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

SPECIAL MEETING AGENDA/ TPAC

4:00 p.m. May 17, 2018 Room 1734

1. ROLL CALL

2. APPROVAL OF MINUTES

A. April 12, 2018

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

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

5. AGREEMENTS/ACTION ITEMS

A. Report On Bids And Award Of Construction Contract For 7757 – Advanced Facility Control And Meter Replacement - Phase 1 Project At The San José-Santa Clara Regional Wastewater Facility

Staff Recommendation:

(a) Report on bids and award of a construction contract for 7757-Advanced Facility Control and Meter Replacement - Phase 1 Project to the low bidder, C. Overaa & Co., for the base bid and Add Alternate Nos. 1 to 4, in the amount of $5,790,000, and approve a 20 percent construction contingency in the amount of $1,158,000.

(b) Adopt a resolution authorizing the Director of Public Works to negotiate and execute one or more change orders in excess of $100,000 for the duration of the project, not to exceed the total contingency amount approved for the project.

This item is scheduled for consideration by the City Council on May 22, 2018.

B. Five- Year 2019-2023 Proposed Capital Improvement Program

Staff Recommendation: TPAC approval of the San José/Santa Clara Regional Wastewater Facility Control Proposed Five-Year 2019-2023 Capital Improvement Program.

The San José/Santa Clara Regional Wastewater Facility Proposed Five-Year 2019-2023 Capital Improvement Program is scheduled for Council consideration on June 12, 2018, and for adoption on June 19, 2018.

C. 2018-2019 Proposed Operating Budget

Staff Recommendation: TPAC approval of the San José/Santa Clara Regional Wastewater Facility Control Proposed Operating Budget.

The San José/Santa Clara Regional Wastewater Facility Control Proposed Operating Budget is scheduled for Council consideration on June 12, 2018, and for adoption on June 19, 2018.

D. 8641 – South Bay Water Recycling Pump Station HVAC Project

Staff Recommendation:
Report on bids and award of contract for the 8641 - South Bay Water Recycling Pump Station Heating, Ventilation, and Air Conditioning Project to the low bidder, Blocka Construction Inc., in the amount of $406,000 and approve a contingency in the amount of $40,600.

This item is scheduled for consideration by the City Council on May 22, 2018.

E. Discharge Regulations and Future Impacts on the San José- Santa Clara Regional Wastewater Facility

Staff Recommendation:
Accept the annual update on regulatory items related to the San José-Santa Clara Regional Wastewater Facility.

This item was accepted by the Transportation and Environment Committee on May 7, 2018, and is scheduled to be considered by the City Council at a date to be determined.

6. OTHER BUSINESS/CORRESPONDENCE

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

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

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

The proposed recommendation was approved by the City Council on April 24, 2018.

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

Staff Recommendation:

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

The proposed recommendation will be approved by Council at a date to be determined.

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

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

The proposed recommendation will be approved by Council at a date to be determined.

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 **June 14, 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 body.

MINUTES OF THE
SAN JOSÉ/SANTA CLARA
TREATMENT PLANT ADVISORY COMMITTEE
San José City Hall, T-1734
Thursday, April 12, 2018 at 4:00 p.m.

1. ROLL CALL

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

Committee Members: Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe (alternate)

Absent: Lan Diep

2. APPROVAL OF MINUTES

A. March 8, 2018
Item 2.A. was approved to note and file.
Ayes – 8 (Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Abstain – 0
Absent – 1 (Diep)

3. UNFINISHED BUSINESS/REQUEST FOR DEFERRALS

4. DIRECTOR'S REPORT

A. Director's Report (verbal)
- Monthly Progress Report
  Assistant Director Kantak noted the inclusion of the monthly progress report in the packet.

5. AGREEMENTS/ACTION ITEMS

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

Staff Recommendation:
Approve a Master Consultant Agreement with Black & Veatch to provide owner's advisor services for the 8142 – Yard Piping Improvements Project at

the San José-Santa Clara Regional Wastewater Facility from the date of execution through June 30, 2026, in a total amount not to exceed $9,750,000. subject to the appropriation of funds.

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

Program Manager Colin Page presented.
Member Gatto and Chair Liccardo asked for clarification of project delivery costs..

Staff response covered multiple reasons for the higher percentage of delivery costs including extensive condition assessment and the extended project timeline.

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

Ayes – **8** (Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Abstain – 0
Absent – 1 (Diep)

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

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

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

Assistant Director Kantak noted changes to the Agreements/Action Items in that the recommendation for Item 5B. should have said "July 2017 through December 2017" and that Items 5B. and 5C. should have said that they would

be scheduled to be considered at a later date instead of "scheduled to be considered by the City Council on April 24, 2018" as noted on the agenda.

Deputy Director Julia Nguyen and Public Works Principal Engineer John Cannon presented.

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

Ayes – **8** (Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Abstain – 0
Absent – 1 (Diep)

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

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

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

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

Ayes – **7** (Debi Davis, Dev Davis, Marsha Grilli, Steven Leonardis,Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Abstain – 1
Absent – 1 (Diep)

6. OTHER BUSINESS/CORRESPONDENCE

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

Facility

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

Ayes – 8 (Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Absent – 1 (Diep)

7. STATUS OF ITEMS PREVIOUSLY RECOMMENDED FOR APPROVAL BY TPAC

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

Staff Recommendation:

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

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

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

Staff Recommendation:

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

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

8. REPORTS

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

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

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

Ayes – 8 (Debi Davis, Dev Davis, John Gatto, Marsha Grilli, Steven Leonardis, Sam Liccardo, Dave Sykes, Kathy Watanabe)
Nayes – 0
Absent – 1 (Diep)

9. MISCELLANEOUS

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

10. OPEN FORUM

11. ADJOURNMENT

A. The Treatment Plant Advisory Committee adjourned at 4:36 p.m.

Sam Liccardo, Chair

TREATMENT PLANT ADVISORY COMMITTEE

San José-Santa Clara Regional Wastewater Facility

Capital Improvement Program
Monthly Status Report: March 2018

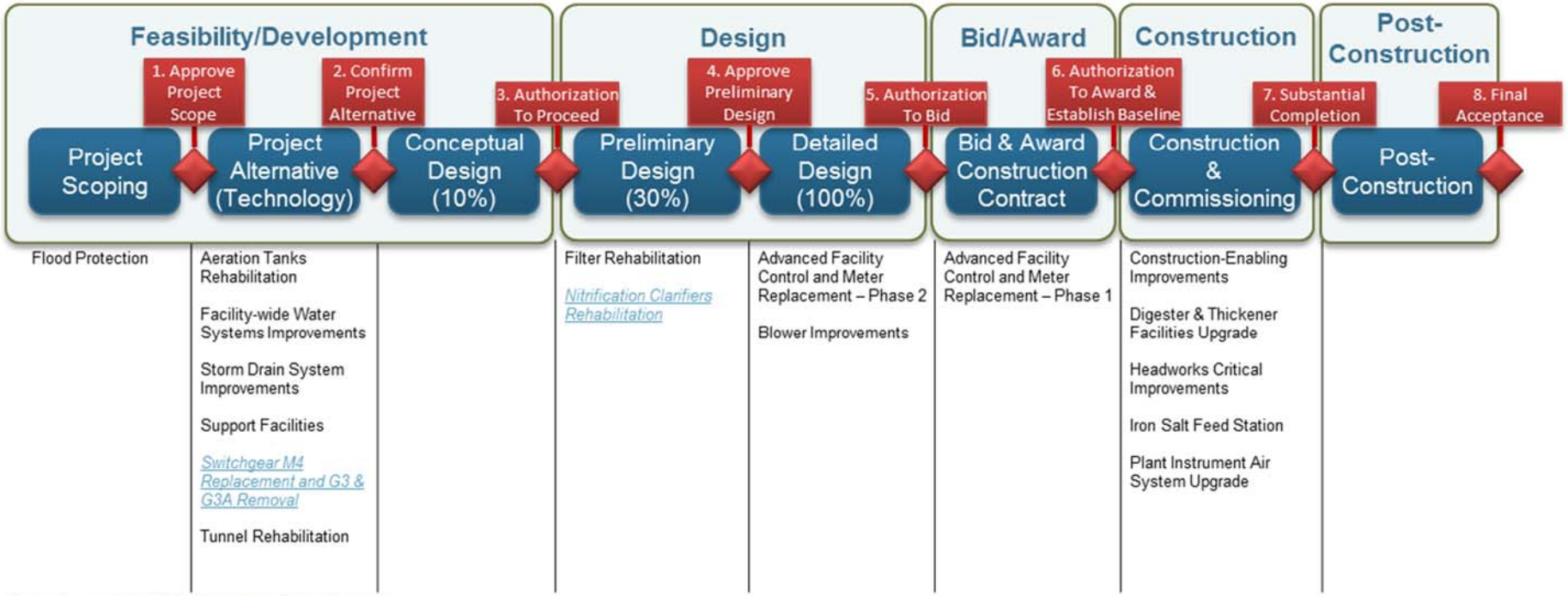
May 10, 2018

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

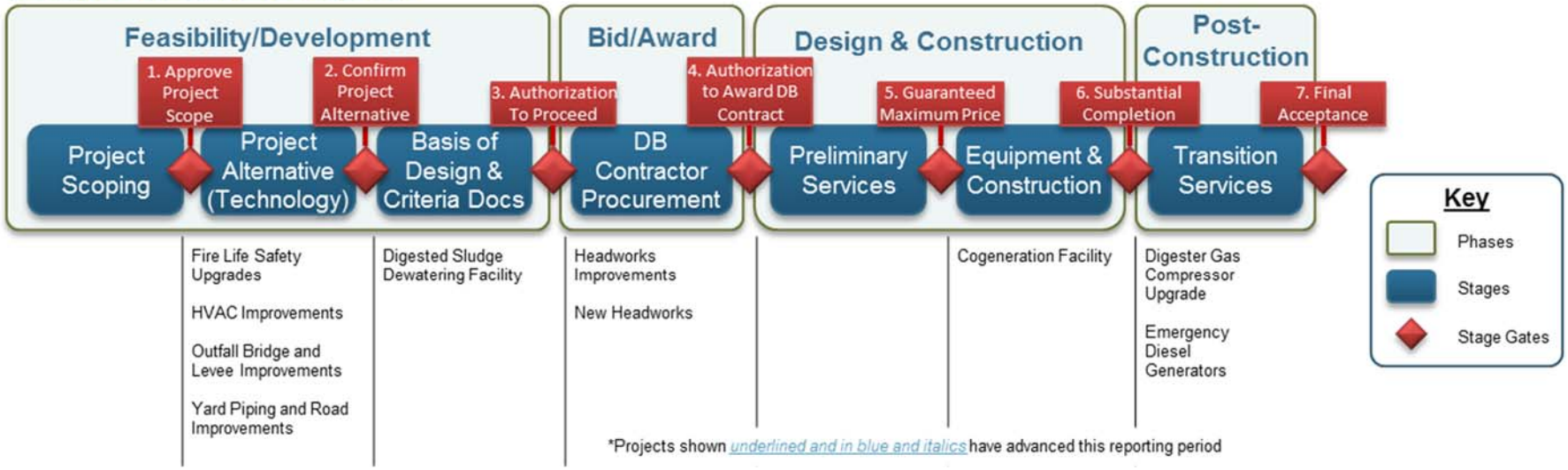
Report Contents

Project Delivery Model

Design-Bid-Build Active Projects



Design-Build Active Projects



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

Program Summary

March 2018

Nineteen CIP projects continued to progress through the feasibility/development, design, and bid/award stages of the project delivery model (PDM) in March. Of particular note, two projects successfully moved through stage gate approval:

- The Switchgear M4 Replacement and G3 & G3A Removal Project advanced through the Approve Project Scope stage gate. This project will replace existing aging switchgear infrastructure (M4) to provide increased circuit breaker capacity to meet future maximum loads at the RWF and to lower arc flash risks to safer levels. The project will also remove existing switchgear (G3 and G3A) that will become redundant once the new Cogeneration Facility is completed. The project initially included an upgrade of switchgear S40, but this work will now be performed by RWF electrical staff for improved coordination and efficiency.
- The Nitrification Clarifiers Rehabilitation Project advanced through the Authorization to Proceed (10% Conceptual Design) stage gate. This project will implement modifications to 16 existing clarifiers in the Biological Nutrient Removal (BNR2) secondary treatment process at the RWF. These clarifiers have been operational for over 40 years, and many of the clarifier elements are nearing the end of their useful life. The project will provide essential mechanical, electrical and structural rehabilitation to the clarifiers and associated ancillary equipment.

