SAN JOSÉ/SANTA CLARA TREATMENT PLANT ADVISORY COMMITTEE

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

AGENDA/TPAC

4:00 p.m. October 11, 2018 Room 1734

1. ROLL CALL

2. APPROVAL OF MINUTES

A. September 13, 2018

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

A. Director's Report (verbal)
- Monthly Progress Report for the month of August.

5. AGREEMENTS/ACTION ITEMS

A. 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 January 2018 through June 2018.

This item was approved by the Transportation and Environment Committee on October 1, 2018, and is scheduled to be considered by the City Council at a later date.

B. San José-Santa Clara Regional Wastewater Facility Staffing Level and Training Status Report

Staff Recommendation:

Accept this report on the status of staffing and training at the San José-Santa Clara Regional Wastewater Facility (Wastewater Facility).

This item was approved by the Transportation and Environment Committee on October 1, 2018, and is scheduled to be considered by the City Council at a later date.

C. Report on Bids and Award of Construction Contract for 8073- Blower Improvements Project at the San José-Santa Clara Regional Wastewater Facility

Staff Recommendation:

(a) Report on bids and award of a construction contract for the 8073 - Blower Improvements Project to the low bidder, Monterey Mechanical Company, for the base bid and Add Alternate No. 1, in the amount of $29,498,000, and approval of a contingency in the amount of $4,425,000.

(b) Adopt a resolution authorizing the Director of Public Works to negotiate and execute any single and/or multiple change orders in excess of $100,000, up to the amount of the contingency of $4,425,000

This item is scheduled to be approved by the City Council on October 23, 2018.

6. OTHER BUSINESS/CORRESPONDENCE

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

A. Purchase of California Carbon Allowances

Staff Recommendation:

Adopt a Resolution authorizing the City Manager to negotiate and execute an agreement between the City of San José and Vitol, Inc., for the purchase of California Carbon Allowances for the San José-Santa Clara Regional Wastewater Facility (RWF) to fulfill the compliance obligation under the California Cap-and-Trade Program, for an amount of $295,728.00.

This item was approved by the City Council on September 25, 2018.

B. Actions Related to Purchase Orders for Hazardous Fluid Waste Recycling, Disposal, and Related Services

Staff Recommendation:

Adopt a resolution authorizing the City Manager to:

1. Execute two Purchase Orders with Safety-Kleen Systems, Inc. (Norwell, MA) for hazardous fluid waste recycling, disposal, and related services, including all labor, material, and equipment necessary to perform such

services, for the Departments of Public Works and Environmental Services for an initial twelve-month period beginning on or about September 19, 2018 and ending September 30, 2019 in a combined amount not to exceed of $145,000;

2. Approve a contingency of $30,000 to amend purchase orders as required during the initial term in the event actual service needs exceed estimates, subject to the appropriation of funds; and
3. Execute purchase orders for up to four additional one-year option terms to extend the services through September 30, 2023, subject to the appropriation of funds.

This item was approved by the City Council on September 18, 2018.

C. Approval of Citywide Insurance Renewals

Staff Recommendation:

Adopt a resolution authorizing the Director of Finance to select and purchase City property and liability insurance policies for the period October 1, 2018 to October 1, 2019, at a total cost not to exceed $1,850,000, including a 15% contingency for additional property or assets scheduled, with the following insurance carriers:

(1) Factory Mutual Insurance Company for Property Insurance, including Boiler & Machinery
(2) Old Republic Aerospace, Phoenix Aviation Managers, for Airport Owners and Operators Liability including War Risks & Extended Perils Coverage (includingExcess Automobile and Employers' Liability) and Police Aircraft Hull & Liability including War Risks & Extended Perils Coverage.
(3) The Travelers Indemnity Company of Connecticut for Automobile Liability (Airport fleet vehicles including Shuttle Buses, Regional Wastewater Facility fleet vehicles, and Airport Shuttle Bus physical damage).
(4) QBE Specialty Insurance Company for Secondary Employment Law Enforcement Professional Liability.
(5) National Union Fire Insurance Company of Pittsburg, PA for Accidental Death, Accidental Dismemberment, and Paralysis Policy for the Police Air Support Unit.
(6) Berkley Regional Insurance Company for Government Fidelity/Crime Coverage.

This item was approved by the City Council on September 18, 2018.

D. Wildlife Habitat at the San José- Santa Clara Regional Wastewater Facility

Staff Recommendation:

Accept this report highlighting established wildlife habitat at the San José-Santa Clara Regional Wastewater Facility, and ongoing habitat management activities for the Western Burrowing Owl.

This item was approved by the Transportation and Environment Committee on September 10, 2018, and is scheduled to be considered by the City Council at a later date.

E. Master Service Agreement with HydroScience Engineers, Inc. for Engineering Support and Services for the San José/Santa Clara Regional Wastewater Facility

Staff Recommendation:

1. Approval of Master Service Agreement with HydroScience Engineers, Inc. for engineering support and services for the San José/Santa Clara Regional Wastewater Facility (Facility) for various operation and maintenance (O&M) projects requiring engineering support and services on an as-needed basis for an initial term starting from the date of execution to June 30, 2019, for a maximum compensation of $500,000 during the initial term, subject to the annual appropriation of funds.

2. Adoption of a resolution authorizing the City Manager to exercise up to three twelve-month options to extend the term through June 30, 2022, for an amount not to exceed $500,000 for each option term; and to amend the Agreement to adjust the compensation to reflect changes in support service needs, provided the total aggregate amount does not exceed $2,000,000 for the full term, subject to the annual appropriation of funds.

This item was approved by the City Council on September 25, 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 **November 8, 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.

To request an accommodation or alternative format for City-sponsored meetings, events or printed materials, please contact Eva Roa (408) 975-2547 or (408) 294-9337 (TTY) as soon as possible, but at least three business days before the meeting/event.

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, September 13, 2018 at 4:03 p.m.

1. ROLL CALL

Minutes of the Treatment Plant Advisory Committee convened this date at 4:03p.m. Roll call was taken with the following members in attendance:

Committee Members: Debi Davis, Dev Davis, Lan Diep, Patrick Kwok (Alternate), Anthony Phan (Alternate) (4:06), Jim Ortbal (alternate), Kathy Watanabe (alternate)

Absent: Steven Leonardis, Sam Liccardo

2. APPROVAL OF MINUTES

A. June 14, 2018
Item 2.A. was approved to note and file.
Ayes – 6 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 3 (Leonardis, Liccardo, Anthony Phan (Alternate))

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

A. Director's Report (verbal)
- Monthly Progress Report
  Assistant Director Napp Fukuda presented the Committee on the Progress Reports of May, June and July.

5. AGREEMENTS/ACTION ITEMS

A. Purchase of California Carbon Allowances

Staff Recommendation:

Adopt a Resolution authorizing the City Manager to negotiate and execute an agreement between the City of San José and Vitol, Inc., for the purchase of California Carbon Allowances for the San José-Santa Clara Regional Wastewater Facility (RWF) to fulfill the compliance obligation under the California Cap-and-Trade Program, for an amount of $295,728.00

This item is scheduled for consideration by the City Council on September 25, 2018.

On a motion made by Committee Member Alternate Jim Ortbal and a second by Committee Member Diep, TPAC recommended approval of staff's recommendation for Item 5.A.

Ayes – 6 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 3 (Leonardis, Liccardo, Anthony Phan (Alternate))

B. Actions Related to Purchase Orders for Hazardous Fluid Waste Recycling, Disposal, and Related Services

Staff Recommendation:

Adopt a resolution authorizing the City Manager to:

1. Execute two Purchase Orders with Safety-Kleen Systems, Inc. (Norwell, MA) for hazardous fluid waste recycling, disposal, and related services, including all labor, material, and equipment necessary to perform such services, for the Departments of Public Works and Environmental Services for an initial twelve-month period beginning on or about September 19, 2018 and ending September 30, 2019 in a combined amount not to exceed of $145,000;
2. Approve a contingency of $30,000 to amend purchase orders as required during the initial term in the event actual service needs exceed estimates, subject to the appropriation of funds; and
3. Execute purchase orders for up to four additional one-year option terms to extend the services through September 30, 2023, subject to the appropriation of funds.

This item is scheduled for consideration by the City Council on September 18, 2018.

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

Ayes – 6 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 3 (Leonardis, Liccardo, Anthony Phan (Alternate))

C. Approval of Citywide Insurance Renewals

Staff Recommendation:

Adopt a resolution authorizing the Director of Finance to select and purchase City property and liability insurance policies for the period October 1, 2018 to October 1, 2019, at a total cost not to exceed $1,850,000, including a 15% contingency for additional property or assets scheduled, with the following insurance carriers:

(1) Factory Mutual Insurance Company for Property Insurance, including Boiler & Machinery
(2) Old Republic Aerospace, Phoenix Aviation Managers, for Airport Owners and Operators Liability including War Risks & Extended Perils Coverage (includingExcess Automobile and Employers' Liability) and Police Aircraft Hull & Liability including War Risks & Extended Perils Coverage.
(3) The Travelers Indemnity Company of Connecticut for Automobile Liability (Airport fleet vehicles including Shuttle Buses, Regional Wastewater Facility fleet vehicles, and Airport Shuttle Bus physical damage).
(4) QBE Specialty Insurance Company for Secondary Employment Law Enforcement Professional Liability.
(5) National Union Fire Insurance Company of Pittsburg, PA for Accidental Death, Accidental Dismemberment, and Paralysis Policy for the Police Air Support Unit.
(6) Berkley Regional Insurance Company for Government Fidelity/Crime Coverage.

This item is scheduled for consideration by the City Council on September 18, 2018.

On a motion made by Committee Member Lan Diep and a second by Committee Member Alternate Watanabe, TPAC recommended approval of staff's recommendation for Item 5.C.

Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

D. Wildlife Habitat at the San José- Santa Clara Regional Wastewater Facility

Staff Recommendation:

Accept this report highlighting established wildlife habitat at the San José-Santa Clara Regional Wastewater Facility, and ongoing habitat management activities for the Western Burrowing Owl.

This item will be considered by the Transportation and Environment Committee on September 10, 2018, and is scheduled to be considered by the City Council at a later date.

On a motion made by Committee Member Lan Diep and a second by Committee Member Alternate Watanabe, TPAC recommended approval of staff's recommendation for Item 5.C.

Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

E. Master Service Agreement with HydroScience Engineers, Inc. for Engineering Support and Services for the San José/Santa Clara Regional Wastewater Facility

Staff Recommendation:

1. Approval of Master Service Agreement with HydroScience Engineers, Inc. for engineering support and services for the San José/Santa Clara Regional Wastewater Facility (Facility) for various operation and maintenance (O&M) projects requiring engineering support and services on an as-needed basis for an initial term starting from the date of execution to June 30, 2019, for a maximum compensation of $500,000 during the initial term, subject to the annual appropriation of funds.

2. Adoption of a resolution authorizing the City Manager to exercise up to three twelve-month options to extend the term through June 30, 2022, for an amount not to exceed $500,000 for each option term; and to amend the Agreement to adjust the compensation to reflect changes in support service needs, provided the total aggregate amount does not exceed $2,000,000 for the full term, subject to the annual appropriation of funds.

This item is scheduled for consideration by the City Council on September 25, 2018.

Assistant Director Napp Fukuda verbally walked through this memo. Committee Member Alternate Patrick Kwok asked whether the HydroScience office was local. Assistant Director Fukuda confirmed that it was local.

On a motion made by Committee Member Alternate Phan and a second by Committee Member Alternate Watanabe, TPAC recommended approval of staff's recommendation for Item 5.E.

Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

6. OTHER BUSINESS/CORRESPONDENCE

A. Information Memo on Amended and Restated Design-Build Contract for Design and

Construction of the Cogeneration Facility at the San José-Santa Clara Regional Wastewater Facility.

Item 6.A. was approved to note and file.

Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

A. 8753 – Master Consultant Agreements With Construction Testing Services, Inc.; Signet Testing Labs, Inc.; And Consolidated Engineering Labs For Special Inspection And Materials Testing Services For The San José-Santa Clara Regional Wastewater Facility Capital Improvement Program

Staff Recommendation:

Approve Master Consultant Agreements with Construction Testing Services, Inc.; Signet Testing Labs, Inc.; and Consolidated Engineering Labs for special inspection and materials testing services for various capital improvement projects at the San José-Santa Clara Regional Wastewater Facility, from the date of execution through December 31, 2023, in a total amount not to exceed $3,000,000 for each agreement, subject to the appropriation of funds.

The proposed recommendation was approved by the City Council on June 19, 2018.

B. Recycling Program Approval of A Design-Build Contract With Ch2m Hill Engineers, Inc. For The Headworks Project At The San José-Santa Clara Regional Wastewater Facility

Staff Recommendation:

1. Adopt a resolution adopting the Addendum to the Environmental Impact Report for the San José-Santa Clara Regional Wastewater Facility in accordance with the California Environmental Quality Act (CEQA), as amended, and adopting a related Mitigation Monitoring and Reporting Program.

2. Approve the design-build contract with CH2M Hill Engineers, Inc. for the Headworks Project at the San José-Santa Clara Regional Wastewater Facility in an amount not to exceed $5,666,354 for the performance of preliminary services under the contract.

3. Approve a design contingency in the amount of $566,635 for City-approved changes to the scope of preliminary services.

4. Adopt a resolution authorizing the City Manager or his designee to:

    a. Negotiate and execute a separate amendment to the contract to allow CH2M Hill Engineers, Inc. to proceed with subsurface investigations prior to the City's execution of the definitive contract amendment in an amount not to exceed $1,000,000;

    b. Approve a construction contingency in the amount of $1,000,000 for City-approved changes to the scope of the subsurface investigations.

    c. Execute change orders in excess of $100,000 up to the amount of the approved contingency for changes to the scope of the preliminary services work or subsurface investigations.

The proposed recommendation was approved by the City Council on June 19, 2018.

C. Report On Bids And Award Of Contract For 8684– Pond A18 South Gate Levee Repair

Staff Recommendation:

Report on bids and award of a construction contract for 8684 Pond A18 South Gate Levee Repair to the apparent low bidder Sweetwater Construction, Inc. for the base bid in the amount of $217,493 and approval of a construction contingency of 15 percent in the amount of $32,624.40.

The proposed recommendation was approved by the City Council on June 19, 2018.

Item 7.A., 7.B. and 7.C. was approved to note and file.
Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

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 for the months of June, July and August.

Item 8.A. was approved to note and file.

Ayes – 7 (Debi Davis, Dev Davis, Diep, Patrick Kwok (alternate), Anthony Phan (Alternate), Jim Ortbal (alternate) Kathy Watanabe (alternate)
Nayes – 0
Absent – 2 (Leonardis, Liccardo)

9. MISCELLANEOUS

A. The next TPAC Meeting is on **October 11, 2018, at 4:00 p.m**., City Hall, Room 1734.

10. OPEN FORUM

11. ADJOURNMENT

A. The Treatment Plant Advisory Committee adjourned at 4:12 p.m.

Pat Kolstad, Vice Chair

TREATMENT PLANT ADVISORY COMMITTEE

San José-Santa Clara Regional Wastewater Facility

Capital Improvement Program
Monthly Status Report: August 2018

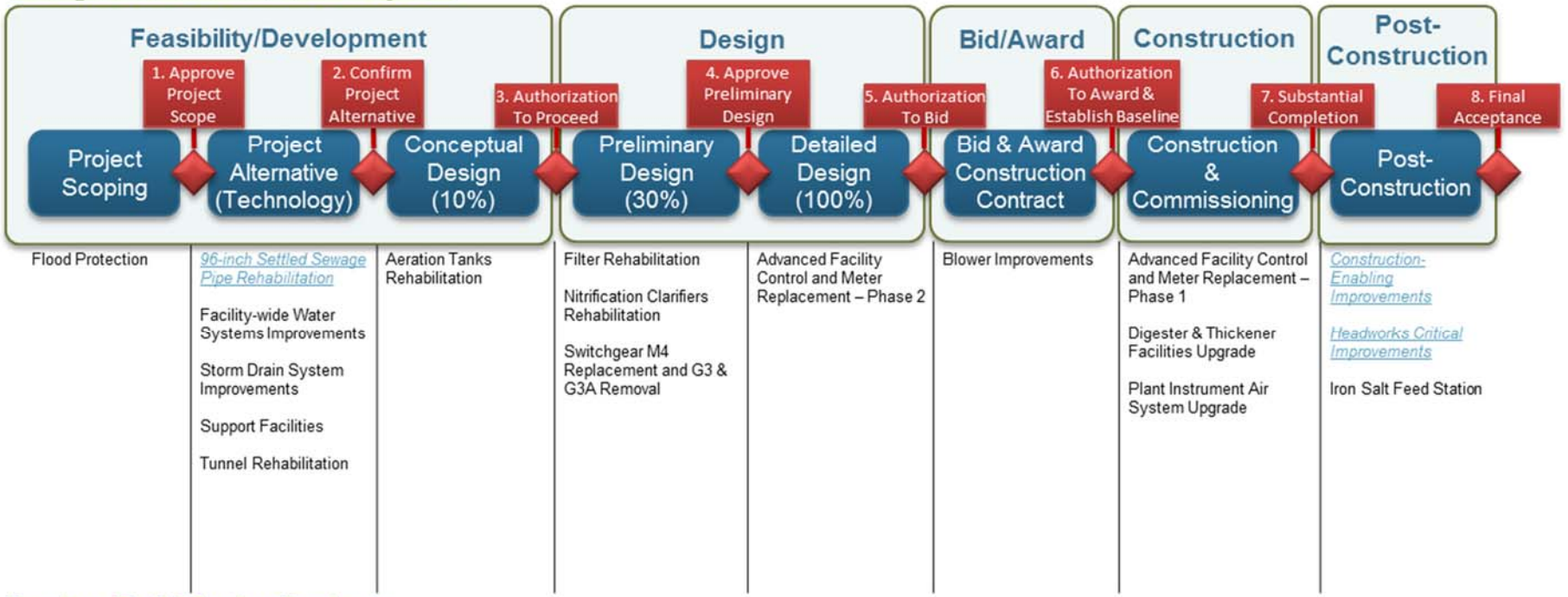
October 4, 2018

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

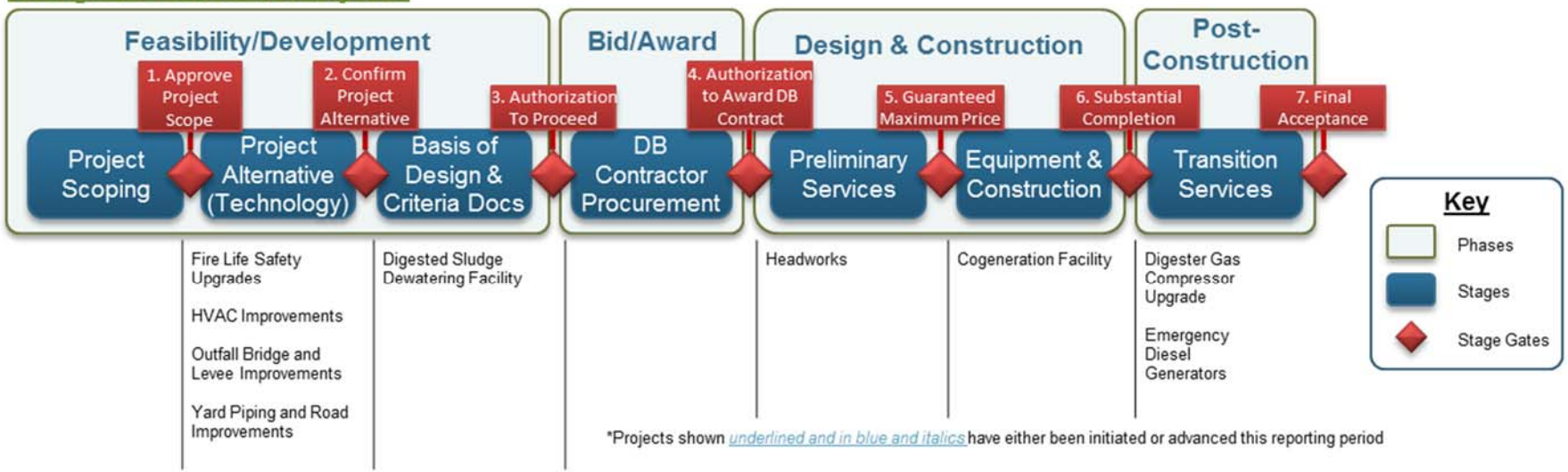
Report Contents

Project Delivery Model

Design-Bid-Build Active Projects



Design-Build Active Projects



*Projects shown underlined and in blue and italics have either been initiated or advanced this reporting period

Program Summary

August 2018

In August, the Headworks Critical Improvements and Iron Salt Feed Station projects advanced through Stage Gate 7 – Substantial Completion of the Project Delivery Model (PDM) to the post-construction phase. The Headworks Critical Improvements Project replaced two existing climber screens with multi-rake screens and replaced slide gate stems and actuators at the headworks facilities. The Iron Salt Feed Station Project constructed new ferric and polymer dosing stations.

The Construction-Enabling Improvements Project achieved Beneficial Use and the Plant Instrument Air System Upgrade Project contractor completed functional testing. For the Cogeneration Facility Project, the four internal combustion engine generators were delivered to the RWF, and factory acceptance testing was completed for the gas purification system with delivery expected in September. The Digester and Thickener Facilities Upgrade Project contractor completed the removal of the PCB-contaminated soil and concrete encapsulation work in accordance with the EPA approved risk-based mitigation plan. Construction continued on the sludge screening building, dissolved air flotation thickeners and gallery, above-ground pipe rack, and digester tanks.

The Advanced Facility Control and Meter Replacement Phase 1 Project team conducted a hazardous material site walkthrough with the contractor. They received the contractor's baseline schedule and several critical submittals, including the flowmeters and valves.

The City opened bids for the Blower Improvements Project. Four bids were received, with the lowest bid five percent below the Engineer's Estimate. The team expects to return to TPAC and Council to recommend award of a construction contract in October 2018.

Design-builder CH2M held a series of workshops to provide the basis for selecting the new headworks site. The project team expects to select the site by October 2018.

The Fire Life Safety Upgrades Project design consultant began conceptual design work and completed an electrical site survey. The City also received a draft condition assessment report for the HVAC Improvements Project and approved a condition assessment plan for the Storm Drain System Improvements Project. The Outfall Bridge and Levee Improvements Project completed review of the alternative analysis report. The Nitrification Clarifiers Rehabilitation Project team completed review of the preliminary design report (PDR) and will receive the final PDR in September.

The CIP initiated the 96-inch Settled Sewage Pipe Rehabilitation Project to address the severe crown corrosion in this pipeline as part of the Yard Piping and Road Improvements Project. A condition assessment of this pipe and the adjacent 87-inch by 136-inch was performed this month to determine the extent of the corrosion and viable rehabilitation methods.

Look Ahead

The following key activities are forecast for September and October of 2018:

- The following projects will proceed to stage gate:
    1. The Facility Wide Water Systems Improvements, Outfall Bridge and Levee Improvements, and 96-inch Settled Sewage Pipe Rehabilitation projects - Stage Gate 2: Confirm Project Alternative.
    2. Digested Sludge Dewatering Facility Project - Stage Gate 3: Authorization to Proceed.
    3. Filter Rehabilitation and Nitrification Clarifiers Rehabilitation projects - Stage Gate 4: Approve Preliminary Design.
    4. Headwork Project – Stage Gate 4.1 Site Selection.
- The Headworks Project will hold workshops on risk management, cost, final site selection, and permitting.
- The Advanced Facility Control and Meter Replacement Phase 2 Project will finalize the hazardous material report.
- The Yard Piping and Road Improvements and Storm Drain System Improvements projects will complete condition assessment work.
- The Digester and Thickener Facilities Upgrade Project will complete replacement of the 78-inch settled sewage pipeline with a final inspection walkthrough scheduled for October. The 78-inch pipeline will be placed into service in October before the wet weather season, and the temporary pumping and pipeline system will be decommissioned.
- The Plant Instrument Air System Upgrade Project will complete the 28-day operational testing.
- The City will advertise an RFP for design-builder services for the Digested Sludge Dewatering Facility Project.
- The City will issue the Notice of Completion and Acceptance (NOCA) for the Headworks Critical Improvements Project.

