 2018

RECOMMENDATION

Review and accept the status of open audit recommendations from the September 2017 *Audit of Environmental Services Department Consulting Services: Agreements Require Additional Oversight.*

SUMMARY

In September 2017, the Office of the City Auditor completed an audit of the Environmental Services Department's use, monitoring, and payment for consulting services. The report included ten recommendations. On October 3, 2017, the City Council directed that an update on open audit recommendations be provided to the Transportation and Environment Committee in Spring 2018.

As shown in the attached summary, eight of those ten recommendations have been implemented. As a result, ESD is expected to receive approximately one million dollars in credits for geographic pay differentials paid during the agreement term from 2013 to 2017 (including the multiplier). The amended and restated master agreement has been revised to allow for reimbursement of geographic pay differentials (subject to pre-approval) by the ESD Director, but does not allow the multiplier to be applied to geographic pay differential. We anticipate this will result in an additional half a million dollars in savings over the term of the new agreement. In addition, ESD received $13,000 in credits for past per diem reimbursements.

Two recommendations are partly implemented – staff have distributed the link to the City's instructions on using consulting agreement forms to all contract monitoring staff, and are preparing Standard Operating Procedures with instructions and guidance on all aspects of contract management. The target date for completing implementation of these two remaining recommendations is December 2018.

The Office of the City Auditor would like to thank the Environmental Services Department for their prompt attention in this matter.

Sharon W. Erickson
Sharon W. Erickson
City Auditor

Attachment

Audit Report and Recommendation	Department	Current Status	Comments
17-05 AUDIT OF ENVIRONMENTAL SERVICES DEPARTMENT CONSULTING SERVICES: AGREEMENTS REQUIRE ADDITIONAL OVERSIGHT (Issued 09/01/17) **The objective of this audit was to evaluate the use, monitoring, and payment for consulting services. The report included ten recommendations.**			
#1: To increase transparency, in its upcoming amendment, ESD should: a) Renegotiate the multiplier and establish not-to-exceed hourly billing rates by position in future service orders; and b) Include limits on the amount and number of salary increases for key staff positions in any given year that it will pay.	ESD	Implemented	On October 25, 2018, Council approved an amended and restated master agreement with Stantec Consulting Services, Inc. (previously MWH Americas, Inc.). The amendment includes a slightly lower multiplier (0.02 decrease). In addition, it includes a table to track not to exceed billing rates based on job classification per service order. All service orders issued will be required to include a level of effort table with not-to-exceed hourly billing rates for key staff positions for the given year (or duration of the approved service order). In addition, the restated master agreement specifies that hourly salary rates may not be increased by more than 3% annually, every January 1st, unless pre-authorized in writing by the Director.
#2: To make invoice review easier and ensure staffing levels are appropriate, ESD should ensure the following information is included in all relevant side letters: Changes to key staff • Sub-consultant firms and their key staff • Billing rates and charges • Form 700 filing • Onsite or offsite designation	ESD	Implemented	A template staffing change approval form was included with the amended master agreement. The form standardizes the information that the consultant must provide to the Director when proposing a change to key staff. Information to be provided on the form letter includes: the name and position of key staff, hourly billing rate, Form 700 filing requirements, and whether the person has an onsite or offsite designation.
#3: ESD should work with the City Attorney's Office to determine: a) Whether the City should seek repayment of geographic pay differentials (including multiplier), and b) If future agreements include a geographic pay differential, the amount of the differential and that the multiplier should not apply.	ESD	Implemented	ESD is expected to receive approximately one million dollars in credit for geographic pay differential (including the multiplier) paid during the agreement term from 2013 to 2017. The amended and restated master agreement has been revised to allow for reimbursement of geographic pay differential, subject to pre-approval by the ESD Director. The revised language does not allow the multiplier to be applied to geographic pay differential. We anticipate this could result in at least half a million dollars in savings.