Alternatives analysis continued on the Aeration Tanks Rehabilitation, Facility-wide Water Systems Improvements, Fire Life Safety Upgrades, and HVAC Improvements projects. Of particular note this month, the HVAC Improvements Project began condition assessment work of 18 existing buildings at the RWF, and the City advertised a Request for Qualifications (RFQ) for design-build (DB) services for the Digested Sludge Dewatering Facility Project. Preliminary design progressed on the Filter Rehabilitation Project and 3D laser scanning of the filter galleries was completed this month. Detailed design also continued on the Blower Improvements Project with the 90% design submitted for City review and prequalification documents for construction contractors advertised this month.

Construction continued on six projects. Early site work continued on the Cogeneration Facility and a formal groundbreaking ceremony was held at the RWF this month. Design work for the project's 90% design submittal neared completion, and the Bay Area Air Quality Management District (BAAQMD) issued the air permit for the project. The Construction-Enabling Improvements Project contractor continued to install the new construction management trailers and addressed several outstanding items for the project. The Digester and Thickener Facilities Upgrade Project contractor completed the installation and testing of the temporary pumping bypass system required to allow replacement of the 78-inch settled sewage pipeline during the dry season, and also completed the foundation for the new sludge screening building. The contractor also started to excavate and remove polychlorinated biphenyl (PCB) impacted soils around the existing digester tanks in accordance with the EPA-approved Phase 1 Risk-Based Mitigation Plan and continued the construction of the new gas piping system supports. The Headworks Critical Improvements Project contractor completed functional testing and distributed control system programming for the newly installed bar screens and prepared to commence operational testing in May. The Iron Salt Feed Station Project contractor continued commissioning the new ferric dosing and polymer dosing stations. The Plant Instrument Air System Upgrade Project contractor completed the testing and calibration of a number of field instruments and electrical components of the new compressor system.

Two other projects are currently in post-construction. The County recorded the City's Notice of Completion and Acceptance (NOCA) this month for the Digester Gas Compressor Upgrade Project. Staff anticipates the NOCA for the Emergency Diesel Generators Project to be recorded April 2018.

Look Ahead

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

- Project teams will seek stage gate approval for the following projects:
    1. Headworks Improvements and New Headworks projects (Headworks Project) - Stage Gate 4: Authorization to Award DB Contract; and
    2. Blower Improvements Project – Stage Gate 5: Authorization to Bid.
- The Iron Salt Feed Station Project is expected to reach Beneficial Use;
- The City will file the NOCA for the Emergency Diesel Generators Project.
- Staff will make the following recommendations to the Treatment Plant Advisory Committee (TPAC) and Council:
    - April : (1) award a master consultant agreement (MCA) for owner's advisor services for the Yard Piping and Road Improvements Project; and (2) accept the CIP Semiannual Status Report, which highlights CIP progress for the period of July through December 2017.
    - May: (1) award a construction contract for the Advanced Facility Control and Meter Replacement – Phase 1 Project; (2) accept an annual update on Discharge Regulations and Future Impacts on the RWF; and (3) accept and adopt the proposed RWF CIP Budget (TPAC May / Council June).

Program Highlight – Project Interfaces

The CIP will implement the design and construction of more than 30 projects over a ten year period within a critical facility operating around the clock. Of key importance is understanding how projects relate to one another, and identifying those projects that may impact or rely on other projects. These relationships between projects are called interfaces.

Interface examples include:

- Informational interfaces, where one project provides information that another project requires, including condition assessment reports or specific design criteria;
- Product interfaces, where one project is responsible for delivering a product to another project, such as hot water, electricity, or digester gas;
- Physical construction interfaces, where infrastructure built by different contractors meet;
- Permit compliance interfaces, where one project's actions trigger a permit condition or requirement that another project must then meet; and
- Systems and operational process modifications in one project that may impact other projects and may require design coordination or agreement regarding design criteria.

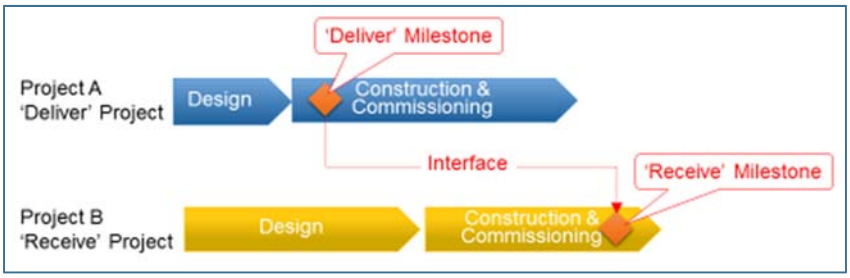


Figure 1: Interface relationship between projects

Interface management coordinates and manages efforts to identify, understand, and document project interfaces. The CIP program management team includes an interface manager role to track, monitor, and communicate the interface status and take actions to maximize benefits or minimize adverse impacts that may arise. Interface management follows a process that promotes:

- A structured, systematic approach from project initiation through commissioning;
- Accountability, with responsibilities assigned for planning and executing interface management response and activities;
- Communication through monthly reports, online tools, and additional resources;
- Collaboration with project managers, subject experts, and project teams through workshops, meetings, and documentation;
- Integration with the program's risk register, schedules, and decision logs, when necessary; and
- Stewardship of interproject relationships and dependencies.

The process begins when an interface is identified and recorded in the interface log located on the CIP Portal, a collaborative website. Anyone in the CIP can identify an interface, but most are identified by the project team or interface manager as the project progresses through each PDM stage. The interface manager then works with the project teams and subject matter experts to evaluate the interface.

Responsibilities are assigned and plans developed to avoid or mitigate any adverse impacts that may occur related to the interface. Project schedule activities are identified to monitor status and execution of the interface. The interface manager monitors these dates through monthly schedule updates and status reports. Corrective action is initiated should the schedule forecast that the interface may be delayed.

Interfaces are also reviewed for other changes that may impact them as the project progresses. Such changes may include scope, schedule, or sequence, with the interface status updated as necessary. Interfaces are closed only when the interface is executed or is no longer relevant.

Interface management requires an early understanding of project relations, identification of relations that involve CIP projects, close collaboration, and proactive management by everyone involved. Successful interface management promotes information sharing and coordination between projects, eliminates potential planning, design, construction, and/or operational conflicts, and ensures project and long-term operational goals are met.

Program Performance Summary

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

Program Key Performance Indicators – Fiscal Year 2017-2018

KPI	Target	Fiscal Year to Date			Fiscal Year End		
		Actual	Status	Trend	Forecast	Status	Trend
Stage Gates	80%	100% 14/14[1]			100% 19/19[2]		
Measurement: Percentage of initiated projects and studies that successfully pass each stage gate on their first attempt. Target: Green: >= 80%; Amber: 70% to 80%; Red: < 70%							
Schedule	90%	0% 0/1			40% 2/5		
Measurement: Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone.[3] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Budget	90%	50% 1/2[4]			75% 3/4[5]		
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	$248M	$197M			$308M[6]		
Measurement: CIP FY17-18 committed costs. Target: Committed cost meets or exceeds 70% of planned Budget. 70% of $354M = $248M. Therefore Green: >=$248M; Amber: $194M to $248M; Red: < $194M							
Procurement	80%	100% 3/3[7]			100% 4/4		
Measurement: Number of consultant and contractor procurements advertised compared to planned for the fiscal year. Target: Green: >= 80%; Amber: 70% to 79%; Red: < 70%							
Safety	0	0			0		
Measurement: Number of OSHA reportable incidents associated with CIP delivery for the fiscal year. Criteria: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Environmental	0	0			0		
Measurement: Number of permit violations caused by CIP delivery for the fiscal year. Target: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Staffing[8]	80%	100% 15/15[9]			100% 15/15		
Measurement: Number of planned positions filled for the fiscal year. Target: Green: >= 80%; Amber: 70% to 79%; Red: < 70%							

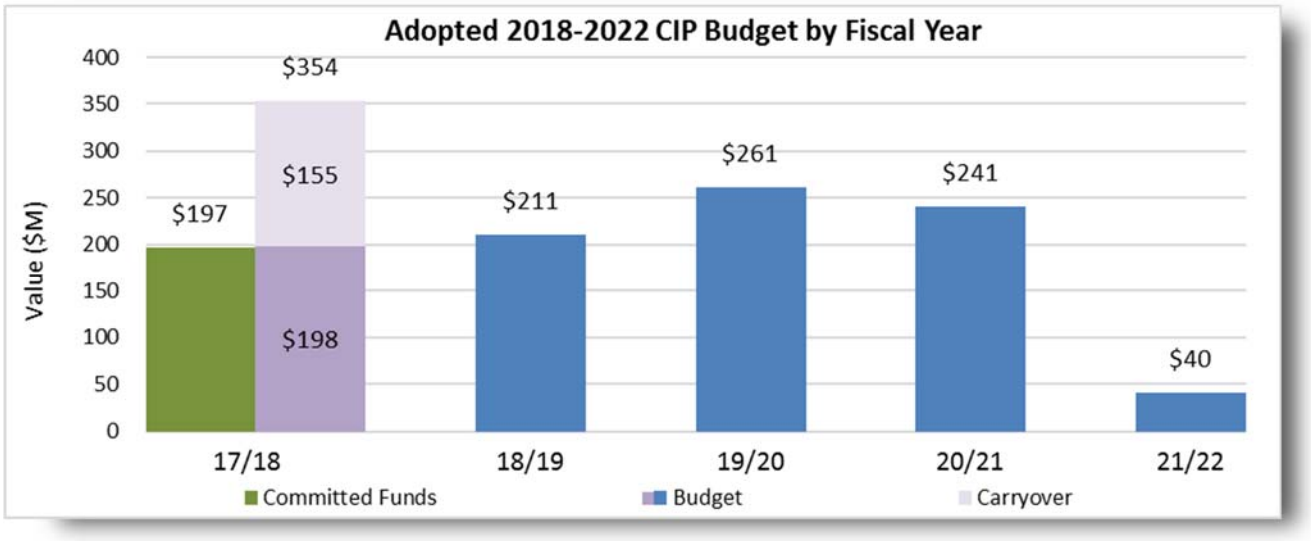
Notes

1. The Switchgear M4 Replacement and G3 & G3A Removal (formally named Switchgear S40 Upgrade, M4 Replacement, G3 & G3A Removal) and the Nitrification Clarifier Rehabilitation projects successfully completed the Approve Project Scope and Authorization to Proceed stage gates, respectively.
2. The fiscal year-end count has been updated to reflect a decrease in the number of planned stage gates due to project schedule revisions.
3. The baseline Beneficial Use date and the baseline budget for each project are established at construction contract award and execution.
4. The Digester Gas Compressor Upgrade Project was accepted by the City with project expenses exceeding the approved baseline budget.
5. The Construction-Enabling Improvements Project is no longer anticipated to be accepted this fiscal year.
6. The fiscal year-end expenditure forecast increased by approximately $2 million due to revised encumbrance estimates.
7. The City advertised the Request for Qualifications for DB services for the Digested Sludge Dewatering Facility Project.
8. The staffing KPI is measured quarterly and represents CIP recruitments planned for the fiscal year. This KPI measurement does not account for staff turnover throughout the fiscal year.
9. The KPI was updated for the third quarter. The program filled three positions: an associate engineer, engineer I/II, and an associate engineering technician.

Program Budget Performance Summary

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

Adopted 2018-2022 CIP Expenditure and Encumbrances



Notes

Committed Funds: Total of expenditures and encumbrances.