Program Highlight – Construction Activity Update

August 31 was a significant day at the RWF with the delivery of four new engine generators, as seen in Figure 1. The new engine generators are being installed as part of the Cogeneration Facility project and will use a combination of biogas (a by-product of the anaerobic digestion process) and natural gas provided by PG&E to produce 100 percent of the electrical power and heat needed to operate the RWF through the next 10-15 years. It is anticipated the new engines will run on up-to a 50-50 blend of digester gas and natural gas, limited only by the volume of digester gas produced at the RWF.

Figure 1: Unloading Caterpillar CG260-16 engines at the RWF

Each engine generator weighs a little more than 56 tons. Together, the four generators can produce up to 14 megawatts (MW) of power if running at full capacity on 100 percent digester gas, but with available digester gas production the four generators are anticipated to deliver a total of up to 12.5 MW of power. On average, 8 to 10 MW of electrical power is needed to operate the RWF.

The engine generators also serve to produce heat for the heating water loop, which is used in the digestion process and non-digester heating loads. The heat recovery system will be configured to maximize recoverable heat, and any excess heat will be rejected to cooling towers.

The engine generators are currently temporarily staged at the new construction laydown area until the design-builder CH2M completes subgrade preparation work, underground utilities, and building foundation work. CH2M is planning to pour the new concrete foundation slab in October and estimates it will take approximately 18 hours to complete the monolithic (single) pour of an estimated 1,650 cubic yards.

A short distance away, the Digester and Thickener Facilities Upgrade Project is completing the demolition and replacement of an existing wye structure, 200-feet of 78-inch diameter pipe, 40-feet of a 96-inch diameter pipe run, and 20-feet of an 87-inch oval pipe run, as seen in Figure 2. This was unforeseen work that had to be completed in a very short time frame during the summer months under low flow conditions. Contractor Walsh has demolished all pipe; installed new pipe; and formed and placed the new wye structure. Walsh is currently backfilling the new pipe and welding the T-lock at the new wye structure and new pipe. T-lock is a polyvinyl chloride (PVC) coating cast into the concrete to protect it from corrosion caused by hydrogen sulfide and other wastewater gases. The original wye structure and pipes were replaced due to the corrosion of the concrete as a result of these gases.

Construction work on the new wye structure and pipe replacements began in May 2018 and is scheduled to be completed at the end of September. While the construction work only took a few months to complete, detailed planning and preparation began long before. Most notably, a temporary pumping and piping system had to be designed and installed to reroute 100 million gallons per day (MGD) of plant effluent from the primary process in order for the contractor to do the repair work on the wye structure and replace the various pipe segments. It has taken a significant coordination and planning effort from all parties, but the wye structure and pipe replacement work is expected to be completed and accepted on time in early October—prior to the start of the wet season.

Figure 2: New wye structure

Program Performance Summary

Seven 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 the current fiscal year.

Program Key Performance Indicators – Fiscal Year 2018-2019

KPI	Target	Fiscal Year to Date			Fiscal Year End		
		Actual	Status	Trend	Forecast	Status	Trend
Stage Gates	90%	100% 3/3 [1]	●	→	100% 19/19	●	→
Measurement: Percentage of initiated projects and studies that successfully pass each stage gate on their first attempt. Target: Green: >= 90%; Amber: 75% to 90%; Red: < 75%							
Schedule	90%	50% 1/2[2]	◆	→	33% 1/3	◆	→
Measurement: Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone.[3] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Budget	90%	NA 0/0	●	→	75% 3/4	▲	→
Measurement: Percentage of CIP projects that are accepted by the City within the approved baseline budget.[3] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Expenditure	$252M	$216M	●	→	$294M	●	→
Measurement: CIP FY18-19 committed costs. Target: Committed cost meets or exceeds 70% of planned Budget. 70% of $360M = $252M. Therefore Green: >=$252M; Amber: $198M to $252M; Red: < $198M							
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							
Vacancy Rate[4]	10%	17% 14/84	▲	→	6% 5/84	●	→
Measurement: Ratio of the number of vacant approved positions to approved positions. Target: Green: <= 10%; Amber: 10% to 20%; Red: > 20%							

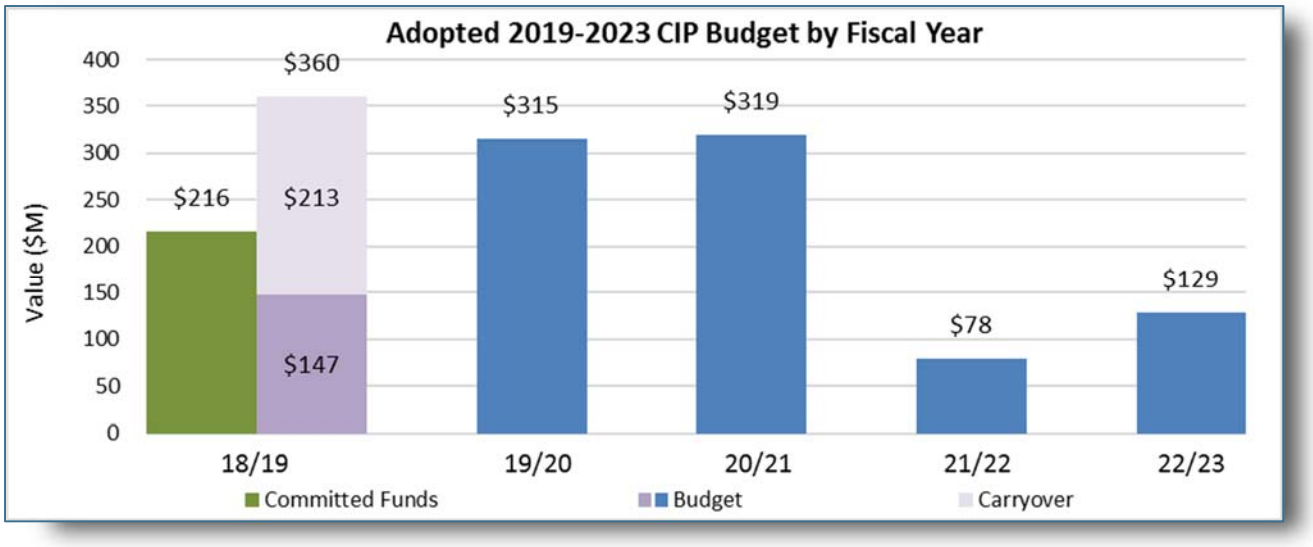
Notes

1. The Headworks Critical Improvements and Iron Salt Feed Station projects both successfully completed Stage Gate 7: Substantial Completion.
2. The Construction-Enabling Improvements and Headworks Critical Improvements projects reached Beneficial Use in August, but only the Headworks Critical Improvements Project was completed within two months of the approved baseline Beneficial Use date.
3. The baseline Beneficial Use date and the baseline budget for each project are established at construction contract award and execution.
4. The Vacancy Rate KPI measures City CIP-approved positions (ESD and Public Works) and program management consultant full-time staff.

Program Budget Performance Summary

This section summarizes the cumulative monthly budget performance for fiscal year (FY)18-19 based on the 2019-2023 CIP.

Adopted 2019-2023 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 for 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.

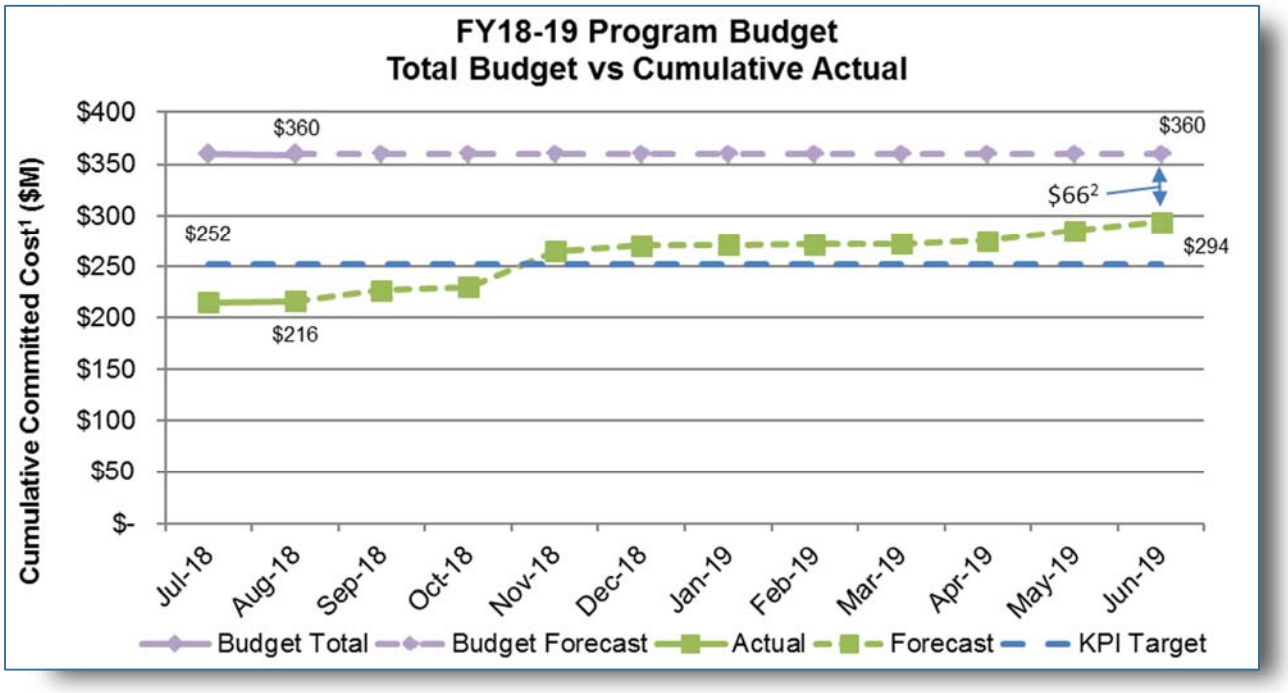
The FY18-19 budget is $175 million, which consists of $121 million in new funds and $54 million in rebudgets. For purposes of this monthly report, the adopted FY18-19 budget is adjusted from $175 million to $147 million due to the exclusion of certain appropriations that are not measured as part of the 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 FY19-20 through FY 22-23.

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. FY18-19 carryover is $213 million.

Budget of $147 million and carryover of $213 million totals $360 million for FY18-19.

Fiscal Year 2018-2019 Program Budget Performance

The committed costs forecast for Fiscal Year 2018-19 are currently being finalized and will be included in next month's report.



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. Several construction contracts are now anticipated to be awarded in FY19-20 instead of FY18-19 based on updated schedules:
        i. Fire Life Safety Upgrades Project
        ii. Outfall Bridge and Levee Improvements Project
    b. Several consultant service orders will not be awarded in FY18-19:
        i. Aeration Tank Rehabilitation Project
        ii. Support Facilities Project
        iii. Tunnel Rehabilitation Project
    c. The Blower Improvement Project construction bids came in under budget.
    d. Several other minor encumbrances for consultant services are either lower than budgeted or are anticipated to be awarded in FY19-20.
    e. Several authorized positions remain vacant, resulting in lower personal services expenses than budgeted.
    f. The payment for the annual premium budgeted for the Owner Controlled Insurance Program in FY18-19 is now anticipated to be paid in FY19-20 due to later than expected invoicing from the insurers in FY17-18.
3. The FY18-19 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 seven projects in the construction phase and an additional 17 projects in feasibility/development, design, or bid and award phases (see PDM, page 2). 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. Iron Salt Feed Station	Post-Construction	May 2018[3]	●	◆
2. Construction-Enabling Improvements	Construction	Aug 2018[3]	●	◆
3. Headworks Critical Improvements	Construction	Aug 2018[3]	●	●
4. Plant Instrument Air System Upgrade	Construction	Oct 2018	●	◆
5. Cogeneration Facility	Design & Construction	Mar 2020[4]	●	●
6. Digester and Thickener Facilities Upgrade	Construction	Jan 2021	◆	◆
7. Advanced Facility Control & Meter Replacement - Phase 1	Construction	June 2021	●	●

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 pages 12 and 13.
3. Actual Beneficial Use date.
4. The project construction Beneficial Use date will be baselined once the City accepts the design-builder's construction schedule.