Audit Report and Recommendation	Department	Current Status	Comments
#4: ESD should enforce the agreement's restrictions on per diem reimbursements for onsite employees and request MWH repay the City for past incorrect per diem reimbursements.	ESD	Implemented	ESD received a credit of $11,683 for past incorrect per diem reimbursements (associated with service order 1). In addition, staff re-reviewed past invoices issued against the master agreement from the contract start date through September 2017. An additional $1,407.46 was identified in incorrect per diem reimbursements. A credit for this amount was paid back to the city.
#5: To ensure consistent enforcement, ESD should clarify mileage reimbursement limits in the MWH agreement and define home office.	ESD	Implemented	The amended and restated master agreement was revised to limit mileage reimbursements. The amended agreement requires that mileage reimbursement is in accordance with the City's travel policy.
#6: In its upcoming amendment to the MWH agreement, ESD should clarify the appropriate compensation rates for Carollo Engineering.	ESD	Implemented	The amended and restated master agreement identifies Carollo Engineering as the major sub-consultant. While invoices previously reflected use of a multiplier for Carollo it was not called out in the agreement. The amendment now identifies the multiplier and associate project cost that will be applied to Carollo rates.
#7: In its upcoming amendment to the MWH agreement ESD should clarify what sub-consultant travel expenses can be reimbursed.	ESD	Implemented	The agreement now clarifies what sub-consultant travel expenses can be reimbursed. It also disallows markup on subconsultant travel expenses. In addition, the amended agreement identifies the specific number of flights the consultant and subconsultant are allowed and for what purposes. Travel not permitted per the agreement can be pre-approved by the Director as needed.
#8: To address the problem of service orders, tasks, compensation schedules, and sub-consultants not being consistent with approved agreements, ESD Administrative staff should periodically distribute the City's instructions on *"Using and Completing the City of San Jose Standard and Master Consulting Agreement Forms"* to all contract monitoring staff.	ESD	Partly Implemented	ESD administrative staff included a link to the City's instruction on the ESD webpage and will reference the document in the annual ESD Introduction to Contracts training in Spring 2018 and in future ESD Contract Management trainings. Target date: Dec-2018.
#9: Because Harper & Associates, Inc. invoices were paid without being adequately reviewed, ESD should assign independent personnel to go back and determine whether any payment adjustments are needed.	ESD	Implemented	ESD's staff reviewed the agreement and invoices submitted by Harper and Associates. Staff processed the necessary payment adjustments and executed a contract amendment to include classifications and hourly billing rates.

Audit Report and Recommendation	Department	Current Status	Comments
#10: To improve consistency across all divisions, ESD should offer additional contract management training. Contract management training should include, but is not limited to the following: • Invoice review • Situations that require amendments • Sales tax accrual process • Standard operating procedures for contract monitoring • Managing consultant relationships	ESD	Partly Implemented	ESD's Contracts staff is developing draft Standard Operating Procedures (SOPs) that include instructions and guidance on all aspects of contract management. Additionally, using the Qualified Vendor list established by the City Manager's Office, ESD solicited bids and is evaluating responses for a third-party consultant to review and set up a standardized contracts management process for the department. As ESD enterprise funds are tracking to have sufficient non-personal fund savings to cover the cost of the consultant work, the Budget Office approved the use of fund savings to complete this work. The SOPs content and Contracts Management course curriculum will be completed with the assistance of the selected consultant. Target date: Dec-2018.

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow
Jon Cicirelli

SUBJECT: SEE BELOW

DATE: March 29, 2018

Approved D. DSyL Date 3/29/18

INFORMATION

SUBJECT: FINAL PROPOSER RANKINGS AND INTENT TO NEGOTIATE THE DESIGN-BUILD CONTRACT FOR THE HEADWORKS PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

BACKGROUND

The San José-Santa Clara Regional Wastewater Facility (RWF) serves a number of jurisdictions. Due to the regional nature of the RWF, projects are subject to State law (as opposed to the City's Charter and Municipal Code). On January 1, 2015, Senate Bill 785 (Wolk) took effect and allowed the use of design-build by special districts, local and state agencies for projects valued over $1,000,000 as long as their respective governing bodies approved. Subsequently, on March 24, 2015, City Council adopted a resolution approving the use of low bid design-build and progressive design-build as possible delivery methods for projects in the RWF's Capital Improvement Program (CIP) and delegated authority to the Directors of Environmental Services and Public Works to determine the appropriate delivery method for each project. As part of this process, staff would keep City Council and the Treatment Plant Advisory Committee (TPAC) apprised about the decision-making process through informational memos for all projects proceeding with a design-build delivery method.