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

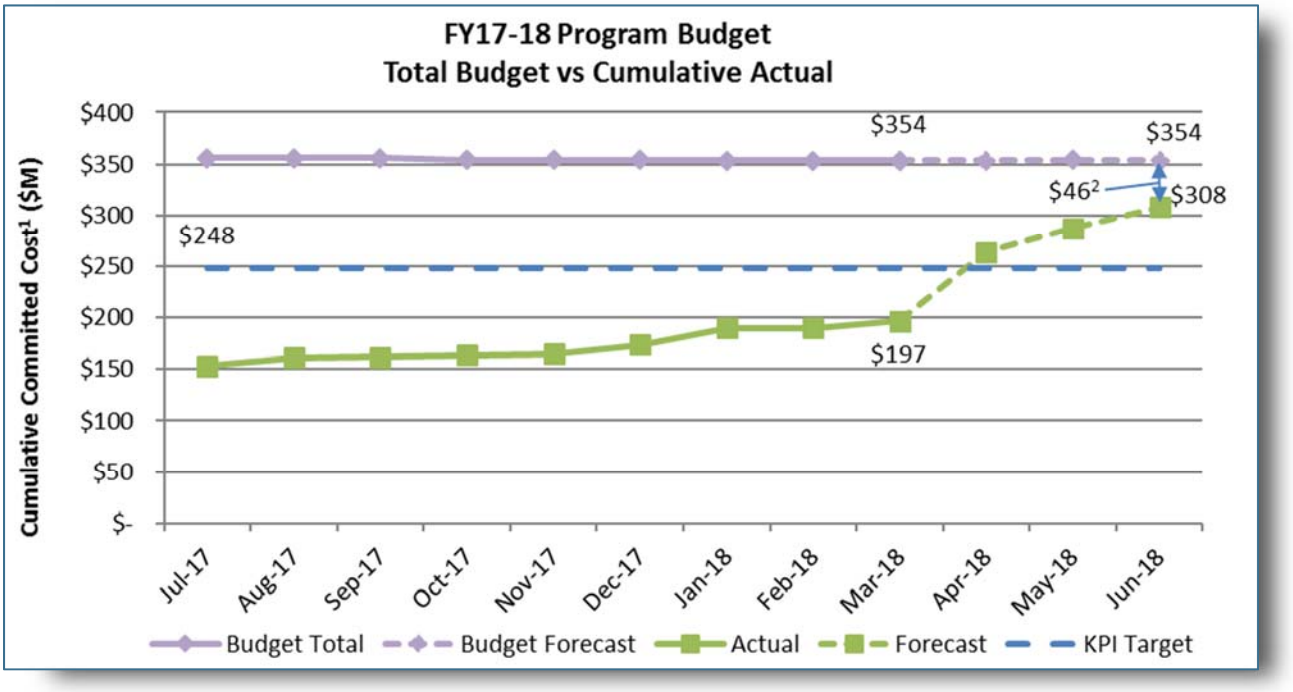
Encumbrance**:** Financial commitments such as purchase orders or contracts that are committed to a vendor, consultant, or contractor**.** An encumbrance reserves the funding within the appropriation and project.

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

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

Fiscal Year 2017-2018 Program Budget Performance

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



Notes

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

Project Performance Summary

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

Project Performance – Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]	Cost Performance[2]	Schedule Performance[2]
1. Digester Gas Compressor Upgrade	Post-Construction	Apr 2017[3]	◆	◆
2. Emergency Diesel Generators	Post-Construction	Jul 2017[3]	●	◆
3. Construction-Enabling Improvements	Construction	May 2018	●	◆
4. Iron Salt Feed Station	Construction	May 2018	●	◆
5. Headworks Critical Improvements	Construction	Jun 2018	●	●
6. Plant Instrument Air System Upgrade	Construction	Jun 2018	●	●
7. Cogeneration Facility	Design & Construction	Jan 2020[4]	●	●
8. Digester and Thickener Facilities Upgrade	Construction	Jul 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 page 11 and 12.
3. Actual Beneficial Use date.
4. The project construction Beneficial Use date will be baselined once the contractor submits their construction schedule.

Project Performance – Pre-Baselined Projects

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

Notes

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

Significant Accomplishments

Biosolids Package

Digester Thickener and Facilities Upgrade

- Contractor Walsh Construction completed the installation and testing of the settled sewage pipeline bypass piping and equipment and the foundation for the new sludge screening building. The contractor started excavating and removing PCB-impacted soils and continued construction of gas piping system supports.

Digested Sludge Dewatering Facility

- The City advertised an RFQ for the selection of a design-builder and held a site walk. The project team anticipates issuing the RFP in summer 2018 and executing the DB contract in spring 2019.

Facilities Package

Cogeneration Facility

- The BAAQMD issued the Authority to Construct and DB contractor CH2M started clearing and grubbing activities at the project site. The City also held a groundbreaking ceremony on March 1.

Fire Life Safety Upgrades

- Design consultant Kennedy/Jenks (K/J) submitted a draft of the condition assessment technical memorandum for City review. The project team will hold a project workshop to review the condition assessment findings in April 2018.

Flood Protection

- The project team met with Santa Clara Valley Water District (SCVWD) to review draft hydrological model results for the 500-year flood boundary projections for the Coyote Creek System.

HVAC Improvements

- Design consultant K/J began condition assessment work of 18 RWF buildings, which will be completed in April 2018.

Outfall Bridge and Levee Improvements

- The City executed a service order with AECOM for engineering services. Condition assessment will start in April 2018.

Liquids Package

Aeration Tanks Rehabilitation

- The project team reviewed the draft condition assessment and alternatives analysis report from design consultant Brown and Caldwell (B&C). The report contained tank rehabilitation options and potential improvements to meet future nutrient limits for the RWF effluent and is expected to be finalized in May.

Blowers Improvements

- Design consultant B&C submitted the 90 percent design and updated the project cost estimate for City review.

Headworks Critical Improvements

- Contractor Overaa Construction continued bar screen replacement work and expects to be finished in June 2018.

Iron Salt Feed Station

- Contractor Anderson Pacific and the project team continued to troubleshoot operational issues with the ferric chloride and polymer dosing systems.

Nitrification Clarifiers Rehabilitation

- The project passed Stage Gate 3: Authorization to Proceed, authorizing the team to proceed with preliminary design.

Power and Energy Package

Plant Instrument Air System Upgrade

- Contractor Anderson Pacific completed installation of the air piping and ceiling-mounted lighting.

Switchgear M4 Replacement and G3 & G3A Removal

- The project passed Stage Gate 1: Approve Project Scope. Preliminary design work will begin in summer 2018.

Explanation of Project Performance Issues

Construction-Enabling Improvements

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

Delays in completing the installation of portable trailers required for the project continue to impact the schedule. The trailer to be used for badging and training was delivered in August; trailers to be used for construction management personnel were delivered in mid-January. Installation of the utilities, access ramps, and canopy systems is underway. Teichert estimates that it could take several more weeks to obtain required materials and schedule necessary subcontractors, which could result in another six to nine weeks to complete the installation and setup of the trailers. These delays would place the Beneficial Use date in May 2018. The City notified Teichert that the number of contract work days has been exceeded and that liquidated damages are in effect. By the end of this reporting month, liquidated damages were $199,000.

Digester and Thickener Facilities Upgrade

This project has encountered numerous unforeseen conditions including required design modifications addressing seismic forces and the discovery of hazardous materials.

The unforeseen conditions are impacting the project schedule and cost. The City has negotiated contract change orders for the following conditions, resulting in an estimated six-month delay to the Beneficial Use date:

- Major corrosion of a below-ground 78-inch settled sewage pipeline and junction structure is impacting the dissolved air floatation tank piping connections, two new pressurization flow boxes, and utility relocation work. The contractor has postponed all repairs until a bypass pumping system can be safely installed during the 2018 dry season.
- A 36-inch biochemical oxygen demand pipe was obstructing the new sludge screen building foundation. The contractor has removed this pipe and relocated several gas drain vaults and associated piping.
- Multiple conflicts between contract work and existing water, natural gas, digester gas, landfill gas, storm drain, and sanitary sewer pipelines are requiring numerous relocations. The contractor has completed necessary relocations and modifications, including rerouting and other design changes to the new digester gas pipe rack footings.
- BAAQMD venting restrictions has delayed digester gas bypass work by approximately six months. The contractor has now completed the digester gas bypass connections and put the digester gas bypass in service.

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

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

- Digester structural redesign: The design consultant has completed the revised structural drawings addressing seismic issues. Next, the contractor will provide a cost proposal to construct the revised plans.
- Hazardous material mitigation: Testing of soils and concrete for PCBs has been completed. The consultant has prepared a hazardous material survey report summarizing the results of the sampling. The project team has determined disposal options. The contractor has started to excavate and remove PCB-contaminated soils.

An estimated delay of 300 working days based on the contractor's latest submittal is now reflected in the revised Beneficial Use date of July 2021. This estimated delay is being evaluated by City staff.

Digester Gas Compressor Upgrade

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

The contractor achieved Beneficial Use in April 2017; NOCA was achieved in March 2018. This schedule delay was primarily due to the following factors:

- The compressor skids were required to be reclassified from Class 1, Division 2 to Class 1, Division 1. This issue was resolved in May 2015.
- BAAQMD delayed approval of the digester gas flaring during the tie-in of the new gas piping. This issue was resolved in November 2016.
- Functional testing of the automation system took longer than anticipated. Multiple competing process shutdowns with other projects contributed to the delay.
    - NOCA was delayed due to outstanding minor work items and the record drawing submittal.

Emergency Diesel Generators

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

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

The contractor has reached a settlement with the City on liquidated damages.

Iron Salt Feed Station

The Iron Salt Feed Station Project construction has been 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; some piping modifications to resolve a pump operational issue at the ferric chloride station; and the 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 to fine tune the control program, identify and resolve pump drop off issues, and address issues with the new flow meter and level sensor. Staff anticipate that the project will reach Beneficial Use in May 2018.

Project Profile – Digested Sludge Dewatering Facility

A series of physical, biological, and chemical processes treat the liquids and solids streams during the RWF wastewater treatment process. Separated solids (or sludge) is thickened and processed through anaerobic digesters for 15 to 30 days to reduce pathogen content and sludge volume. The thickened digested sludge is then pumped to open air lagoons and drying beds for further sludge volume reduction, treatment, and stabilization over a four-year cycle. The RWF generates approximately 85 tons of biosolids per day, which are used as alternate daily cover (ADC) at the local Newby Island Landfill.

The 2013 Plant Master Plan recommended transitioning from the existing open-air lagoons and drying beds to a new mechanical dewatering facility. Benefits of this transition include:

- Reducing odors in the community,
- Positioning the RWF to have multiple and diversified disposition options,
- Reducing the footprint of the biosolids processing area from 750 acres to about 160 acres to enable other land uses; and
- Creating flexibility to respond to future regulatory changes governing the disposal of treated biosolids at landfills as well as changing market conditions related to beneficial reuse of treated biosolids.

In 2014, a biosolids management strategy was further developed to address biosolids transition implementation. Council approved recommendations from this strategy in December 2014 and June 2015, including the new Digested Sludge Dewatering Facility Project. In addition, recent developments in solids waste regulations (SB1383) further validate the need for this project. Implementation of SB 1383 could preclude the RWF from continuing to dispose of its biosolids at Newby Island Landfill (or any other California landfill) as soon as 2020. Construction of the new digested sludge dewatering facility will position the RWF to have biosolids disposition options in compliance with this regulation.

The project will construct a new mechanical dewatering facility and associated support facilities to replace the existing lagoons and drying beds. The support facilities are anticipated to include transfer sludge pumps; digested sludge storage tanks and feed pump stations; dewatering centrifuges; sludge cake conveyance facilities; polymer facilities; centrate pumps; and truck load-out facilities. The project team identified a site for the new dewatering facility on the east side of Zanker Road (see Figure 2). The total project budget is approximately $97 million.

The project will be delivered using the progressive design-build method. In October 2016, Council approved a master consultant agreement with B&C to provide engineering services as the City's owner's advisor. Their services include development of project alternatives, the project definition report (PDR), and preparation of the documents required by the California Environmental Quality Act (CEQA). B&C completed the alternatives analysis in 2017. As a result of this work, the City selected decanter centrifuges for the dewatering technology, and identified other acceptable alternatives for sludge pumping, storage, cake conveyance, and site layout. At present, the project team is working with B&C to complete the PDR and CEQA documentation by fall 2018.