Project Performance – Pre-Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]
1. Headworks Project	Design and Construction	Dec 2022
2. Blower Improvements	Bid and Award	Nov 2021
3. Switchgear M4 Replacement and G3 & G3A Removal	Design	Feb 2022
4. Advanced Facility Control & Meter Replacement Phase 2	Design	Dec 2022
5. Filter Rehabilitation	Design	Mar 2023
6. Nitrification Clarifiers Rehabilitation	Design	Jan 2024
7. Outfall Bridge and Levee Improvements	Feasibility/Development	Jan 2021
8. Fire Life Safety Upgrades	Feasibility/Development	Sep 2022
9. Digested Sludge Dewatering Facility	Feasibility/Development	Oct 2022
10. Storm Drain System Improvements	Feasibility/Development	Nov 2022
11. Flood Protection	Feasibility/Development	Jan 2023
12. HVAC Improvements	Feasibility/Development	Mar 2023
13. Facility-wide Water Systems Improvements	Feasibility/Development	Sep 2023
14. Aeration Tanks Rehabilitation	Feasibility/Development	Feb 2026
15. Support Facilities	Feasibility/Development	Mar 2027
16. Yard Piping and Road Improvements	Feasibility/Development	May 2027
17. Tunnel Rehabilitation	Feasibility/Development	Jun 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 and Thickener Facilities Upgrade

- Contractor Walsh Construction completed the canopy, pump pads, conduits, and control panels for the thickened sludge pumps; formed, installed rebar, and poured the first-floor deck in the Sludge Screening Building; completed the wye junction structure for the 78-inch settle sewage bypass; and installed the 96-inch settle sewage bypass connection.

Facilities Package

Cogeneration Facility

- CH2M submitted the 100 percent design documents for review.
- The four 3MW engine generators arrived on-site, including the engine generator exhaust stacks.
- The project team completed the Unison Gas Purification System factory acceptance testing.
- CH2M completed the hauling of spoils from the construction-enabling area to the Spreckles Yard and the preparation of the subgrade of the new project structures.

Construction-Enabling Improvements

- The Fire Department issued a temporary certificate of occupancy permit and the project reached Beneficial Use.

Facility-Wide Water Systems Improvements

- Design consultant Kennedy/Jenks (KJ) completed the draft alternative analysis report and conducted a review workshop. The project team will bring the project to Stage Gate 2: Confirm Project Alternative in October.

Flood Protection

- The project team authorized design consultant AECOM to conduct an RWF flood risk analysis.

HVAC Improvements

- Design consultant KJ identified alternatives for improvements to the existing support building HVAC systems and conducted an alternative workshop.

Storm Drain System Improvements

- Design consultant AECOM completed the condition assessment of the storm water pump stations and began utility locating and survey.

Yard Piping and Road Improvements

- Owner's Advisor Black & Veatch completed the condition assessment of the primary 96-inch and 87-inch by 136-inch settled sewage pipelines and secondary clarifier “A” side return activated sludge pipelines.

Liquids Package

Blower Improvements

- Bids were opened on August 16. Four bids were received, with the lowest bid five percent below the Engineer’s Estimate. The construction contract will be recommended for award in October 2018.

Headworks

- The Headworks Project team held three workshops with the design-builder on 1) hydraulics; 2) site selection and scope; and 3) site investigations. The team expects to advance to the next stage gate in October and return to the Treatment Plant Advisory Committee (TPAC) and City Council (Council) to seek delegation of authority to the City Manager to negotiate and execute a Definitive Contract Amendment (DCA) with the design-builder to complete the design-build work for a not-to-exceed guaranteed maximum price (GMP).

Headworks Critical Improvements

- The project team successfully completed Stage Gate 7 - Substantial Completion. Contractor Overaa Construction is expected to finish punch list items next month.

Iron Salt Feed Station

- The project team successfully completed Stage Gate 7 - Substantial Completion. Construction is complete, and the City expects to issue NOCA in October 2018.

Nitrification Clarifiers Rehabilitation

- Design consultant HDR Engineering, Inc. worked with the project team to evaluate cost reduction recommendations from the Value Engineering exercise. Next month the project team is expected to finalize the rehabilitation approach and scope for the clarifiers.

Power and Energy Package

Plant Instrument Air System Upgrade

- The functional test and commissioning test standard operating procedures were approved. Next, the project team will begin the 28-day operational testing.

Explanation of Project Performance Issues

Iron Salt Feed Station

Project construction was delayed by eight 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 installation of additional piping to allow O&M staff to temporarily dose polymer at an alternate location. In addition, operational testing and commissioning of the new equipment has taken longer than anticipated. Specifically, fine-tuning the control program; identifying and resolving pump operational issues; and addressing problems with the new flow meter and level sensor have taken additional time.

The project team resolved all issues and completed the commissioning test in May 2018. Beneficial Use was achieved on May 14, 2018. The project team is working with the contractor to complete the remaining work and anticipates filing the NOCA in October 2018.

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 was granted 47 extra work days for weather-related delays. Teichert was also 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 completing the installation of the project's portable trailers impacted the schedule. In early August, the contractor completed installation of the utilities (electrical, communications, and wastewater) required to obtain a temporary certificate of occupancy permit for the trailers. The temporary permit was received this month and substantial completion was issued. The project team provided the contractor with a list of remaining contract work to be completed. With the accumulation of liquidated damages ending, staff will work with Teichert to complete the outstanding work and schedule meetings to begin negotiating project close out.

Plant Instrument Air System Upgrade

Project construction has been delayed by three months due to three issues: 1) Staff discovered that the planned construction site access route crossed a large settled sludge pipeline, requiring an alternative access route to be developed and constructed; 2) the contractor was temporarily unable to install a section of the conduit from the sludge control building to the new compressor building due to other work being performed in the area by a different contractor; and 3) the commissioning test SOP required for Anderson Pacific to perform the 28-day commissioning test is still being finalized. The project is expected to achieve Beneficial Use in October 2018.

Digester and Thickener Facilities Upgrade

This project encountered numerous unforeseen conditions at the beginning of construction in 2016, described below. In 2017, design modifications were required to address seismic risks, and discovery of hazardous materials required extensive cleanup. Delays for these conditions are still being discussed and evaluated.

The City has negotiated contract change orders for the following unforeseen conditions discovered in 2016:

- Major corrosion of a below-ground, 78-inch settled sewage pipeline and junction structure delayed the construction of dissolved air flotation tank piping connections, two new pressurization flow boxes, and utility relocation work. The contractor postponed all repairs until a temporary pumping and pipeline system could be designed and safely installed to enable replacement of the pipeline in the 2018 dry season. In May of 2018, the contractor started full-time operation of this temporary pumping and pipeline system and began replacement of the 78-inch settled sewage pipeline, which is anticipated to be completed by late September 2018.
- A 36-inch biochemical oxygen demand pipe was found to be obstructing the new sludge screen building foundation. The contractor removed this pipe and relocated several gas drain vaults and associated piping before foundation construction began.
- Multiple conflicts between contract work and existing utilities required numerous relocations including water, natural gas, digester gas, landfill gas, storm drains, and sanitary sewer pipelines. The contractor completed necessary relocations and rerouting, especially near the new digester gas pipe rack footings. Many of these modifications also require design changes.
- Bay Area Air Quality Management District venting restrictions also delayed digester work. The contractor completed the temporary digester gas connections and the system became operational in February 2018.

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

- Digester structural redesign. The design consultant revised the structural drawings to address seismic issues by enlarging the foundation ring beam at the base of each of the four digesters. The contractor provided a cost proposal

associated with this revision and the City issued a change order for a portion of the proposal. Work associated with the new foundation is ongoing and rebar installation is in progress for the first digester.

- Hazardous material mitigation. Testing of soils and concrete for PCBs was completed and a final conditional approval was provided by the Environmental Protection Agency (EPA). All removal and disposal of contaminated materials has been completed to comply with the risk-based management plan approved by the EPA. All contaminated soils have been removed and disposed of and most of the impacted concrete has been encased. The last portion of the work will be finalized once all foundation work is completed. At that time, final reports on the work will be submitted to the EPA.

In November 2017, Council approved a contingency increase of $15 million. The City issued change orders against the increased contingency for delays associated with the conditions discovered in 2016.

In June 2018, Council approved a second contingency increase of $25 million for additional costs associated with the seismic redesign, hazardous material remediation, and extended construction duration.

An estimated delay of approximately 145 working days is currently reflected in the revised Beneficial Use date of January 2021.

Project Profile – Switchgear M4 Replacement and G3 and G3A Removal

For the last 10 years, the RWF has been implementing the Electrical Reliability Improvement Project to improve the RWF electrical distribution system. As part of these improvements, switchgears M1 and M3 have been replaced and switchgear M5 was added to form the 4.16kV electrical ring bus with the existing M4 switchgear. The M4 switchgear is more than 30 years old and has reached the end of its useful life cycle.

Figure 3: Exterior of Existing M4 (5kV) Switchgear Enclosure

The M4 switchgear is located next to the 115kV Substation #2 on the RWF's east side and connects to the 115kV substation through step-up transformers. M4 breakers that interconnect to the RWF's 4.16kV ring bus are rated for 2000 amps, while breakers at the ring bus switchgears at M1, M3, and M5 are for 3,000-amp. Currently, the 2,000-amp breakers at M4 can handle the RWF's existing maximum current load; however, future RWF electrical loads, such as those for the Digested Sludge Dewatering Facility, are expected to exceed the capability of the 2,000-amp breakers. This project intends to replace the existing M4 switchgear with new switchgear that has 3,000-amp breakers to interconnect to the ring bus.

In addition, the M4 Switchgear replacement will be designed with protective relays that will lower the arc flash levels at M4. The arc flash level is the amount of electrical energy that is expanded during an electrical fault. The Electrical staff while working on the M4 Switchgear must wear the appropriate Personal Protective Equipment (PPE). With a lower arc flash level, the safety of the Electrical staff will significantly improve by eliminating the need to wear a full body protective suit. Consultant Brown & Caldwell has been engaged to develop plans and specifications to replace the existing M4 switchgear. The existing M4 switchgear is scheduled to be replaced in 2021 after the new Cogeneration engine generators have been commissioned. During the installation of the engine generators, the RWF's electrical system will be reconfigured to permit a total replacement of the M4 switchgear.

The project will replace the existing M4 switchgear and outdoor enclosure while retaining the existing foundation. The existing power cables connecting M4 will be reused.

The project will also develop plans to remove the existing G3 and G3A switchgears in Building 40. These switchgears are being used to connect the existing Cogeneration EG1, EG2, and EG3 generators to the RWF's distribution system. The EG1, EG2, and EG3 generators will be decommissioned after the new Cogeneration Facility's generators are commissioned. Once the generators are decommissioned, switchgears G3 and G3A will be removed as part of this project scope.

The project is anticipated to reach Beneficial Use in February 2022 with a total project budget of approximately $7.5 million.