In May 2015, the City selected the progressive design-build (PDB) delivery method for the Headworks Improvements and New Headworks projects, collectively called the Headworks Project (Project), due to its complexity, unknown site conditions, presence of multiple project interfaces, and integration with existing facilities. The PDB delivery method provides a single point of responsibility for both design and construction, and increases the potential for innovative solutions to complex issues. CDM Smith is assisting with the process by serving as the owner's advisor for the Project[1].

[1] December 1, 2015 Council Memo for owner's advisor services:
http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=1475&meta_id=544246

Project Description
Preliminary treatment, the first step in the RWF treatment process, is provided by the headworks facility, which functions to remove inorganic material, such as sticks, stones, grit and sand from the influent wastewater stream to protect and reduce wear on the downstream process equipment. Key components of the headworks facility include pumps, mechanical screens, screenings compactors, grit removal systems, and grit washing systems. As with most types of mechanical equipment, maintenance requirements and reliability are very important aspects of the day-to-day operations. In addition, the headworks must be able to respond to a wide range of hydraulic loading conditions to account for daily and seasonal fluctuations.

The existing headworks facility consists of two separate headworks structures, Headworks 1 and Headworks 2. Headworks 1 has been in operation for over 50 years and has a rated capacity of 271 million gallons per day (mgd). Headworks 2, which was commissioned in 2008, has a rated capacity of 160-mgd and was built to supplement the original headworks in response to a wet weather event that occurred in 1998 when the RWF experienced an estimated peak wet weather flow of 330-mgd.

With the aging Headworks 1 facilities requiring regular repairs and rehabilitation, the City's Plant Master Plan recommended decommissioning Headworks 1 and expanding Headworks 2 to handle future anticipated peak flows of up to 400 MGD. Subsequent City evaluations identified the need for a new headworks (Headworks 3) to replace Headworks 1, and outlined modifications needed for Headworks 2 to improve operational reliability and performance. The CIP defined and sequenced the work in two parts:

1. Headworks Improvements – This portion of work will include improving the reliability of Headworks 2, performing structural repairs to several influent boxes, and re-routing of in-plant recycle flows from Headworks 1 to the new Headworks 3, in preparation for the decommissioning of Headworks 1.
2. New Headworks – This portion of work will include the design and construction of a new Headworks 3 facility consisting of a new pump station, screens, grit removal, piping and other appurtenances to replace the aging Headworks 1.

These two parts, collectively called the Headworks Project, will be performed under a single PDB contract and are expected to be substantially complete by fall 2022. Attachment A shows the location of the existing Headworks 1 and 2 and anticipated location of the new Headworks 3.

ANALYSIS

The City implemented a two-step selection process for procurement of the design-builder. The first step involved shortlisting teams based on qualifications. A Request for Qualifications (RFQ) was issued on May 24, 2017, and Statement of Qualifications (SOQs) were submitted on July 12, 2017. The RFQ consisted of a pre-qualification questionnaire intended to address the minimum general requirements that should be met by design-build firms (acceptable safety record, licenses

and registrations, workers compensation history, etc.) and a requirement to list key personnel including their project experiences. The RFQ also required that the design-build firm had completed design-build projects similar in nature to the Project and were financially capable of performing the work.

Of the four firms that submitted SOQs, the following three firms were shortlisted and invited to participate in the Request for Proposals (RFP) process:

- CH2M HILL Engineers, Inc. (with Kiewit Infrastructure as the key subcontractor)
- HDR\Alberici (a proposed joint venture)
- Overland Contracting (Black & Veatch Engineers with Overaa Construction as the key subcontractor)

The second step consisted of the submission and evaluation of technical proposals. The RFP was issued on November 8, 2017 and proposals were received from the three short-listed firms on December 21, 2017.

State law allows the use of "best value" as a design-builder selection method so that competitive proposals can be evaluated by using the criteria and selection procedures specifically identified in the RFP. "Best value" means a value determined by evaluation of objective criteria that may include, but not be limited to price, features, functions, life-cycle costs, experience, and past performance. Responsive proposers are ranked based on a determination of value provided. Key elements reviewed during the RFP process included:

- Technical and management approach to meet Project objectives;
- Price consisting of fees for preliminary services, general conditions, and design-builder;
- Approach to how life-cycle cost will be addressed during the project cost evaluation process;
- A bonding capacity of at least $100 million;
- Ability to meet all insurance mandates as dictated by the RFP;
- Strategy for local subcontracting, commitment to providing a skilled and trained workforce, and labor peace; and
- The City's small and local business preference.