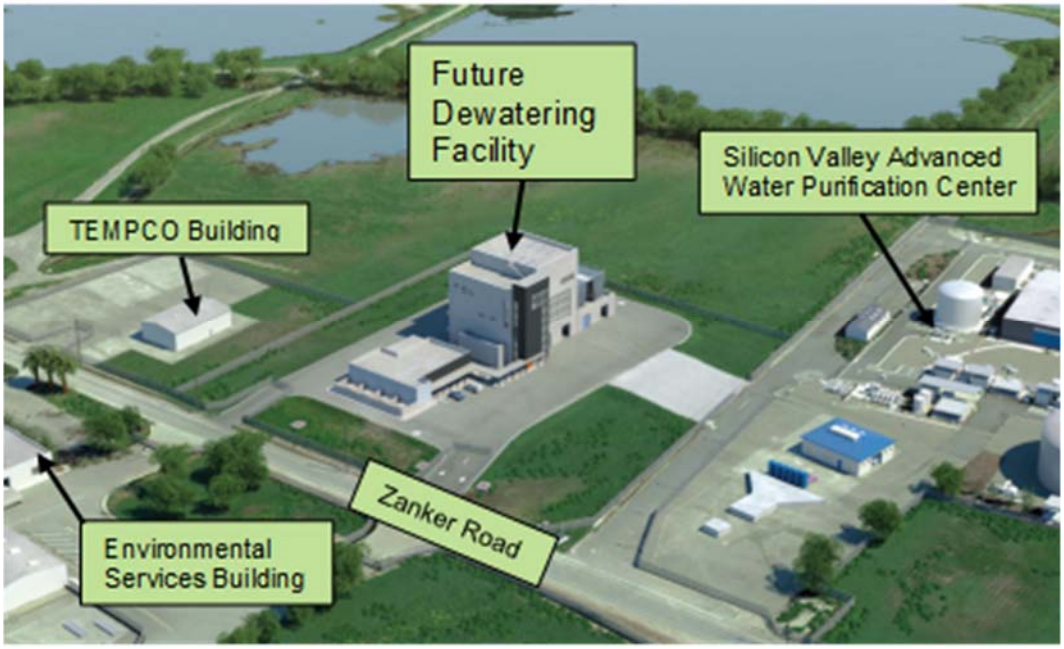


Figure 2: Mechanical Dewatering Facility Conceptual Rendering

In March, the City issued an RFQ for design-builder (DB) services. The top-ranked teams will be invited to submit proposals as part of the Request for Proposals (RFP) process. The project team anticipates making a recommendation to Council to award a DB contract in spring 2019. Once awarded, the DB entity will provide detailed design and complete construction of the new facilities based on a negotiated guaranteed maximum price. Construction is scheduled to begin in fall 2020 with substantial completion expected by winter 2022

Regional Wastewater Facility Treatment – Current Treatment Process Flow Diagram

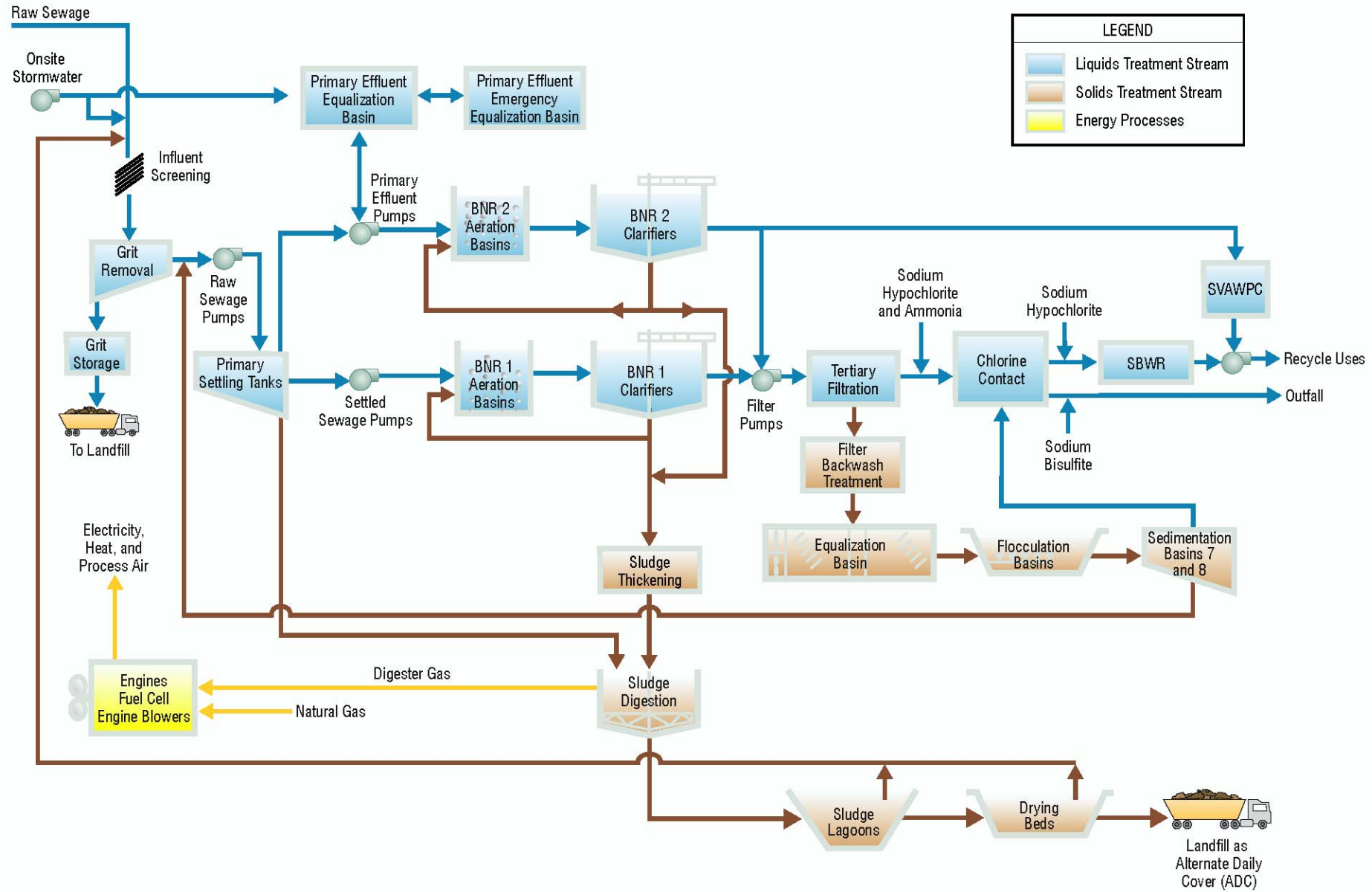


Figure 3 – Current Treatment Process Flow Diagram

Regional Wastewater Facility Treatment – Proposed Treatment Process Flow Diagram

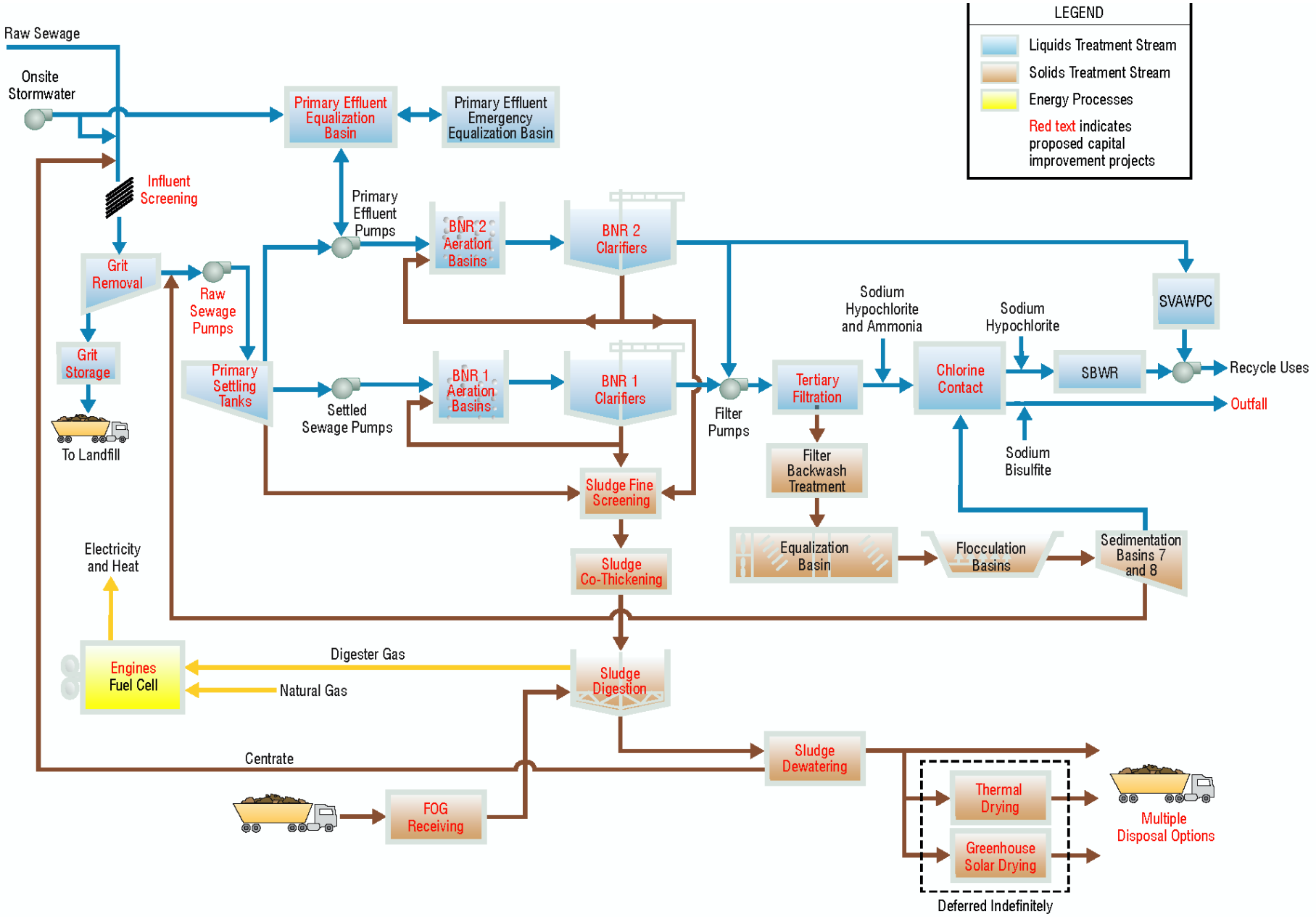


Figure 4 – Proposed Treatment Process Flow Diagram

Active Construction Projects – Aerial Plan

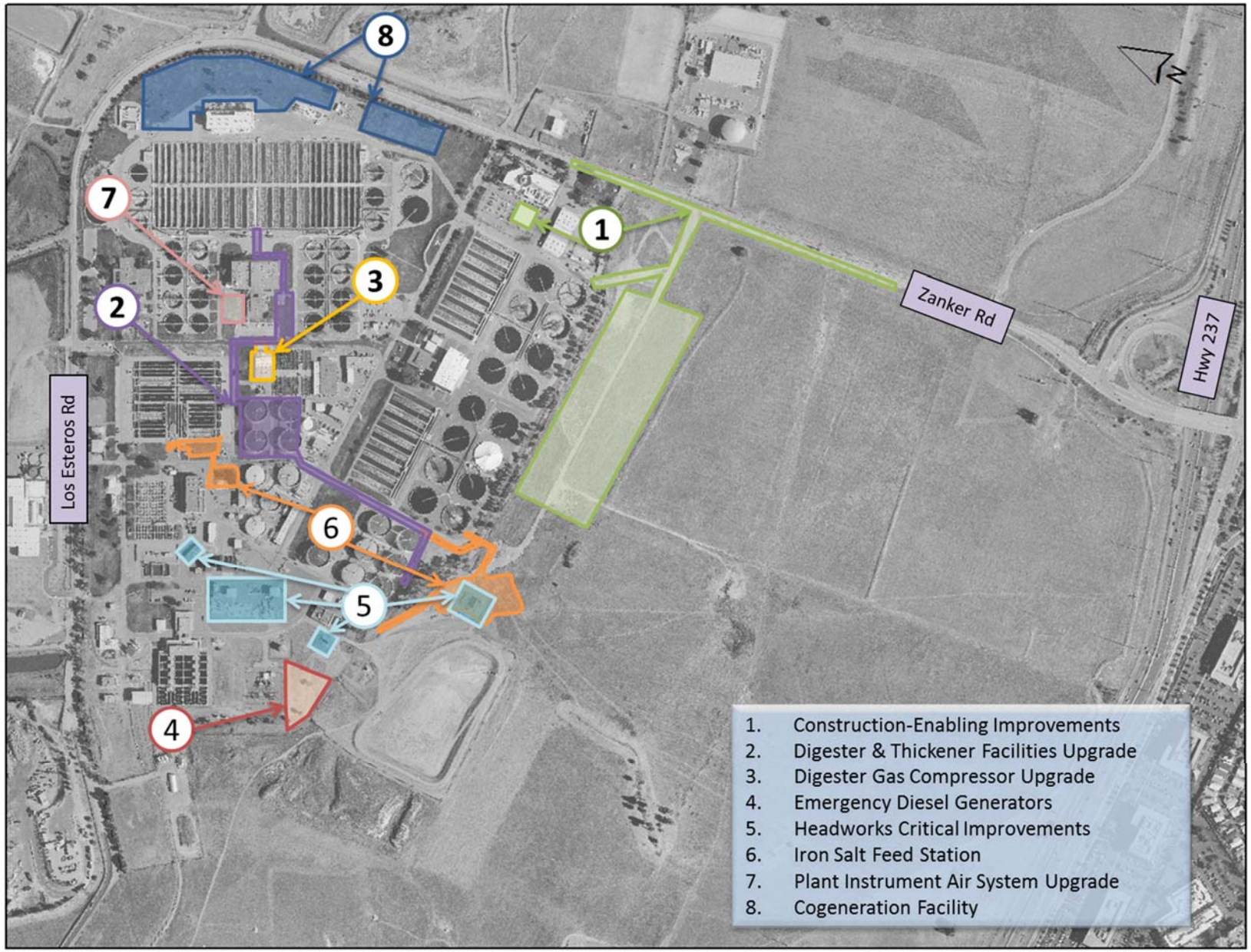


Figure 5: Active Construction Projects

COUNCIL AGENDA: 5/22/18
FILE: 18-658
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: April 30, 2018

Approved D-DSyL Date 5/10/18

SUBJECT: REPORT ON BIDS AND AWARD OF CONSTRUCTION CONTRACT FOR 7757 – ADVANCED FACILITY CONTROL AND METER REPLACEMENT - PHASE 1 PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

(a) Report on bids and award of a construction contract for 7757-Advanced Facility Control and Meter Replacement - Phase 1 Project to the low bidder, C. Overaa & Co., for the base bid and Add Alternate Nos. 1 to 4, in the amount of $5,790,000, and approve a 20 percent construction contingency in the amount of $1,158,000.