Figure 4: Interior of Existing M4 (5kV) Switchgear Enclosure

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Regional Wastewater Facility Treatment – Current Treatment Process Flow Diagram

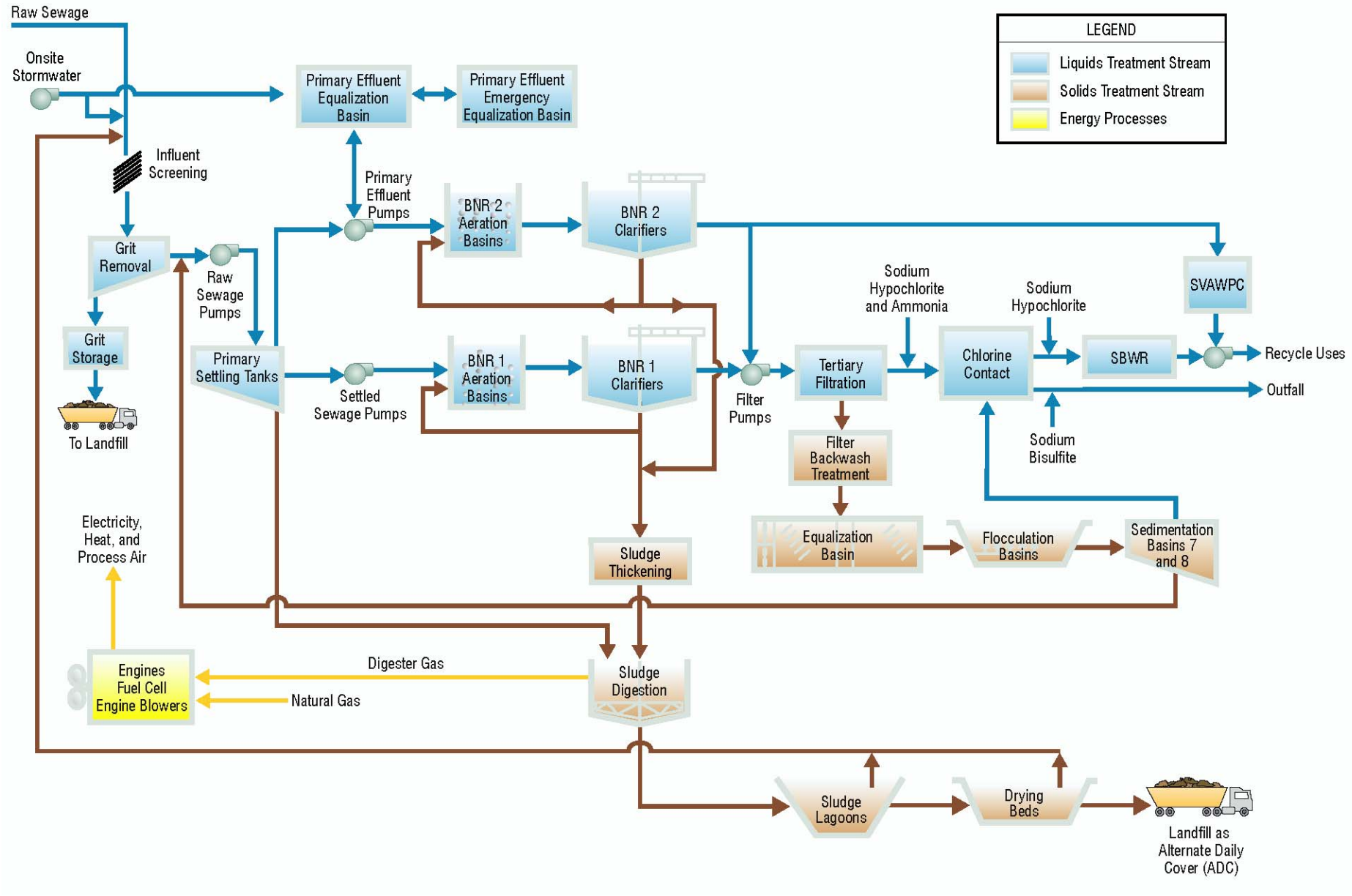


Figure 5 – Current Treatment Process Flow Diagram

Regional Wastewater Facility Treatment – Proposed Treatment Process Flow Diagram

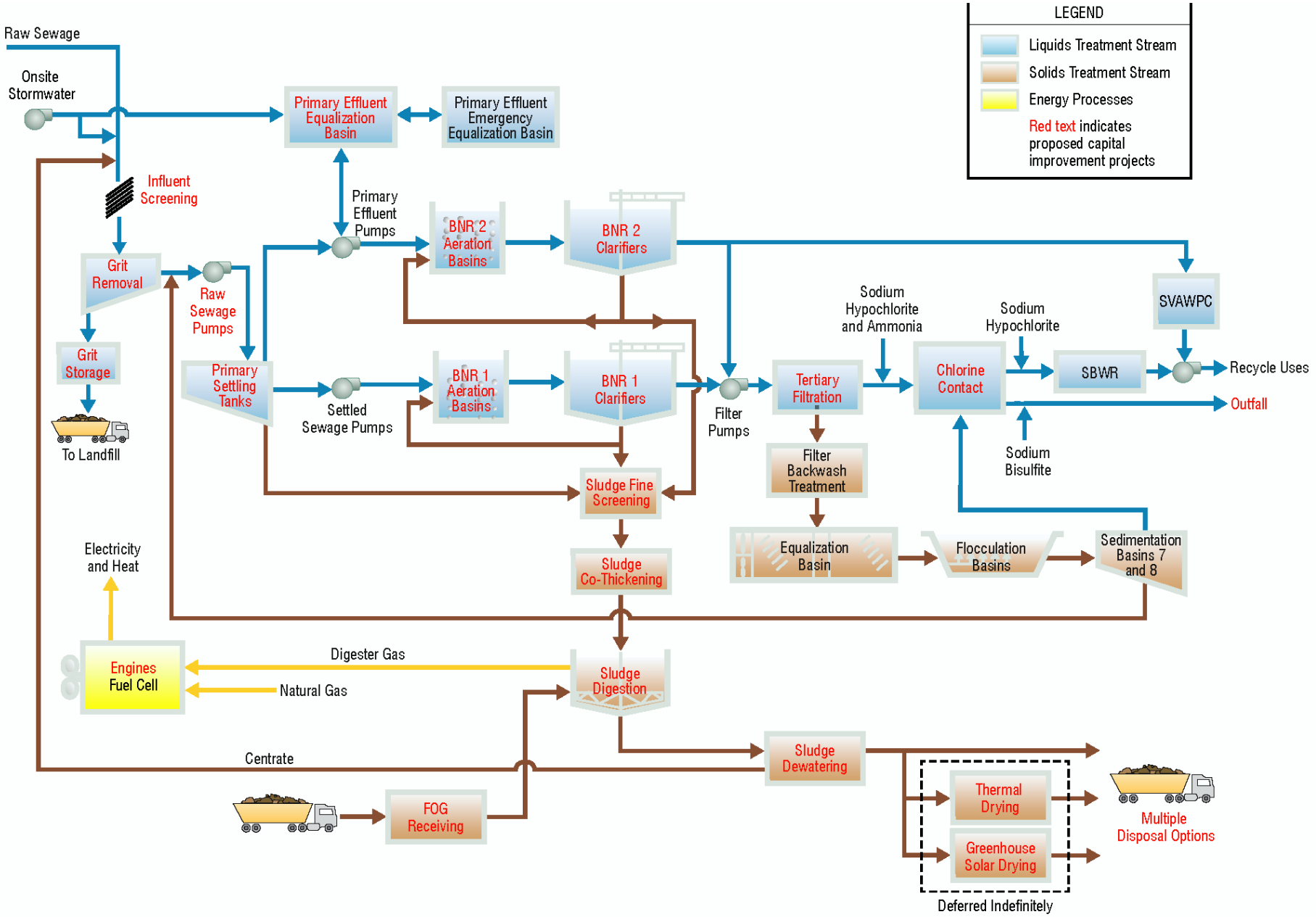


Figure 6 – Proposed Treatment Process Flow Diagram

Active Construction Projects – Aerial Plan

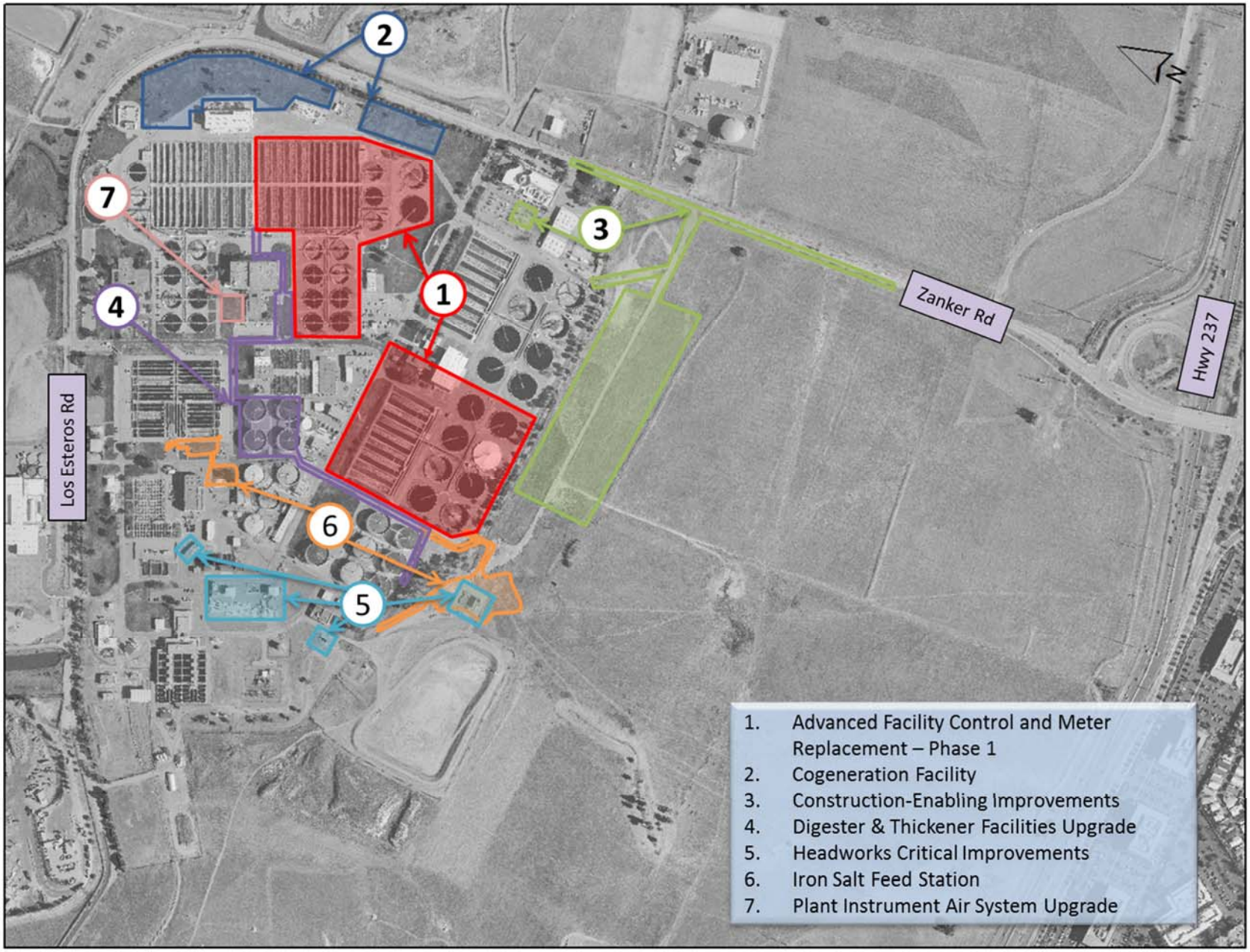


Figure 7: Active Construction Projects

T&E AGENDA: 10/01/2018
ITEM: d (2)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow
Matt Cano

SUBJECT: SEE BELOW

DATE: September 12, 2018

Approved

Date 9-18-18

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

RECOMMENDATION

Accept the semiannual status report on the San José-Santa Clara Regional Wastewater Facility Capital Improvement Program for the period of January 2018 through June 2018.

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 second 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 included 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 twelfth in the report series and highlights key program and project accomplishments from January 2018 through June 2018. This report also complements monthly CIP status reports, which staff began issuing in April 2014 to provide more frequent and time-relevant updates. Through June 2018, 51 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 a few program areas from January 2018 through June 2018.

A. *EPA Approval of Risk-Based PCB Mitigation Plan*
The RWF first encountered polychlorinated biphenyls (PCBs) in early 2017 during construction of the Digesters and Thickener Facilities Upgrade project. Staff has been working with the Environmental Protection Agency (EPA) over the past year to obtain approval of a risk-based mitigation plan for excavating, handling, and disposing of PCB-impacted materials (i.e., soil and concrete substrate). In December 2017 and June 2018, staff received conditional approvals from the EPA on the proposed PCB handling and mitigation plan. This effort required an extensive application process; soil, concrete, and groundwater sampling and characterization; and close coordination with EPA staff.