The selection panel, consisting of representatives from Environmental Services, Public Works, and a local labor union, evaluated the written proposals based on key elements above and held interviews with the three candidate firms on February 7, 2018. Scores from the proposals and interviews were tabulated and resulted in the following final ranking:

Proposer	Ranking
CH2M HILL Engineers, Inc.	1
HDR\Alberici	2
Overland Contracting	3

The selection panel ranked CH2M as the highest ranked firm to implement the Project. While all three firms were well qualified, CH2M distinguished itself from the other proposers during the interview phase by demonstrating a clear understanding of Project objectives, outlining innovative approaches to completing the Project, and confirming their highly experienced professionals were dedicated to the success of the Project. The CH2M team consists of a project manager and team leaders with extensive design-build experience, including the design and construction of headworks facilities.

CH2M has been working together with the City over the last 18 months on the Cogeneration Facility progressive design build project and has maintained a local office in San Jose for the last 30 years. Their major contracting partner, Kiewit Infrastructure, has more than 55 years of experience in Northern California and was the General Contractor for the City's Headworks 2 project that was commissioned in 2008.

Contract Negotiation Process
A draft design-build contract was included in the RFP. This form of agreement was initially developed by staff and the City Attorney's Office in consultation with attorneys from the City's outside counsel (Hawkins Delafield and Wood) for the Cogeneration Facility Project and then tailored to this Project, while also incorporating lessons learned from the Cogeneration Project. Staff will negotiate the final terms of the agreement, along with the price for preliminary (pre-construction) services, the general conditions fee, and the design-builder fee.

In May 2018, staff plans to recommend to Council: 1) approval of the contract; and 2) approval of a "not to exceed" fixed or lump sum price for the Preliminary Services component of the Project. Following, development of the Basis of Design Report (BDR), in approximately one year, staff will return to Council to seek delegation of authority to the City Manager to negotiate and award the guaranteed maximum price (GMP). GMP is a pricing method used in design-build projects, in which the City pays the design-builder on a defined cost-reimbursable basis subject to a maximum limit, above which the City is not obligated to pay for services within the original scope. The total budget for the Project is currently $140 million, which includes an estimate of $105 million for the design-build work, however, a more accurate estimate of the GMP will be available following completion of the BDR.