(b) Adopt a resolution authorizing the Director of Public Works to negotiate and execute one or more change orders in excess of $100,000 for the duration of the project, not to exceed the total contingency amount approved for the project.

OUTCOME

Award of the construction contract to C. Overaa & Co (Overaa)., will allow for the construction and completion of the Advanced Facility Control and Meter Replacement - Phase 1 Project (Project), which will improve operational reliability and efficiency at the San José-Santa Clara Regional Wastewater Facility (RWF). Approval of a 20 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 as scheduled in the fourth quarter of 2020.

BACKGROUND

The RWF relies on control equipment, such as flow meters, valves and actuators, sensors and transmitters, for process monitoring and control to maintain safe and efficient operation of the RWF and full compliance with its National Pollutant Discharge Elimination System (NPDES) permit. Most of the control equipment at the RWF was installed during the 1960s and 1970s and is in poor condition and requires excessive maintenance. Some of the control equipment is difficult to repair because it is no longer supported by the manufacturers, and replacement parts are scarce or not available. Therefore, there is an urgent need to replace the control equipment to increase equipment and data reliability and integrity, and to improve the RWF's overall operations and efficiency.

The Project will replace and/or upgrade the control equipment in the Secondary B Battery and Nitrification B Battery treatment areas, as shown in Attachment A. The project scope includes replacing 52 flow meters, 24 valves, 12 valve actuators, 26 sensors and transmitters, associated piping modifications, and electrical improvements.

Construction is scheduled to begin in July 2018, with substantial completion in December 2020. Major construction work will be performed during the planned maintenance shutdown periods for each battery in 2019 and 2020, respectively.

Council Resolution No. 71816, adopted on November 4, 2003, requires pre-qualification of contractors on all public works projects in which the Engineer's Estimate is $10 million or more. The Engineer's Estimate for this project is $10.4 million, and the Project will be delivered using a conventional design-bid-build delivery method. Based on these factors, staff conducted a pre-qualification process in October 2017. Six general contractors submitted their pre-qualification packages. Staff evaluated the packages and determined that four general contractors met the pre-qualification requirements. Of the four pre-qualified contractors who were invited to bid on the Project, three submitted bids.

ANALYSIS

Bids were opened on February 8, 2018 with the following results:

Contractor	Base Bid Amount	Add Alt Total	Total Bid	Variance Amount	Over/ (Under) Percent
C. Overaa & Co. (Richmond)	$5,302,000	$488,000	$5,790,000	($4,566,829)	(44)
Monterey Mechanical Co. (Alameda)	$6,205,000	$576,000	$6,781,000	($3,575,829)	(35)
Kiewit Infrastructure West Co. (Fairfield)	$7,416,700	$1,398,000	$8,814,700	($1,542,129)	(15)
Engineer's Estimate	**$9,000,000**	**$1,400,000**	**$10,400,000**		

In addition to the base bid scope of work there are four Add Alternate bid items as follows:

Add Alternate No. 1: Replacement of Secondary Clarifiers B-1 to B-8 Effluent Flow Meters and all associated modification work.
Add Alternate No. 2: Replacement of Secondary Clarifiers B-9 to B-11 Effluent Flow Meters and all associated modification work.
Add Alternate No. 3: Replacement of Secondary Tank B-5 West End Feed Flow Meters, Sensors, Transmitter, and all associated modification work.
Add Alternate No. 4: Replacement of Secondary Tank B-6 West End Feed Flow Meters, Sensors, Transmitters, and all associated modification work.

Contractor	Add Alt No. 1	Add Alt No. 2	Add Alt No. 3	Add Alt No. 4
C. Overaa & Co.	$97,000	$62,000	$169,000	$160,000
Monterey Mechanical Co.	$90,000	$57,000	$249,000	$180,000
Kiewit Infrastructure West Co.	$674,000	$199,000	$279,000	$246,000
Engineer's Estimate	**$250,000**	**$160,000**	**$520,000**	**$470,000**

A total of three bids were received and all of the bids were below the Engineer's Estimate. The low bids may be attributed to the following factors:

- Equipment vendor quotes used on the bid are likely lower than the quotes used in the Engineer's Estimate due to the competitive nature of the bidding process, and
- Lower mobilization and staffing costs as Overaa has other construction projects ongoing at the RWF.

The low bid submitted by C. Overaa & Co. is 44 percent under the Engineer's Estimate. Staff considers the low bid submitted for the Project is acceptable for the work involved and recommends awarding a construction contract to the low bidder, Overaa. Add Alternates Nos. 1, 2, 3, and 4 are recommended for award because there is sufficient project budget to accommodate these additions to the Project.

Construction contingencies for capital projects are established by Council Resolution No. 71319:

a. Five percent of the total contract amount for street, sidewalk or park projects;
b. 10 percent of the total contract amount for utilities and building projects;
c. 15 percent of the total contract amount for building renovation projects;
d. Such other amount as may be approved by the City Council for a particular project.

Staff recommends a 20 percent construction contingency for this Project. This contingency is recommended 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. The higher contingency percentage is also recommended given the lower contract amount.

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, in 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, and provide staff with the flexibility to efficiently respond to unforeseen changed conditions for the duration 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, Treatment Plant Advisory Committee (TPAC), and the City Council on a semiannual basis. Monthly progress reports of the RWF Capital Improvement Program (CIP) will also be submitted to TPAC and posted on the City's website.

PUBLIC OUTREACH

This project was advertised on BidSync.com on January 3, 2018 and advertised in the San José Post Record. This memorandum will be posted on the City's Council Agenda website for the May 22, 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, Finance, and Planning, Building and Code Enforcement.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the May 17, 2018 TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended May 22, 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:	$ 5,790,000
2.	COST OF PROJECT:	
	Project Delivery	$ 3,544,000*
	Construction	$ 5,790,000
	Contingency (20%)	$ 1,158,000
	Total Project Costs	**$10,492,000**
	Prior Year Expenditures	$ 1,311,412
	Remaining Project Costs	**$ 9,180,588**

** Project delivery estimate includes: $1,223,800 for professional consultant services (feasibility/development, design, and engineering services during bid and award, construction and post construction phases); $289,000 for project management during feasibility and development phase; $162,000 for project management during design phase; $101,000 for project management during bid and award phase; $1,675,800 for construction management (including special inspections); and $92,400 for project management during post construction and project closeout phase.*

The estimated project delivery cost is 61% of the construction cost, which is in line with project delivery costs for capital projects at the RWF and other wastewater facilities. Construction management costs for this project are slightly higher than average due to the extended construction duration resulting from operational constraints and additional coordination needed to ensure that the work is completed during the planned maintenance shutdown periods.

3. COST ELEMENTS OF CONTRACT:
This is a lump sum contract. $5,790,000

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 between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

BUDGET REFERENCE

The table below identifies the fund and 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	2017-2018 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
Remaining Project Costs			$9,180,588			
Remaining Funding Available						
512	7224	Advanced Facility Control and Meter Replacement	$13,248,000	$5,790,000	279	10/17/2017 Ord. No. 30014

CEQA

Exempt, File No. PP16-130, CEQA Guidelines Section 15301, Existing Facilities.

/s/
KERRIE ROMANOW
Director
Environmental Services Department

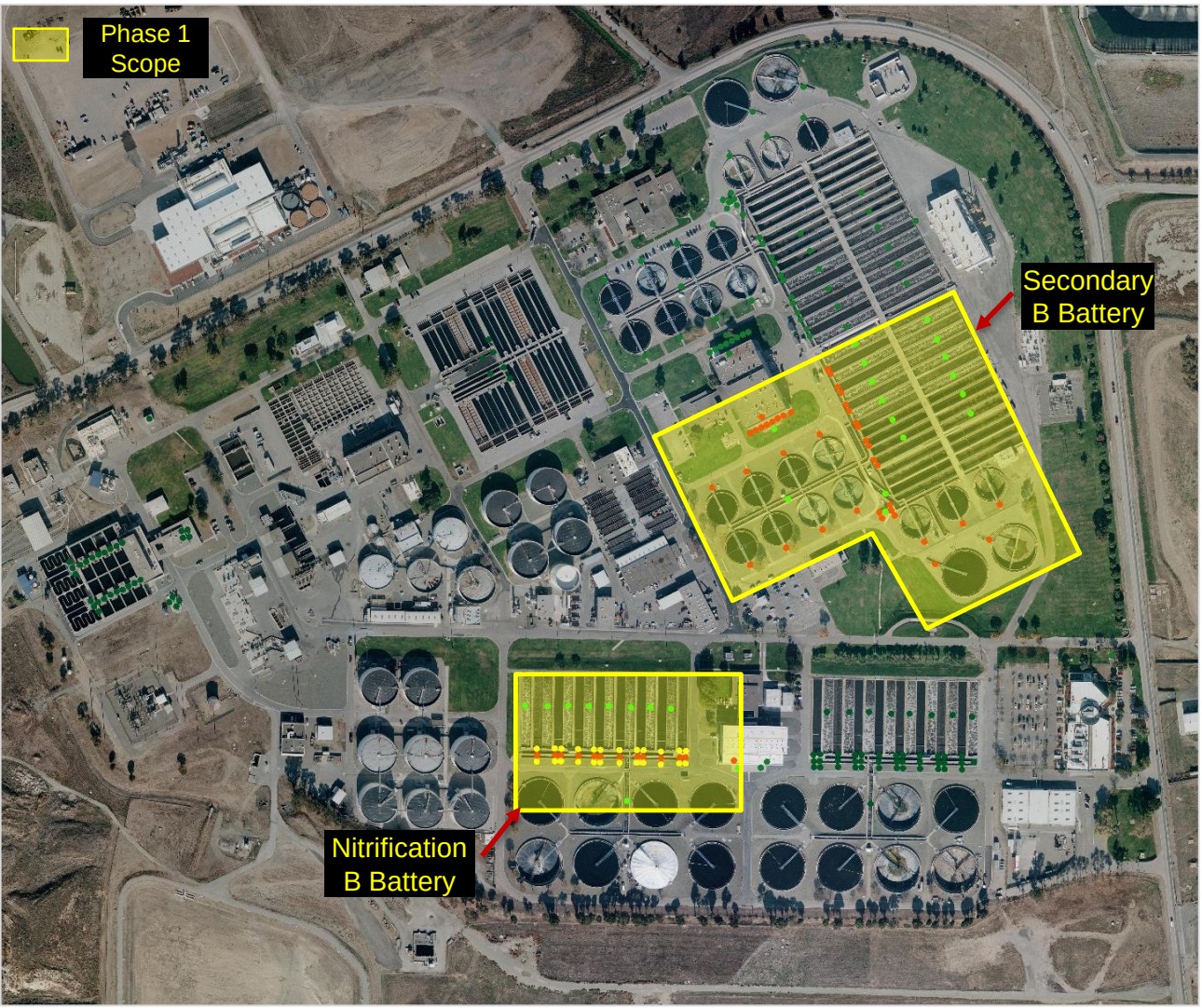
/s/
MATT CANO
Director
Public Works Department

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

Attachment A – Advanced Facility Control and Meter Replacement - Phase 1 Project Map

Attachment A - Project Map

Advanced Facility Control and Meter Replacement – Phase 1



Phase 1 Scope

Secondary – B Battery
(Construction in 2019)

- 39 Flow Meters
- 16 Sensors

Nitrification – B Battery
(Construction in 2020)

- 13 Flow Meters
- 24 Valves and 12 Actuators
- 10 Sensors

San José-Santa Clara Regional Wastewater Facility

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TREATMENT PLANT ADVISORY COMMITTEE

FROM: Kerrie Romanow

SUBJECT: **FIVE-YEAR 2019-2023 PROPOSED CAPITAL IMPROVEMENT PROGRAM**

DATE: May 10, 2018

Approved D·DSyC Date 5/10/18

This memorandum serves to transmit the San José/Santa Clara Regional Wastewater Facility (RWF) Proposed Five-Year 2019-2023 Capital Improvement Program (CIP). The RWF is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José Environmental Services Department. As a regional-serving facility, the RWF provides wastewater treatment services to other cities and sanitary districts in the South Bay including: City of Milpitas, Cupertino Sanitary District, West Valley Sanitation District (representing cities of Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation District 2-3, and Burbank Sanitary District.