B. *Recruitments*
During this period, staff successfully filled five vacant positions—principal engineer, senior engineer, associate engineer, engineer I/II, and associate engineering technician. Steady progress continues to be made with recruitments, with 11 vacant CIP positions remaining at the end of fiscal year 2017-2018. Recruitment will continue to be a priority during fiscal year 2018-2019, including filling a new environmental services program manager position authorized as part of the 2018-2019 operating budget; this position will develop a long-term strategy for biosolids disposition at the RWF, research/update cost models and negotiate contracts, and manage a small team that will be responsible for operational implementation.

C. *Construction Management*
Construction management services for RWF CIP projects is currently provided by Public Works (PW). In addition to having a team of PW construction management (CM) staff co-located onsite at the RWF, the team is further supplemented by third-party construction management and special inspection consultant staff who provide experienced construction resources to support the CIP. During this period, the CIP had 12

PW staff and three consultant construction management staff onsite to deliver seven projects in construction.

In addition, there are 17 CIP projects in various stages of feasibility/development or design, which are expected to advance into construction within the next five years. These are large multi-disciplinary projects with complex schedules and interfaces, which will require significant construction management resources and expertise to deliver. The current forecast shows the volume of construction work peaking beginning in 2020-2021 and 2021-2022.

In anticipation of the significant ramp up, staff has begun working on developing a comprehensive construction management resourcing plan to ensure that adequate CM resources and expertise will be in place. As an initial step, in June, Council approved three new Public Works positions to support the growing workload. Council also approved three master consultant agreements to provide special inspection and materials testing services for the next five years. Staff will continue to develop and refine the construction management strategy and resourcing plan and expects to bring forward requests for additional positions and/or third-party construction management services agreements over the next two years.

On the project delivery front, 24 active projects progressed through various stages of the project delivery model.

A. *Feasibility/Development Highlights*

Thirteen projects were in the feasibility/development phase during the second half of fiscal year 2017-2018. Key activities completed during this period include the following.

- **Flood Protection**: Staff worked on defining the project scope and met with the Santa Clara Valley Water District to review hydrological modeling results for the 500-year flood boundary projections for Coyote Creek.
- **Switchgear M4 Replacement and G3 & G3A Removal**: The project team completed project scoping and began working on the 30 percent design. This project will replace and upgrade existing switchgears and cables to improve worker safety and increase the RWF's electrical capacity in anticipation of the commissioning of the new Cogeneration Facility and Digested Sludge Dewatering Facility.
- **Yard Piping and Road Improvements** (progressive design-build): On April 24, 2018, Council awarded a master consultant agreement for owner's advisor services to Black & Veatch.
- Condition assessments continued for the **Fire Life Safety Upgrades** (low bid design-build) and **HVAC Improvements** (low bid design-build) and began for the **Outfall Bridge and Levee Improvements** (low bid design-build) and **Storm Drain System Improvements** projects. CIP staff conducted workshops with consultants and O&M staff to plan the assessments and discuss the findings.
- The **Aeration Tanks Rehabilitation** and **Facility-wide Water Systems Improvements** project teams completed their condition assessments and held workshops to determine the preferred alternatives.

- **Digested Sludge Dewatering Facility** (progressive design-build): During this period, the City advertised a request for qualifications to procure a design-builder, received four statements of qualifications, and determined that all four proposing firms were qualified. Concurrent with the procurement, staff and the owner's advisor developed the project definition report that will set the requirements and constraints for the selected design-builder.
- **New Headworks and Headworks Improvements** (progressive design-build): During this period, staff selected and negotiated with the top-ranked design-build firm. On June 19, 2018, Council awarded the design-build contract to CH2M HILL Engineers.

B. *Design Highlights*

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

- **Nitrification Clarifiers Rehabilitation**: In March, the project team completed the conceptual design (10 percent design) and began to develop the preliminary design (30 percent design). The design consultant conducted a hazardous material field inspection in June.
- **Filter Rehabilitation**: Between January and June, the project team developed the preliminary design report, conducted hazardous materials testing, and participated in a value engineering study.
- **Blower Improvements**: The City pre-qualified five contractors in April. In May, the design consultant completed the 100 percent design. The City advertised the request for bids in June.

C. *Construction Highlights*

Seven projects totaling more than $206 million were in construction during the second half of fiscal year 2017-2018 (see Attachment A). One of the seven projects is being delivered using the progressive design-build method, with the remaining six projects being delivered using the design-bid-build delivery method. Significant progress was made on all seven projects. Most notably, staff worked to resolve the previously encountered unforeseen issues on the Digester and Thickener Facilities Upgrade project. One of the design-bid-build projects reached beneficial use during this period, and three other projects are anticipated to reach that milestone this summer.

Key activities completed during this period include the following:

- **Advanced Facility Control and Meter Replacement – Phase 1**: Staff advertised a request for bids in January to three pre-qualified contractors and opened bids in February. All bids received were below the engineer's estimate. On May 22, 2018, Council awarded a construction contract to C. Overaa & Co., and staff issued the Notice to Proceed (NTP) on July 6, 2018. Construction is expected to start in spring 2019. The project is expected to reach beneficial use in winter 2020.
- **Cogeneration Facility** (progressive design-build): In January, the design-builder began construction on early work package 2 (EWP2), which included civil site

preparation and foundation work for the engine generator building in advance of the definitive contract amendment (DCA). In April, the City received the Authority to Construct from the Bay Area Air Quality Management District. In late May, the City Manager approved the DCA, which set the guaranteed maximum price (GMP). In June, the City issued an NTP for the final design and construction of the project. In the same month, the four new cogeneration engines successfully passed factory acceptance testing. The project is expected to reach beneficial use in summer 2020.

- **Digester and Thickener Facilities Upgrade**: Work on the dissolved air flotation thickener (DAFT) tanks, post tensioning cables on digester tanks five through eight, new screening building, and elevated pipe rack progressed between January and June. In February, the concrete for the DAFT tanks' subnatant channel was poured and, subsequently, hydrostatically tested. In March, the contractor completed the new sludge screening building's foundation. In June, the contractor completed the installation of lights and conduits on 28 pipe rack supports.

  78-inch Pipe Replacement – In January, the contractor began installing the temporary piping and pumping equipment needed to reroute up to 100 million gallons per day to enable the replacement of the corroded 78-inch settled sewage pipeline. The contractor completed installation of the pumping equipment in March. Operation of the reroute system began in May, as did excavations around the 78-inch pipe and wye structure.

  Seismic Redesign – Staff and the design consultant continued to work on the seismic redesign of the digester tank foundations. In April, the design consultant submitted the revised design and the contractor priced the work. The revised design includes a more substantial foundation around the base of each digester tank and some mechanical modifications.

  PCBs Cleanup and Mitigation – After an extensive application and soil testing process, the Environmental Protection Agency (EPA) conditionally approved the City's risk-based mitigation plan for excavating, handling, and disposing of polychlorinated biphenyls (PCBs) in the soil adjacent to the digester tanks. Excavations around Digesters 5 through 8 resumed in March and continued through June (excavations had been on hold since August 2017). As of June 2018, most of the major PCB cleanup work had been completed with some coating work continuing inside of the digesters and tunnels.

  On June 12, 2018, Council approved staff's recommendation to increase the project's construction contingency by $25 million to address the seismic redesign and PCB issues and associated delays to the contractor.

  Through June, construction was 48 percent complete. The project is expected to reach beneficial use in winter 2020.

- **Headworks Critical Improvements**: The contractor began installing the second of two new bar screens in January and completed the installation in April. Two new slide gate actuators at the RWF's emergency basin overflow structure were also installed. The 28-day operational testing of the new bar screens was successfully completed in May. Through June, construction was 99 percent complete. The project is expected to reach beneficial use in summer 2018. Once completed, the project will provide safer and more reliable facilities that are essential for preliminary treatment at the RWF.
- **Plant Instrument Air System Upgrade**: During this period, the contractor completed the installation, testing, and calibration of numerous pieces of equipment, instruments, and electrical components. Configuration of the distributed control system was completed in April. In May, each of the three new air compressors were tested and connected to the RWF's instrument air system. Through June, construction was 98 percent complete. The project is expected to reach beneficial use in summer 2018. Once completed, the project will provide an upgraded high-pressure air supply system that is located above grade and less prone to flooding; improve operational reliability and redundancy; and be easier to maintain and repair without causing pressure loss or interrupting the operation of DAFT tanks or equipment that rely on it.
- **Construction-Enabling Improvements**: Although the project continued to experience construction delays, the contractor made progress during this period. The contractor delivered and installed the four new construction management trailers. The contractor also made significant progress on the badging trailer, guard shack, Zanker Road construction entry gate, and other outstanding items. Through June, construction was 95 percent complete. The project is expected to reach beneficial use in summer 2018. Once completed, the project will provide a dedicated construction entrance, security gate, badging office, staging area, trailer hook-up, and parking area, as well as additional office space to accommodate the increased volume of construction activity at the RWF.
- **Iron Salt Feed Station**: On May 14, 2018, the project reached beneficial use with the completion of operational testing and commissioning of the ferric chloride and polymer stations which began in February. The completed project enables RWF staff to manage the concentration of a highly corrosive compound, hydrogen sulfide, in digester gas, to ensure the RWF's emissions remain below the RWF's air permit limit. The project also allows RWF staff to implement an enhanced primary treatment process with lower odor levels.

Staff, contractors, and consultants continued to work safely and there were no reportable incidents to the State's Division of Occupational Safety and Health (Cal/OSHA) during the second half of fiscal year 2017-2018.

Staff expects to achieve the following during the first half of fiscal year 2018-2019.

1. Reach beneficial use on three projects: Headworks Critical Improvements, Construction-Enabling Improvements, and Plant Instrument Air System Upgrade.
2. Complete the repair of the 78-inch settled sewage pipeline as part of the Digester and Thickener Facilities Upgrade project.
3. Advertise a request for proposals (RFP) to select a design-builder for the Digested Sludge Dewatering Facility project, with the contract award anticipated in summer 2019.
4. Obtain Council approval to award a construction contract for the Blower Improvements project.
5. Continue design and design-build work on five projects: Advanced Facility Control and Meter Replacement – Phase 2, Filter Rehabilitation, Headworks, Nitrification Clarifiers Rehabilitation, and Switchgear M4 Replacement & G3/G3A Removal. These projects are expected to be awarded in the 2019-2020 fiscal year.
6. Host a fifth vendor open house to update the consultant and contractor community on progress of the RWF CIP and, in particular, to increase outreach and awareness to small and local businesses.
7. Develop a program-wide protocol for the testing and mitigation of hazardous materials during project design and construction.
8. Continue to develop longer term resource and staffing plans, particularly for construction management in anticipation of increased construction activities in upcoming fiscal years.
9. Continue recruitment activities to fill remaining RWF CIP vacancies, including an environmental services program manager to oversee the RWF's biosolids transition.

EVALUATION AND FOLLOW-UP

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

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the October 1, 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 TPAC meeting October 11, 2018. A supplemental memo with the committee's recommendation will be included in the amended October 23, 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.

\s\
KERRIE ROMANOW
Director, Environmental Services

\s\
MATT CANO
Director, Public Works

For questions, please contact Napp Fukuda, Assistant Director, Environmental Services Department at (408) 793-5353.