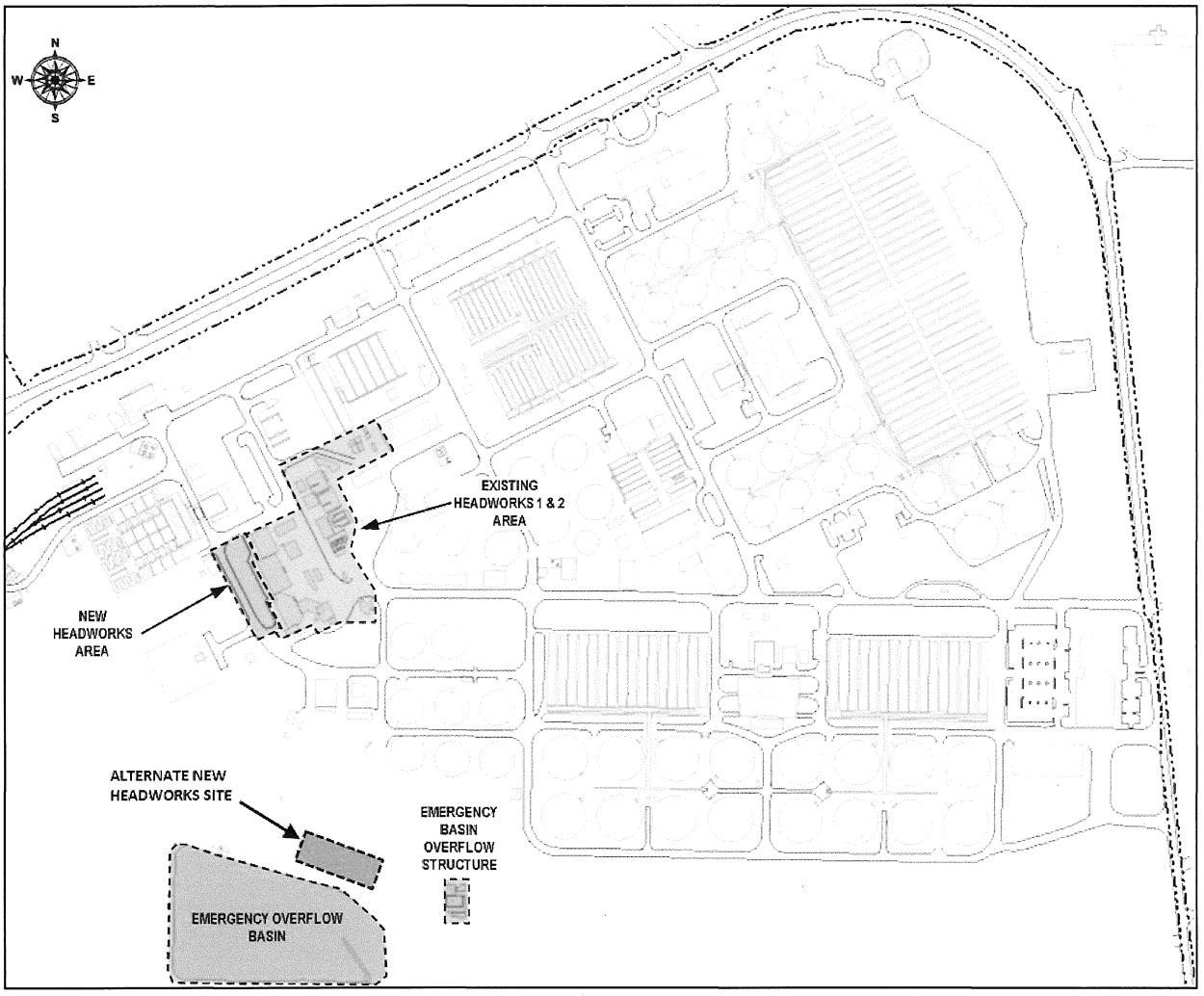
\s\
JON CICIRELLI
Acting Director of Public Works

\s\
KERRIE ROMANOW
Director, Environmental Services

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

ATTACHMENT A

New Headworks Facility Project Location within the San José-Santa Clara Regional Wastewater Facility



City Manager's Contract Approval Summary

For Procurement and Contract Activity between $100,000 and $1.17 Million for Goods and $100,000 and $290,000 for Services

MARCH 1 - MARCH 31, 2018

	Description of Contract Activity [1]	Fiscal Year	Req#/ RFP#	PO#	Vendor/Consultant	Original $ Amount	Start Date	End Date	Additional $ Amount	Total $ Amount	Comments
1	FERRIC CHLORIDE AND DOSING STATION	17-18	24943	54676	KEMIRA WATER SOLUTIONS, INC	600,000	07/01/17	06/30/18	40,000	640,000	
2	COATING REHABILITATION SERVICE FOR 5 CLARIFIER TANKS	17-18	25339	55455	MURPHY INDUSTRIAL COATINGS INC	800,000	11/01/17	10/31/18			
3	WEED ABATEMENT SERVICES	17-18	25484	55415	LONG'S CUSTOM DISCING INC	166,300	03/15/18	03/14/19			
4	PURCHASE WEIR FLOWAY PUMP MODEL 28MKL/N, 1000HP	17-18	25518	80425	WEIR FLOWAY PUMPS	162,941	03/14/18	09/13/18			SBWR
5	EDI MEMBRANES, CORES AND CLAMPS	17-18	25835	55504	ENVIRONMENTAL DYNAMICS INC	160,000	12/01/17	11/30/18			
6	MOTOR AND GENERATOR REPAIR SERVICES	17-18	25840	55460	VINCENT ELECTRIC	172,000	04/01/18	03/31/19			
7	PRIME MOVER PARTS	17-18	25959	55477	UPS MIDSTREAM SERVICES INC	180,000	05/23/18	05/22/19			
8	SERVICE ORDER NO. 01: OUTFALL BRIDGE AND LEVEE IMPROVEMENT	17-18		AC 27585	AECOM	708,414	03/14/18	10/30/20			MASTER AGREEMENT TERM 5/24/16-6/30/21, $5M

[1] This report captures completed contract activity (Purchase Order Number, Contract Term, and Contract Amount)