The Proposed Five-Year CIP is provided to the Treatment Plant Advisory Committee's review and for a recommendation to the San José City Council for approval. As a City of San José budget document, the Proposed Five-Year CIP includes information on the establishment of interim financing (wastewater revenue notes) and future long-term bond financing to accommodate San José's share of CIP costs. The cost of securing financing and future debt service obligations outlined in the Proposed Five-Year CIP are specific to the City San José, as the CIP assumes that other cities and sanitary districts served by the RWF will fund their respective share of capital costs through cash contributions. Also included with this packet as Attachment A is a ten-year (2018-2019 through 2027-2028) forecast of CIP allocations.

/s/
KERRIE ROMANOW
Director, Environmental Services

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

PROPOSED

SAN JOSE / SANTA CLARA WATER POLLUTION CONTROL PLANT

700 Los Esteros Road
San Jose, California 95134

Five-Year 2019-2023 Capital Improvement Program

Submitted by

Kerrie Romanow, Director

Environmental Services Department

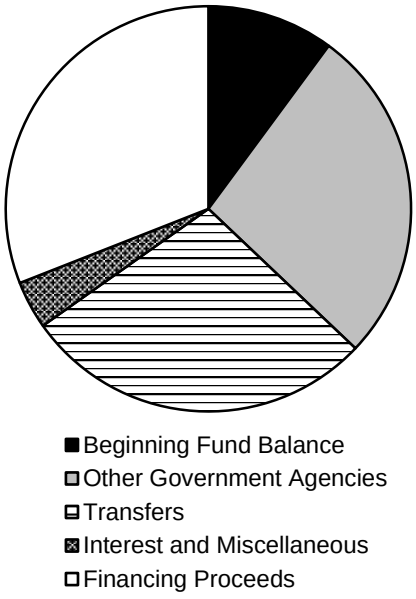
City of San Jose

TO: Treatment Plant Advisory Committee

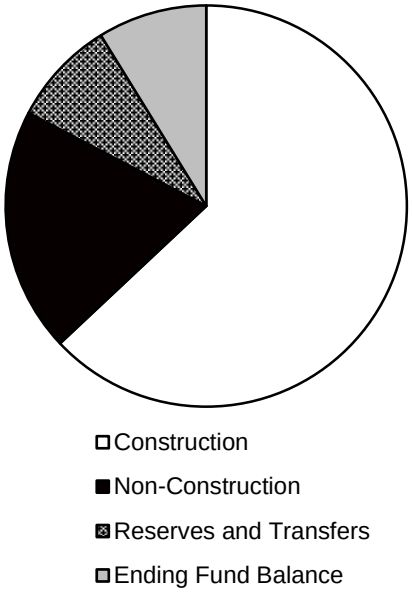
Sam Liccardo	(Chair) Mayor, City of San Jose
Pat Kolstad	(Vice-Chair), City of Santa Clara
Marsha Grilli	Vice Mayor, City of Milpitas
Steven Leonardis	Boardmember, West Valley Sanitation District
John M. Gatto	Boardmember, Cupertino Sanitary District
David Sykes	City Manager, City of San Jose
Lan Diep	Councilmember, City of San Jose
Dev Davis	Councilmember, City of San Jose
Debi Davis	Councilmember, City of Santa Clara

WATER POLLUTION CONTROL
2019-2023 Capital Improvement Program

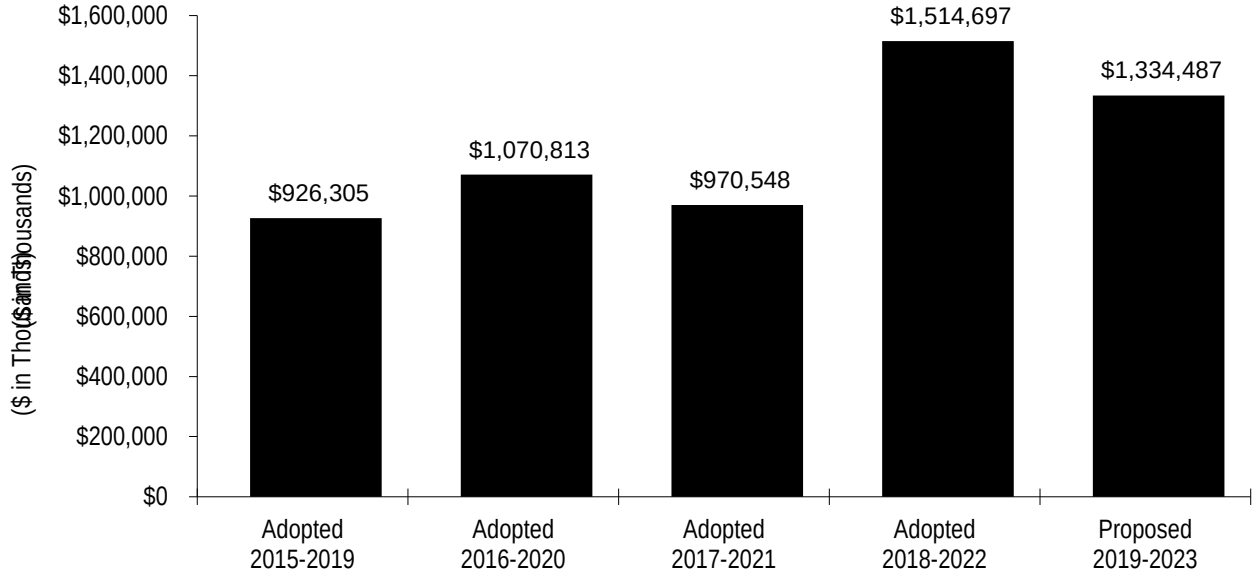
2018-2019 Proposed Source of Funds



2018-2019 Proposed Use of Funds



CIP History



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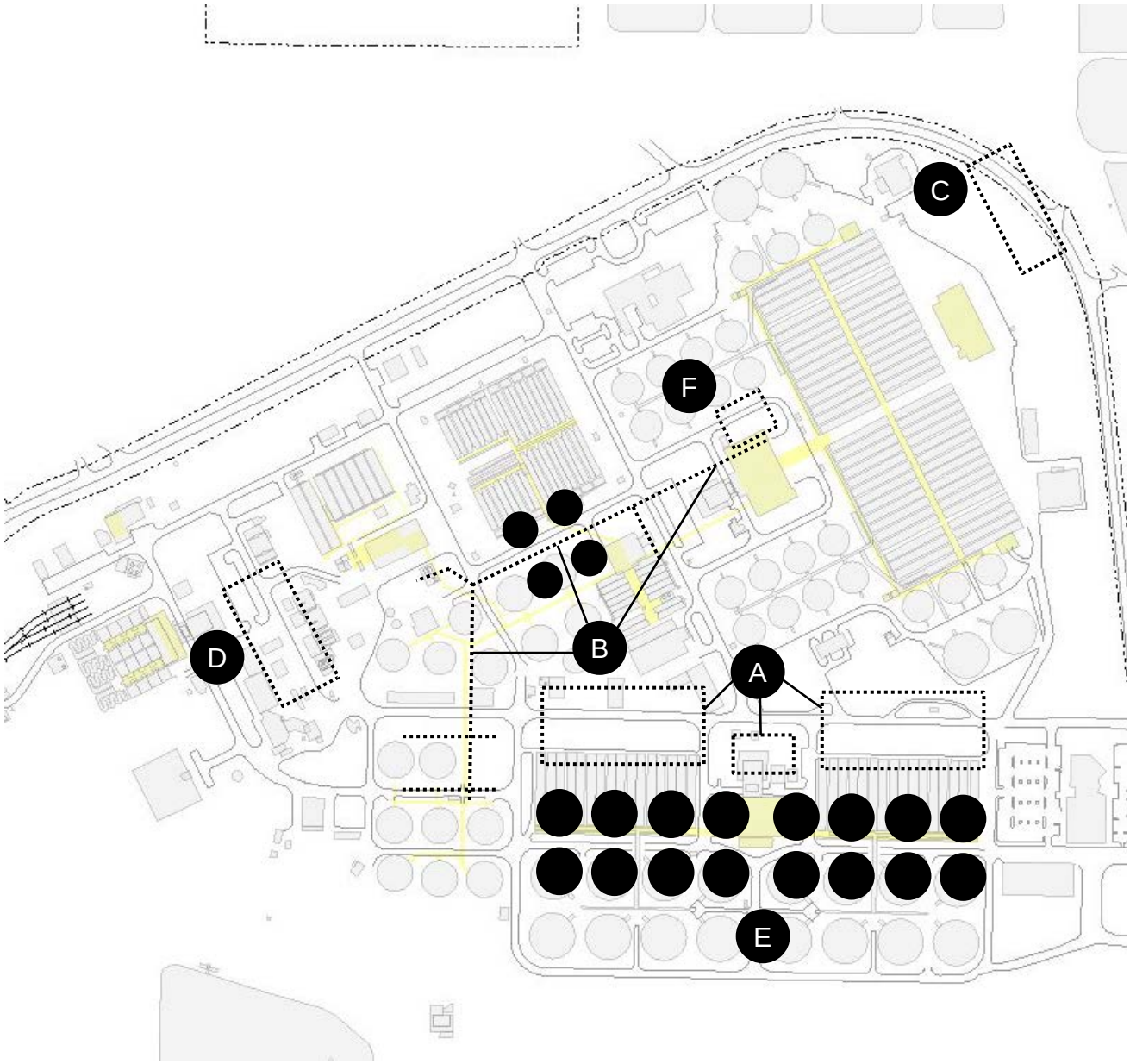
Water Pollution Control

2019-2023 Proposed Capital Improvement Program*

A) Aeration Tanks and Blower Rehabilitation
B) Digester and Thickener Facilities Upgrade
C) Energy Generation Imp.
D) Headworks Imp. and New Headworks
E) Nitrification Clarifier Rehabilitation
F) Plant Instrument Air System Upgrade



* Includes only the first set of projects to be in construction at the Plant. Please see the Source & Use for a full listing.

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Water Pollution Control Capital Program

2019-2023 Proposed Capital Improvement Program

Overview

INTRODUCTION

PLANT INFRASTRUCTURE	
ACRES OF LAND	2,684
AVERAGE DRY WEATHER INFLUENT CAPACITY (MILLIONS OF GALLONS PER DAY)	167
AVERAGE DRY WEATHER INFLUENT FLOW (MILLIONS OF GALLONS PER DAY)	101
DRY METRIC TONS OF BIOSOLIDS HAULED EACH YEAR	37,000
AVERAGE MEGAWATTS PRODUCED	8.2

The San José-Santa Clara Water Pollution Control Plant (Plant) is a regional wastewater treatment facility serving eight South Bay cities and four special districts including: San José, Santa Clara, Milpitas, Cupertino Sanitary District (Cupertino), West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation Districts 2-3 (unincorporated), and Burbank Sanitary District (unincorporated). The Plant is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José's Environmental Services Department (ESD). ESD is also responsible for planning, designing, and constructing capital improvements at the Plant, including water reuse facilities. On March 26, 2013, the City Council approved to change the name of the Plant to the San José-Santa Clara Regional Wastewater Facility (RWF) for use in public communications and outreach.

The 2019-2023 Proposed Capital Improvement Program (CIP) provides funding of $1.33 billion, of which $126.0 million is allocated in 2018-2019. The five-year CIP is developed by City staff, reviewed by the Treatment Plant Advisory Committee (TPAC), and approved by the San José City Council. The budgeted costs are allocated to each agency based on its contracted-for capacity in the Plant. Each agency is responsible for its allocated share of Plant costs, as well as the operation, maintenance, and capital costs of its own sewage collection system; debt service on bonds issued by the agency for sewer purposes; and any other sewer service related costs. Each agency is also responsible for establishing and collecting its respective sewer service and use charges, connection fees, or other charges for sewer service.

This program is part of the Environmental and Utility Services City Service Area (CSA) and supports the following outcomes: *Reliable Utility Infrastructure* and *Healthy Streams, Rivers, Marsh, and Bay.*

PROGRAM PRIORITIES AND OBJECTIVES

The 2019-2023 Proposed CIP is consistent with the goals and policies outlined in the City's Envision San José 2040 General Plan. These include maintaining adequate operational capacity for wastewater treatment to accommodate the City's economic and population growth; adopting and implementing new technologies for wastewater to achieve greater safety, energy efficiency, and environmental benefit; and maintaining and operating the Plant in compliance with all applicable local, state, and federal regulatory requirements.

Water Pollution Control Capital Program

2019-2023 Proposed Capital Improvement Program

Overview

PROGRAM PRIORITIES AND OBJECTIVES

The development of this Proposed CIP is guided by the Plant Master Plan (PMP), a 30-year planning-level document focused on long-term rehabilitation and modernization of the Plant. On April 19, 2011, the City Council approved a preferred alternative for the Draft PMP and directed staff to proceed with a program-level environmental review of the preferred alternative. In November 2013, the City Council approved the PMP and certified the final Environmental Impact Report. In December 2013, Santa Clara's City Council took similar actions.