Attachment A – Projects in Construction: January 2018 – June 2018

Attachment A – Projects in Construction: January 2018 – June 2018

#	Project Name	Contractor	Amount Awarded	Date Awarded	Estimated Beneficial Use
1.	6717 – Iron Salt Feed Station	Anderson Pacific Engineering Construction, Inc.	Base Contract: $5,205,000 Contingency: $780,750	1/26/2016	5/14/2018 [1]
2.	7418 – Cogeneration Facility	CH2M HILL Engineers, Inc.	Design-Build GMP: $89,071,932 Contingency: $2,100,068	4/26/2016 [2]	Summer 2020
3.	7382 – Digester and Thickener Facilities Upgrade	Walsh Construction Company II, LLC	Base Contract: $107,925,000 Contingency: $53,490,625 [3]	5/24/2016	Winter 2020
4.	7987 – Construction-Enabling Improvements	Teichert Construction, Inc.	Base Contract: $3,135,910 Contingency: $314,000	6/21/2016	Summer 2018
5.	7617 – Plant Instrument Air System Upgrade	Anderson Pacific Engineering Construction, Inc.	Base Contract: $2,848,000 Contingency: $427,200	8/23/2016	Summer 2018
6.	8101 – Headworks Critical Improvements	C. Overaa & Co.	Base Contract: $1,499,000 Contingency: $224,850	5/23/2017	Summer 2018
7.	7757 – Advanced Facility Control and Meter Replacement – Phase 1	C. Overaa & Co.	Base Contract: $5,790,000 Contingency: $1,158,000	5/22/2018	Spring 2021

1. This is the actual date the contractor achieved substantial completion and the project reached beneficial use.
2. On April 26, 2016, Council approved the design-build contract and authorized the City Manager to negotiate and execute the definitive contract amendment setting the GMP. On May 25, 2018, the City manager approved the amended contract.
3. On November 28, 2017, Council approved an increase to the initially approved construction contingency amount of $13,490,625. On June 12, 2018, Council approved a second construction contingency increase.

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION AND ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: September 14, 2018

Approved

Date 9-18-18

SUBJECT: SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY STAFFING LEVEL AND TRAINING STATUS REPORT

RECOMMENDATION

Accept this report on the status of staffing and training at the San José-Santa Clara Regional Wastewater Facility[1] (Wastewater Facility).

OUTCOME

Acceptance of the report will update the Committee on the status of the Wastewater Facility staffing and training.

BACKGROUND

The Environmental Services Department has provided periodic staffing status reports to the Transportation and Environment Committee and City Council on the vacancy rates for critical operations and maintenance classifications (wastewater operators, wastewater mechanics, industrial electricians, and instrument control technicians) and on staff efforts to recruit and retain employees in these critical classifications. A high of 25 percent of critical operations and maintenance positions were vacant in December 2012. The last staffing report presented to the Transportation and Environment Committee on June 5, 2017 reported a 13 percent vacancy rate in the combined critical job classifications.

[1] *The legal, official name of the facility remains San Jose/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.*

ANALYSIS

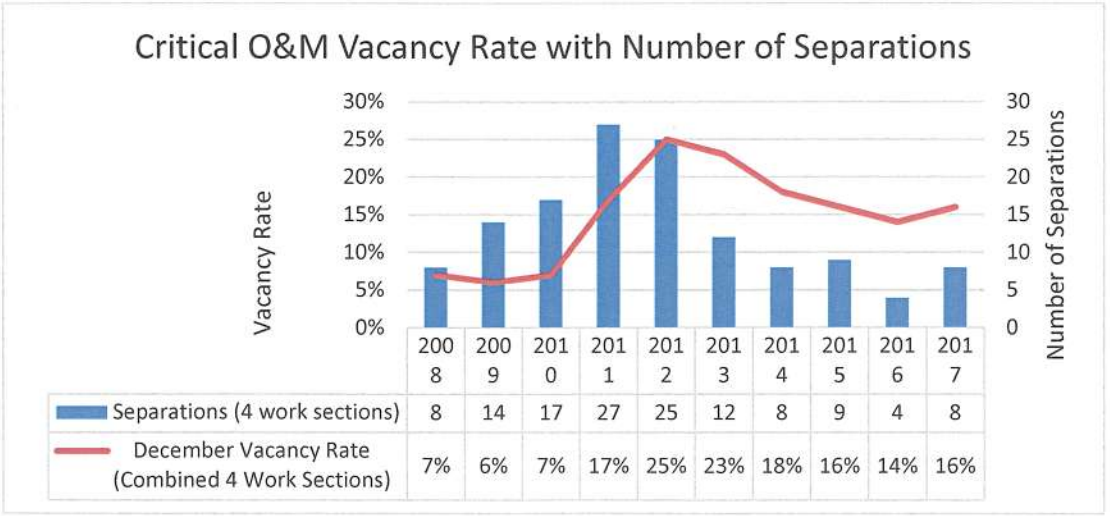
The Environmental Services Department continues to perform a multi-pronged approach for addressing Facility staffing. This approach includes recruitment and the use of temporary staff to fill vacancies, engaging and developing our current workforce, and performing outreach and engagement activities to attract and build the future workforce.

Status Update on Vacancies

The collaborative efforts of Environmental Services Department (ESD), Human Resources (HR) and the Office of Employee Relations to address the Facility's staffing challenges, has resulted in reducing the vacancy rate for the combined group of critical operations and maintenance positions (wastewater operators, wastewater mechanics, industrial electricians, and instrument control technicians) to eleven percent (11%) as of September 1, 2018.

	As of May 1, 2017			As of September 1, 2018		
Work Section	Authorized FTEs	Vacancies	Vacancy Rate	Authorized FTEs	Vacancies	Vacancy Rate
Wastewater Operators	61	4		63	6	
Wastewater Mechanics	54	15		52	8	
Instrumentation	11	3		13	1	
Industrial Electricians	11	2		12	1	
Combined O&M work sections	137	24	**18%**	140	16	**11%**

Over the years, as illustrated in the following graph, the vacancy rate for critical operations and maintenance classifications has been reduced from the high of 25% in 2012 to 11% as of September 2018. It is a challenge to be fully staffed when new vacancies are created through separations including retirement.



Twenty-seven (27) wastewater operator, wastewater mechanic, industrial electrician and instrument control technician positions were filled from May 1, 2017 to September 1, 2018.

Staffing Model

In fiscal year 2014-15, 18 wastewater attendant (formerly plant attendant) positions were repurposed to create additional points of entry into the operations and maintenance trades job series and to help develop a qualified candidate pool for existing wastewater operator trainee, wastewater mechanic, industrial painter, instrument control technician, air conditioning mechanics and heavy equipment operator positions. Wastewater attendants assist journey level positions by performing the entry level tasks while learning various job functions as they rotate and cross-train through the Facility work groups. This creates more opportunity to "grow our own" and develop staff to promote into the various journey level positions throughout the Wastewater Facility. Since 2014, 27 wastewater attendants were hired. Of those, 20 are still employed at the Facility, including 6 who were promoted to journey level trade positions. Three were promoted to wastewater mechanic, 1 to air conditioning mechanic, 1 to painter, and 1 heavy equipment operator.

Outreach to Build the Future Workforce

Since the last staffing report, from May 2017 to August 2018, ESD staff participated in 15 outreach activities that included tours, presentations, job fairs, and teacher externships.

Water Careers Pathway Consortium that was created with funds from a four-year grant (administered by West Valley College) to address the skilled worker shortage in the water industry, concluded in June 2018. Through work with this consortium, ESD jointly hosted a water careers exploration event on March 28, 2018 in the City Hall Rotunda which introduced 440 high school students to careers in the water and wastewater industry.

ESD continues to actively support and participate in the initiatives of BAYWORK, a collaborative of water and wastewater utilities working together to ensure workforce reliability. During the last year, ESD hosted 16 teachers over three separate externships that exposed them to water and wastewater careers. The teachers will incorporate their experiences into their teachings and curriculum, influencing students in their career choices.

ESD is working with Evergreen Valley Community College to provide a water/wastewater technology (Clean Water Technology) certificate program. The core courses in the certificate program will help prepare students for careers in water or wastewater industries. Additionally, these classes will accelerate the acclimation of newer employees to their jobs at the Wastewater Facility.

Training

The high number of newly filled positions means training the new workforce is a high priority. As of September 2018, 52 employees in the 124 filled positions (42%) have less than three years of experience in their current roles.

Operations Training Program: In 2014, ESD hired a consultant who developed custom wastewater operations training modules. In 2016, the Facility implemented this competency-based training system with seven (influent systems, primary treatment, sludge control, secondary treatment, nitrification, disinfection, filtration) training modules that train and validate competency of operations staff to ensure continued and smooth operation of the Wastewater Facility. This training program is being successfully used to train new operators or existing operators as they rotate to new process treatment areas.

Operator-in-Training Program: The wastewater operator-in-training (OIT) program is an approximately 18-month program to train entry-level employees to the wastewater operator II level. Candidates are hired into the OIT classification and receive classroom and on-the-job training to meet the pre-requisites to take the State Water Resources Control Board wastewater treatment plant certification test and to prepare the OIT to work independently at the RWF. As reported in 2017, eight OITs were hired February 2017. All obtained their Grade II wastewater license in March of 2018. Currently, all eight have validated their competencies in their assigned treatment area using the training module and are working independently as shift operators. A recruitment to hire the next group of OITs is planned for the fall 2018.

Mechanical Maintenance Training Program: The mechanical maintenance division developed a basic training program for wastewater attendants, called "Skills and Knowledge Evaluation" (SKE). This program introduces knowledge and skills to attendants that will help them advance into the industrial mechanical maintenance field. The program contains evaluation sheets on 25 topics. The topics range from hand tools to bearings to shop power equipment.

The format of each SKE subject begins with a description of what is expected to be learned from the material. The second part of the SKE is the learning section where the attendant is to study the materials and answer a series of questions. The third portion of the SKE is a practical exam. The attendant works with a competent mechanic to complete a series of physical tasks. The competent mechanic reviews the SKE with the attendant and signs the SKE when it is passed. To date, 10 wastewater attendants have participated in the training programs, and four have completed the training.

A training program for the wastewater mechanic is currently being developed. The mechanic training program will be designed to train less experienced maintenance personnel on the skills and knowledge required to safely and competently perform all tasks for their assigned position.

The instrumentation and electrical shops have similar training materials and provide on-the-job training. These two trades, however, require some additional external certification.

Future Training Needs

In addition to the training required for new or inexperienced staff, the Facility is in the midst of undertaking an unprecedented number of capital improvement projects to address critical rehabilitation needs and ensure operational reliability, to improve process performance through newer technologies, and to ensure compliance with regulations to protect the environment. As a result, there is a need for additional resources to assist staff with: the planning and implementation of various process shutdowns, flow diversions, or startups activities; the review

of plans and specifications for operational impacts, shutdown constraints, sequence of activities, or risk analyses; the advanced level training and troubleshooting that is needed with new equipment and wastewater treatment processes; and, the development of new or updated standard operating procedures. RWF management has issued a request for proposal seeking consultant services for this assistance. The estimated cost is $3.75 M over the next five (5) years. Funds budgeted for technical training will be used for this project. Staff will bring forward additional information to City Council when the Consultant is selected.

EVALUATION AND FOLLOW-UP

Staff will continue to work with the Department of Human Resources, Office of Employee Relations and the City Manager's Office to identify and pursue ways to retain, recruit, and train critical wastewater facility staff.

PUBLIC OUTREACH

This item is scheduled to be heard at the November TPAC meeting.

COORDINATION

This report has been coordinated with the City Attorney's Office, the Office of Employee Relations and the Department of Human Resources.

COMMISSION RECOMMENDATION

This item is scheduled to be heard at the October 11, 2018 Treatment Plant Advisory Committee meeting.

CEQA

Not a Project, File No. PP10-069 (a) Staff Reports.

/s/
KERRIE ROMANOW
Director, Environmental Services

For question please contact Kerrie Romanow, Director, Environmental Services Department, at (408) 535-8552.

COUNCIL AGENDA: 10/23/18
FILE:
ITEM:

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow
Matt Cano

SUBJECT: SEE BELOW

DATE: October 2, 2018

Approved [signature] Date 10-2-18

SUBJECT: REPORT ON BIDS AND AWARD OF CONSTRUCTION CONTRACT FOR 8073 – BLOWER IMPROVEMENTS PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

(a) Report on bids and award of a construction contract for the 8073 - Blower Improvements Project to the low bidder, Monterey Mechanical Company, for the base bid and Add Alternate No. 1, in the amount of $29,498,000, and approval of a contingency in the amount of $4,425,000.

(b) Adopt a resolution authorizing the Director of Public Works to negotiate and execute any single and/or multiple change orders in excess of $100,000, up to the amount of the contingency of $4,425,000

OUTCOME

Award of the construction contract to Monterey Mechanical Company, will allow for the construction and completion of the Blower Improvements Project (Project), which will improve operational reliability and efficiency at the San José-Santa Clara Regional Wastewater Facility (RWF). Approval of a 15 percent construction contingency will provide funding for unanticipated work necessary for the proper and timely completion of the Project. Adoption of a resolution authorizing the Director of Public Works to negotiate and execute change orders up to the contingency amount will allow for implementation of any changes required in the Project for completion.

BACKGROUND

The RWF secondary treatment process consists of two separate biological nutrient removal (BNR) systems, BNR-1 and BNR-2. These systems include a biological treatment process that removes organics from the incoming primary effluent. The main system components include the blowers and aeration tanks' air headers and diffusers. The air provided by the blowers is used to accelerate the biodegradation of organic material in the biological nutrient removal process.

BNR-1 and BNR-2 were originally constructed in 1961 and 1975, respectively. The blowers that serve the secondary treatment system are in good condition due to good maintenance, but their auxiliary systems have aged beyond their useful lives and require rehabilitation to ensure long-term operations and to minimize future maintenance requirements. The 14 aeration blowers are located throughout the RWF in three separate buildings: the Blower and Generator Building (Building 40); the Secondary Blower Building (SBB); and the Tertiary Blower Building (TBB), as shown in Attachment A – Blower Improvements Project Map.

The project includes the installation of new motors, new variable frequency drives/reduced voltage soft starters, and new instrumentation and controls for ten existing blowers, as well as the decommissioning and demolition of four SBB blowers. This will result in increased reliability, efficiency, and redundancy for the entire biological treatment process using modern controls and instrumentation upgrades. Construction is scheduled to begin in January 2019 and be completed by December 2021.

Council Resolution No. 71816, adopted on November 4, 2003, requires pre-qualification of contractors on all public works projects for which the Engineer's Estimate exceeds $10 million. The Engineer's Estimate for this project's base bid is $29.4 million, and the project will be delivered using the conventional design-bid-build process. Accordingly, staff conducted a pre-qualification process in March 2018. Five general contractors submitted pre-qualification packages. Staff evaluated the packages and determined that all five general contractors met the pre-qualification requirements. Of the five pre-qualified contractors invited to bid on the Project, four contractors submitted responsive bids.

ANALYSIS

Bids were opened on August 16, 2018 with the following results:

Contractor	Base Bid Amount	Add Alt 1 Total	Total Bid	Variance Amount	Over/ (Under) Percent
Monterey Mechanical Company (Oakland)	$28,736,000	$762,000	$29,498,000	($1,702,000)	(5)
GSE Construction Company Inc. (Livermore)	$29,211,000	$320,000	$29,531,000	($1,669,000)	(5)

Engineer's Estimate	**$29,400,000**	**$1,800,000**	**$31,200,000**	---	---
Shimmick Construction Company, Inc. (Oakland)	$31,197,000[(a)]	$745,000	$31,942,000	$742,000	2
Flatiron West Inc. (Benicia)	$32,518,000	$1,600,000	$34,118,000	$2,918,000	9

[(a)]Submitted amount contained a math error. Value is revised to show the corrected amount.

In addition to the base bid scope of work, there is one Add Alternate bid item as follows:

Add Alternate No. 1: Demolition of SBB Blowers A-1, A-2 and A-3 and all associated appurtenances

The low bid submitted by Monterey Mechanical Company is five percent below the Engineer's Estimate. Staff considers the low bid acceptable for the work involved in the Project and recommends awarding a construction contract to the low bidder. Monterey Mechanical Company specializes in complex water/wastewater projects and has completed several projects at the RWF. Add Alternate No. 1 is recommended for award since there is sufficient project budget to accommodate this addition to the Project and it is competitively priced as compared to the Engineer's Estimate.

Council Policy provides for a standard contingency of fifteen percent on Public Works projects involving building renovation projects. The standard contingency is appropriate for this project to account for the challenge of maintaining continuous operations at the RWF during construction, complex project interfaces with existing electrical and process control facilities, potential utility conflicts, access constraints, and the potential for conflicts with other concurrent capital improvement and maintenance projects.

Staff also recommends delegating authority to the Public Works Director to execute one or more change orders in excess of $100,000 for the duration of the Project, for a total not to exceed the contingency approved for the Project, and subject to other applicable limitations on the authority of the Director in the San José Municipal Code. Approval of these recommendations will provide funding for any unanticipated work necessary for the proper and timely completion of the Project.

EVALUATION AND FOLLOW-UP

No follow-up action with City Council is expected at this time. A progress report on this and other RWF capital projects will be made to the Transportation and Environment Committee and the City Council on a semiannual basis. Monthly progress reports of the RWF Capital Improvement Program (CIP) will also be submitted to the Treatment Plant Advisory Committee (TPAC) and posted on the City's website.

PUBLIC OUTREACH

This project was advertised on BidSync.com on June 20, 2018 and advertised in the San José Post Record. This memorandum will be posted on the City's Council Agenda website for the October 23, 2018, City Council meeting.

COORDINATION

This Project and memorandum have been coordinated with the City Attorney's Office, the City Manager's Budget Office, and Departments of Fire, and Planning, Building and Code Enforcement.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the October 11, 2018, TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended October 23, 2018, City Council meeting agenda.

FISCAL/POLICY ALIGNMENT

This Project is consistent with the Council-approved focus on rehabilitating aging RWF infrastructure, improving efficiency, and reducing 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:	$ 29,498,000
2.	COST OF PROJECT:	
	Project Delivery	$ 11,854,000*
	Construction	$ 29,498,000
	Contingency (15%)	$ 4,425,000
	Total Project Costs	**$ 45,777,000**
	Prior Year Expenditures	$ 5,107,761
	Remaining Project Costs	**$ 40,669,239**

** Project delivery estimate includes: $5,233,000 for consultant design and construction support services (feasibility/development, design, and engineering services during bid and award, construction and post construction phases); $60,000 for project management during feasibility and development phase; $1,233,000 for*

project management during the design phase; $240,000 for project management during bid and award phase; $4,754,000 for construction management (including special inspections; and $334,000 for project management during post construction and project closeout phase.

The estimated project delivery cost is 40% of the construction cost, which is in line with project delivery costs for capital projects at the RWF and other wastewater facilities.

3. COST ELEMENTS OF CONTRACT:
This is a lump sum contract. $ 29,498,000

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

5. OPERATING COSTS: The annual costs to operate and maintain the upgraded facilities are not anticipated to impact the San José-Santa Clara Treatment Plant Operating Fund as this is an equipment replacement project, and therefore there will be no additional annual operations and maintenance costs.

6. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this project is allocated 20 percent to flow, 60 percent to biochemical oxygen demand (BOD), and 20 percent to ammonia (NH_3).

BUDGET REFERENCE

The table below identifies the fund and appropriations proposed to fund the contract recommended as part of this memorandum and remaining project costs, including project delivery, construction, and contingency costs.

Fund #	Appn #	Appn Name	Current Total Appn	Amt for Contract	2018-2019 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
Remaining Project Costs			**$40,669,239**			
Remaining Funding Available						
512	7677	Aeration Tanks and Blower Rehabilitation	$54,112,000	$29,498,000	V-138	06/19/2018, Ord. No. 30124

CEQA

Exempt, File No. PP16-124, CEQA Guidelines Section 15301, Existing Facilities.

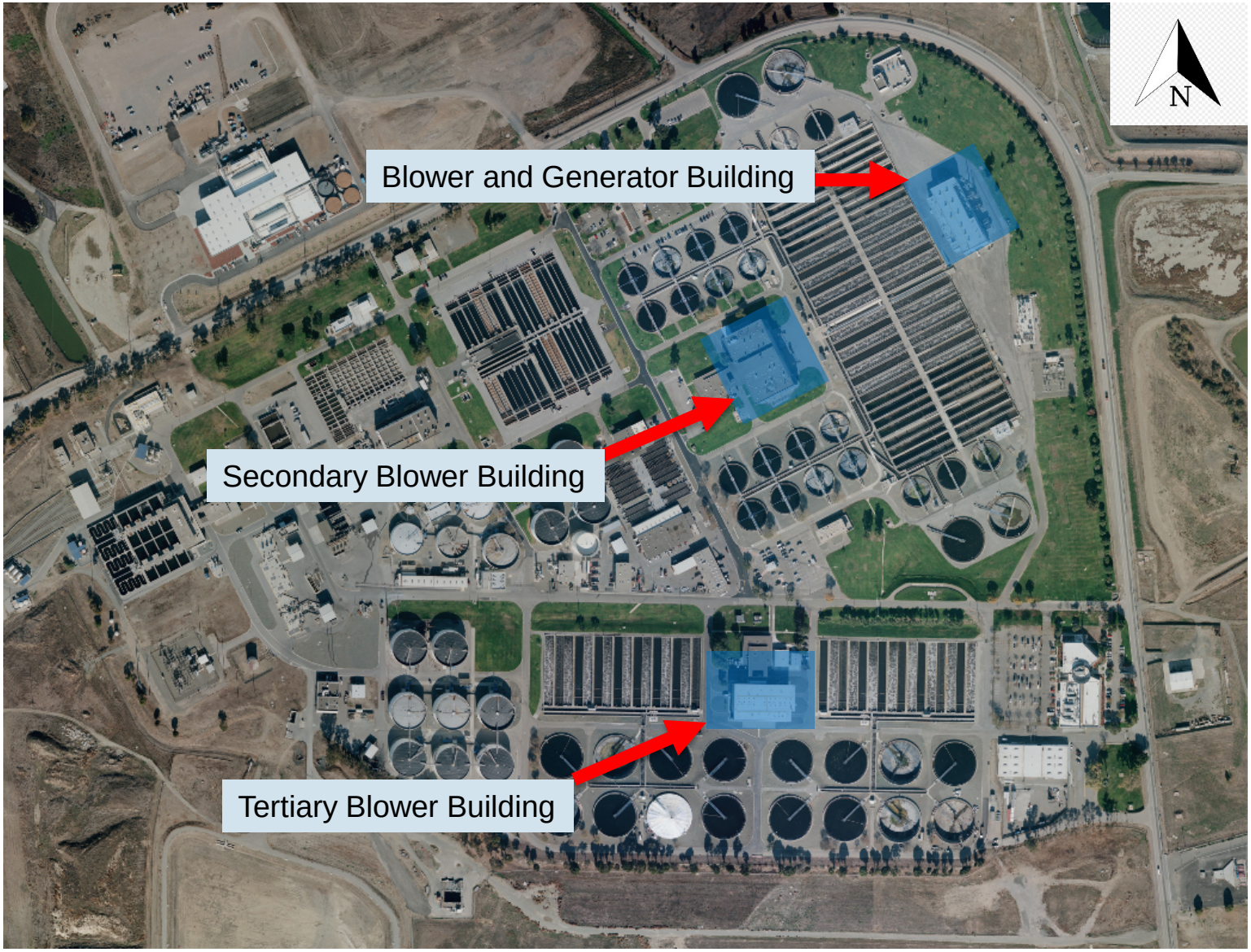
/s/
KERRIE ROMANOW
Director,
Environmental Services Department

/s/
MATT CANO
Director,
Public Works Department

For questions, please contact Napp Fukuda, Assistant Director, Environmental Services Department at (408) 793-5353

Attachment A – Blower Improvements Project Map

Attachment A
8073 – Blower Improvements Project
Location Map



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

SEPT 1 - SEPT 30, 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	FRICTION & NON-FRICTION PARTS INCLUDING BEARINGS, SEALS, DRIVE COMPONENTS, AND RELATED ITEMS AS REQUIRED.	18-19	26030	55524	MOTION INDUSTRIES	175,000	07/01/18	06/30/19			
2	(QTY 240) 4" 710/NN NEO FLANGED CHECK VALUE	18-19	26916	80720	MOTION INDUSTRIES	119,382	08/22/18	06/30/19			NITRIFICATION - AERATORS
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