San José-Santa Clara Regional Wastewater Facility

The PMP recommends more than 114 capital improvement projects to be implemented over a 30-year planning period at an estimated investment level of approximately $2 billion. The PMP assumed an implementation schedule of 2010 through 2040.

On September 24, 2013, the City Council approved a multi-year master services agreement with MWH Americas, Inc. for program management consultant services to assist with managing and implementing the RWF CIP[1]. By February 2014, the consultant program management team, along with City staff, completed a project validation process that included a review and prioritization of PMP projects, along with gap projects identified through discussions with Operations and Maintenance staff. The projects included with this Proposed CIP are based on the outcome of that project validation and the completion of various programmatic studies. On October 17, 2017, the City Council approved an amendment to extend the consultant program management services through 2023 to align with the implementation of the ten-year capital program.

Program priorities for the near term include: obtaining long-term financing (for San José only); continuing to build operating reserves needed for bond issuance; continuing to prioritize projects based on criticality and staffing resources; and actively managing project risks and variables to inform timing and amount of major encumbrances.

[1] Effective January 1, 2017, MWH Americas, Inc. was acquired and merged with Stantec Inc.

PROGRAM PRIORITIES AND OBJECTIVES

Program Funding: Since early 2014, staff has been working with representatives from the City of Santa Clara and the tributary agencies to develop a ten-year funding strategy for the CIP. On May 14, 2015, TPAC recommended approval of, and on June 2, 2015, the City Council approved the Ten-Year Funding Strategy. An update on the Ten-Year Funding Strategy was recommended for approval by TPAC on December 10, 2015 and approved by the City Council on January 12, 2016. The staff reports are available online.[2]

In August 2017, staff provided an update on Clean Water State Revolving Fund (SRF) funding to the City Council, which included news that the State Water Resources Control Board (SWRCB) would not be funding the Digester and Cogeneration projects. Staff will continue to monitor the issue and evaluate further SRF opportunities as appropriate. However, based on the City's recent experience with this program, unless significant changes are made to the funding level, program priorities, program resources, and loan agreement terms, SRF loans do not appear to be a potential source of funding for the RWF CIP.

In October 2017, the City Council approved the establishment of a $300 million interim financing facility to finance external third-party capital costs. As the CIP progresses, the City will periodically pay off the interim financing facility with long-term bonds. This strategy provides funding for the CIP at the lowest possible cost with the least amount of risk.

Program/Project Delivery and Implementation: Successful delivery of this large, multi-disciplinary CIP requires an integrated team of City staff, outside consultants, and contractors. The program continues to operate under an integrated project delivery model using a combination of City staff and consultants. The program is being delivered using a mix of City staff from Environmental Services Department, Public Works Department, Planning, Building and Code Enforcement Department, Finance Department, and the City Attorney's Office, as well as program management consultant staff and various other consultant firms.

With more than two dozen large projects moving through the feasibility/development and design development phases, the program will need to continue to draw from the professional consultant and/or contractor community for program management, project management, subject-matter technical expertise, engineering design, and construction management services. Over the last year, staff has put several tools or initiatives into place in anticipation of this large construction ramp up, including an owner-controlled insurance program (OCIP), a design and construction management document system (EADOC), and a Building Official Program.

Developing a construction management resourcing model and plan is a top priority for the 2019-2023 Proposed CIP, with a ramp up in construction expected in 2019-2020 and 2020-2021 that would result in additional construction management support being needed in Public Works for the program.

[2] June 2, 2015 Memo: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=732&meta_id=516433
January 12, 2016 Memo: http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2118&meta_id=550326

PROGRAM PRIORITIES AND OBJECTIVES

Another significant priority for the program this CIP is to perform a minor update to the Plant Master Plan to incorporate changes in operational, regulatory, and technological conditions, since the original PMP was completed in 2011. In addition, the update will incorporate changes to the PMP capital project list that were a result of the 2014 project validation process, as well as include gap projects identified since that effort.

Program/Project Delivery Variables: Building on the program start-up activities, which concluded in June 2014, the program team will continue to develop and refine project schedules and budgets and implement regular reporting and centralized document management systems for consistent and efficient program and project delivery. The program team continues to work on developing standardized project delivery tools, design standards and specifications, control system and integration strategies, startup, commissioning, and training.

On the project delivery front, it is important to recognize that many projects in the Proposed CIP are in the feasibility/development phase. Staff will continue to develop and refine project scope, schedules, and budgets as the projects progress through scoping, preliminary engineering, detailed design, and bid award. To the extent possible, staff will continue to monitor and implement mitigation measures to minimize impacts to project delivery schedule and cost caused by various factors such as changes in project delivery staffing resources, long lead time items, external permit reviews and approvals, and construction bidding climate.

A number of program tools and resources will be used to counter potential impacts to the overall program delivery; these include employing a program interface manager and construction coordinator to address project interface issues during design and construction, obtaining local professional cost estimating services, scheduling regular meetings with regulatory and permitting entities, and continuing to implement the CIP Program Delivery Model (PDM) stage gate approvals.

In addition, staff will continue to apply the lessons learned from large construction projects, like the Digester and Thickener Facilities Upgrade project, to future projects. This includes proactively performing subsurface utility investigations, condition assessments, process shutdown verifications, and hazardous materials investigations.

SOURCES OF FUNDING

Revenues for the 2019-2023 Proposed CIP are derived from several sources: transfers from the City of San José Sewer Service and Use Charge (SSUC) Fund and Sewage Treatment Plant Connection Fee Fund; contributions from the City of Santa Clara and other tributary agencies; interest earnings; Calpine Metcalf Energy Center Facilities repayments; a federal grant from the U.S. Bureau of Reclamation; and debt-financing proceeds.

The SSUC Fund derives its revenues from fees imposed on San José users of the residential, commercial, and industrial sanitary sewer system. Transfers from this fund to the Plant CIP over the five years total $214.9 million, which represents a $5.1million (2.3%) decrease as compared to the 2018-2022 Adopted CIP.

Contributions from the City of Santa Clara and other agencies are determined according to agreements with the participating agencies, based on financing plans, anticipated Plant expenditures, and the amount and characteristics of flows from each agency's connections to the Plant. These contributions reimburse the City for actual project expenditures. In this Proposed CIP, contributions from the City of Santa Clara and other agencies total $316.6 million, which represents a $2.2 million (0.7%) decrease compared to the 2018-2022 Adopted CIP.

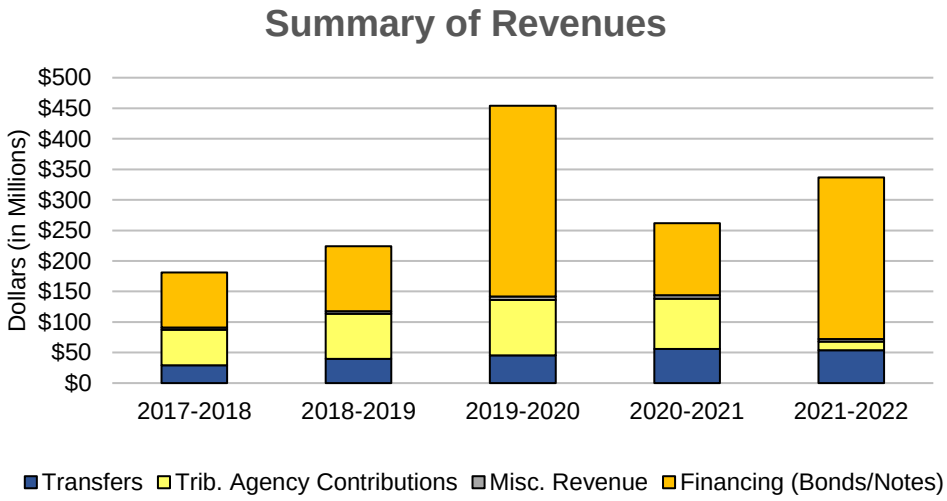
To accommodate project costs for the San José – Santa Clara Regional Wastewater Facility (RWF), wastewater revenue notes (notes) ($369.0 million) and bond proceeds ($384.3) million are assumed to cover costs of the RWF improvements in the Proposed CIP for the 2018-2019 through 2022-2023 period. The establishment of an interim financing program, in the form of wastewater revenue notes, ($300 million) was approved and issued in 2017-2018. The notes will provide periodic short-term, flexible funding to meet the cash flow needs of the RWF improvement project. Generally, the notes are repaid within a 3-year period and offer a lower interest costs than fixed rate bonds. During this CIP period, bonds will also be issued in the amount of $384.3 million to both repay the notes issued in 2017-2018 and provide $84.3 million in additional funding for the RWF project. Associated debt service for the wastewater revenue notes and debt service for the bonds is estimated to be $1.8 million in 2018-2019, $3.2 million in 2019-2020, $5.8 million in 2020-2021, $12.4 million in 2021-2022, and $27.2 million in 2022-2023. The estimated size of the debt financings and the related debt service are scheduled to cover external third-party capital costs programmed in the 2019-2023 Proposed CIP while avoiding large rate increases that would be required to fund the PMP in a "pay-as-you-go" scenario. City of San José staff costs will be cash-funded and not included in either the wastewater revenue notes program or long-term debt financing. Additional debt financing, in the form of notes and bonds will likely be needed to fund project costs beyond the Proposed CIP period.

Water Pollution Control Capital Program

2019-2023 Proposed Capital Improvement Program

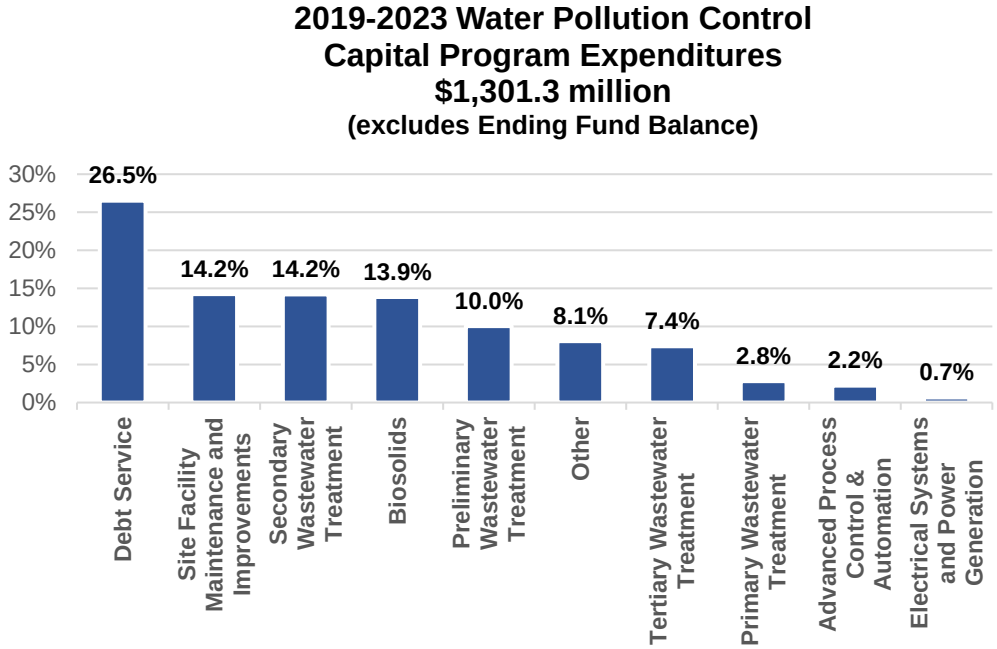
Overview

SOURCES OF FUNDING



PROGRAM HIGHLIGHTS

The Water Pollution Control Capital Program's expenditures are organized to show the use of funds in several categories. The following highlights the major projects in the program. For further information on the program's individual projects, please refer to the Detail Pages.



PROGRAM HIGHLIGHTS

New Headworks

The headworks facilities at the Plant provide the first step of treatment, also known as preliminary treatment, by removing large inorganic material, such as sticks, stones, grit, and sand, from the influent wastewater stream before it impacts downstream treatment units. This initial treatment protects and reduces wear on the downstream process equipment, minimizes plugging and clogging of pipes, and enhances overall process performance.

The Plant has two headworks facilities. The original headworks facility, known as Headworks 1, was built in the mid-1950s and expanded in the 1960s, and serves as the Plant's duty headworks. It includes mechanical bar screens, aerated grit tanks, detritors, screenings and grit handling facilities, and a pump station.

Headworks 1 Bar Screens

A second headworks facility, known as Headworks 2, was commissioned in 2008 to operate in parallel with Headworks 1 and handle peak wet weather flows. Headworks 2 includes mechanical bar screens, vortex grit removal units, screenings and grit handling facilities, and a pump station.

Due to extensive rehabilitation work required to maintain Headworks 1, the PMP recommended decommissioning it and constructing a new headworks facility to meet current and future flows. At an estimated total cost of $127.3 million, the New Headworks project will replace the aging Headworks 1. This project includes new mechanical bar screens, grit removal equipment, screenings and grit handling facilities, pump station, odor control, and miscellaneous piping enhancements. The project also rehabilitates and expands the existing emergency overflow basin, and consolidates influent piping.

Proposed Site for New Headworks

This project will be designed in conjunction with the Headworks Improvements project, which will improve the reliability of Headworks 2 and relocate pipelines to reroute flows from Headworks 1 to Headworks 2 and the new headworks in preparation for the decommissioning of Headworks 1.

Water Pollution Control Capital Program

2019-2023 Proposed Capital Improvement Program

Overview

PROGRAM HIGHLIGHTS

The 2019-2023 Proposed CIP allocates $115.9 million for design, construction, contingency, and project management costs. Award of the design-build contract is expected in summer 2018, though costs for contract actions are anticipated across multiple fiscal years, and construction completion is anticipated in 2022-2023.

Digester and Thickener Facilities Upgrade

The Plant currently processes biosolids material through a combination of anaerobic digestion, lagoon storage, and air drying. The Plant has 16 anaerobic digesters of varying ages constructed between 1956 and 1983. Of the 16 digesters installed, six are currently out of service due to structural damage or other mechanical failures. The remaining ten digesters are operational but are near the end of their useful life. The digesters receive primary sludge (i.e. solids) from the primary clarifiers and thickened waste activated sludge from the Dissolved Air Flotation Tanks (DAFTs). Sludge is retained in the digester tanks for up to 30 days to allow the digestion process to reduce volatile solids and destroy pathogens.

The digested sludge is then pumped and stored in open air storage lagoons (a three-year process) and drying beds (a six-month process) for further stabilization and conversion to high-quality Class A biosolids. The dried biosolids are eventually trucked to the nearby Newby Island landfill for use as alternate daily cover.

Existing digesters

The original anaerobic digestion process was designed to operate under mesophilic conditions to produce Class B biosolids in accordance with U.S. Environmental Protection Agency (USEPA) Title 40 Part 503. During a Biosolids Study Session, held in April 2014, TPAC requested that staff explore the possibility of producing Class A biosolids instead of Class B biosolids, including impacts on operation and maintenance costs. The study was completed and determined that Class A biosolids could be achieved through modification of the current mesophilic digestion process to a two-stage thermophilic phased anaerobic digestion (TPAD) process. In comparing the various alternatives, it was determined that TPAD was a cost-effective way to provide a superior overall sludge digestion process as well as position the Plant to economically produce Class A biosolids at a future date. In November 2014, TPAC accepted staff's recommendation to proceed with TPAD configuration. In December 2014, Council approved and directed staff to proceed with the TPAD configuration.

PROGRAM HIGHLIGHTS

Digester and Thickener Facilities Upgrade (Cont'd.)

At an estimated total cost of $169.7 million, the Digester and Thickener Facilities Upgrade project will completely rehabilitate four digesters. This project includes: new covers and mixing systems; modifications to operate as a two-phase TPAD system; structural repairs and seismic retrofits; heating system, gas collection conveyance system, and tunnel system upgrades; electrical, instrumentation, and control systems upgrades; and the retrofit of six DAFT units to allow for the co-thickening of primary and secondary sludge, including new odor control treatment. The project will also construct a new primary sludge screening facility, heat exchangers, waste biogas flare, and polymer dosing facility.

3-D rendering of rehabilitated digesters

Construction began in July 2016 and is approximately 35% complete. The Project has experienced significant challenges and delays since the beginning of construction, including unforeseen conditions, underground utility conflicts, unexpected regulatory requirements, deteriorated pipe conditions, seismic design issues, and hazardous materials mitigation. Many of these issues are typical of large, complex construction projects. Evaluation of the costs and delays associated with the seismic design issues and hazardous materials mitigation is underway and may require an appropriation increase to resolve these issues once the details are developed. While the project is currently behind schedule, it is anticipated to be completed in 2021-2022.

The funding of $8.4 million programmed in the 2019-2023 Proposed CIP covers construction management, construction contingency, and post-construction costs for the project.

MAJOR CHANGES FROM THE 2018-2022 ADOPTED CIP

The overall size of the Water Pollution Control CIP has decreased by $180.2 million from $1.5 billion in the 2018-2022 Adopted CIP to $1.3 billion in the 2019-2023 Proposed CIP. The following table outlines the most significant changes to project budgets, including new/augmented allocations and reduced/eliminated allocations.

Project Name	Incr/(Decr)
Debt Service Repayment for Plant Capital Improvement Projects	($153.5 million)
Yard Piping and Road Improvements	($14.1 million)

OPERATING BUDGET IMPACT

Several projects in this Proposed CIP are expected to introduce new operating costs to the Operating Budget. These include: New Headworks, Digested Sludge Dewatering Facility, Digester and Thickener Facilities Upgrade, and Energy Generation Improvements. The operation and maintenance impacts are due to chemical, labor, maintenance consumables (e.g. parts, oil), electrical, and hauling & tipping costs.

The estimated net operating impact of the Digester and Thickener Facilities Upgrade project may be adjusted in the future after additional analysis is performed to determine required staffing levels to operate and maintain the facilities. The estimate also assumes that all power and heating needs will be provided by the Cogeneration Facility.

A new Digested Sludge Dewatering Facility is anticipated to be in operation by late 2022, which will include new mechanical dewatering units, feed tank, sludge storage, conveyance, and chemical dosing facilities to be housed in a new building. This facility will allow for the eventual retirement of the current lagoons and sludge drying beds expected to be completed in 2027.

A new Cogeneration Facility (part of the Energy Generation Improvements project) is expected to come online in late 2019 that will introduce a new generator building, new engine generators, a gas treatment system, boilers, chillers, and other ancillary equipment. In addition, a new chilled water system pump station may be incorporated as part of the project. A more detailed analysis of current and future operating and maintenance costs will be available in spring 2018 after completion of preliminary and detailed design by the project's design-builder. Additionally, depending on the timing of when new facilities come online and existing facilities are decommissioned, there may be a temporary increase in operating costs due to the dual operations.

The table below summarizes the operating and maintenance impact to the Sewer Service and Use Charge Fund for several projects.

Net Operating Budget Impact Summary

	2019-2020	2020-2021	2021-2022	2022-2023
Digester and Thickener Facilities Upgrade		$1,300,000	$1,622,000	$1,687,000
Digested Sludge Dewatering Facility				8,788,000
New Headworks				21,000
Energy Generation Improvements	$84,000	$87,000	$89,000	$92,000
	$84,000	$1,387,000	$1,711,000	$10,588,000

Note: The estimated operating costs have been provided by the Environmental Services Department and have not yet been fully analyzed by the City Manager's Budget Office. That analysis may result in different costs when the actual budget for the year in question is developed.

Water Pollution Capital Program
2019-2023 Proposed Capital Improvement Program
Attachment A - Operating Budget Impact

	2019-2020	2020-2021	2021-2022	2022-2023
Water Pollution Capital Program				
New Headworks				$21,000
Digested Sludge Dewatering Facility				$8,788,000
Digester and Thickener Facilities Upgrade		$1,300,000	$1,622,000	$1,687,000
Energy Generation Improvements	$84,000	$87,000	$89,000	$92,000
Total Water Pollution Capital Program	**$84,000**	**$1,387,000**	**$1,711,000**	**$10,588,000**

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2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Source and Use of Funds Statements

Source of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
San José-Santa Clara Treatment Plant Capital Fund							
Beginning Balance	60,388,200	12,736,816	11,073,816	5,806,816	5,464,816	82,168,816	12,736,816
Reserve for Encumbrance	155,970,229						
Transfers							
Transfer for 2009 Debt Service from the Sewer Service and Use Charge Fund (541)	5,716,000	5,369,000	5,372,000	5,371,000			16,112,000
Transfer for Plant CIP Debt Service from Sewer Service and Use Charge Fund (541)	721,000	1,815,000	3,192,000	5,834,000	12,373,000	27,238,000	50,452,000
Transfer for Capital Projects from Sewer Service and Use Charge Fund (541)	17,000,000	27,000,000	27,000,000	30,000,000	30,000,000	30,000,000	144,000,000
Transfer for Equipment Replacement from Sewer Service and Use Charge Fund (541)			1,083,000	1,083,000	1,083,000	1,083,000	4,332,000
Transfer from the Sewage Treatment Plant Connection Fee Fund (539)	3,090,000	1,249,000					1,249,000
TOTAL Transfers	**26,527,000**	**35,433,000**	**36,647,000**	**42,288,000**	**43,456,000**	**58,321,000**	**216,145,000**
Revenue from Use of Money and Property							
Interest Income	3,241,000	4,431,000	7,166,000	8,545,000	7,099,000	5,223,000	32,464,000
TOTAL Revenue from Use of Money and Property	**3,241,000**	**4,431,000**	**7,166,000**	**8,545,000**	**7,099,000**	**5,223,000**	**32,464,000**
Revenue from Local Agencies							
2009 Bond Debt Repayment	165,000	155,000	155,000	155,000			465,000
State Revolving Fund - Loan Repayment	1,374,000	555,000					555,000
WPCP Projects and Equipment Replacement	49,157,000	33,009,000	109,158,000	102,917,000	27,290,000	43,234,000	315,608,000

Water Pollution Control

2019-2023 Proposed Capital Improvement Program

Source of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
TOTAL Revenue from Local Agencies	**50,696,000**	**33,719,000**	**109,313,000**	**103,072,000**	**27,290,000**	**43,234,000**	**316,628,000**
Revenue from the Federal Government							
U.S. Bureau of Reclamation Grant	250,000	250,000	250,000	250,000	250,000	250,000	1,250,000
TOTAL Revenue from the Federal Government	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**250,000**	**1,250,000**
Other Revenue							
Calpine Metcalf Energy Center Facilities Repayment	389,000	389,000	389,000	389,000	389,000	389,000	1,945,000
TOTAL Other Revenue	**389,000**	**389,000**	**389,000**	**389,000**	**389,000**	**389,000**	**1,945,000**
Financing Proceeds							
Wastewater Revenue Notes	90,000,000	39,000,000	160,000,000	170,000,000			369,000,000
Bond Proceeds					384,310,000		384,310,000
TOTAL Financing Proceeds	**90,000,000**	**39,000,000**	**160,000,000**	**170,000,000**	**384,310,000**		**753,310,000**
Total San José-Santa Clara Treatment Plant Capital Fund	**387,461,429**	**125,958,816**	**324,838,816**	**330,350,816**	**468,258,816**	**189,585,816**	**1,334,478,816**
TOTAL SOURCES	**387,461,429**	**125,958,816**	**324,838,816**	**330,350,816**	**468,258,816**	**189,585,816**	**1,334,478,816**

2019-2023 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
Water Pollution Control							
Headworks Improvements	4,455,873	270,000	13,501,000	366,000	312,000	104,000	14,553,000
New Headworks	8,215,825	1,309,000	110,036,000	2,024,000	1,902,000	633,000	115,904,000
Preliminary Wastewater Treatment	**12,671,698**	**1,579,000**	**123,537,000**	**2,390,000**	**2,214,000**	**737,000**	**130,457,000**
East Primary Rehabilitation, Seismic Retrofit, and Odor Control	39,882	1,000,000	11,842,000	22,176,000	686,000	684,000	36,388,000
Iron Salt Feed Station	3,538,623						
Primary Wastewater Treatment	**3,578,504**	**1,000,000**	**11,842,000**	**22,176,000**	**686,000**	**684,000**	**36,388,000**
Aeration Basin Future Modifications			846,000	4,274,000	770,000	440,000	6,330,000
Aeration Tanks and Blower Rehabilitation	38,976,808	40,412,000	2,069,000	61,463,000	1,228,000	955,000	106,127,000
Nitrification Clarifier Rehabilitation	4,241,907	841,000	41,530,000	1,290,000	1,275,000	1,240,000	46,176,000
Secondary Clarifier Rehabilitation		565,000	4,003,000	21,209,000	159,000	164,000	26,100,000
Secondary Wastewater Treatment	**43,218,715**	**41,818,000**	**48,448,000**	**88,236,000**	**3,432,000**	**2,799,000**	**184,733,000**
Filter Rehabilitation	4,594,534	1,026,000	33,324,000	1,166,000	1,090,000	454,000	37,060,000
Final Effluent Pump Station & Stormwater Channel Improvements			902,000	5,999,000	1,104,000	37,234,000	45,239,000
New Disinfection Facilities				952,000	6,179,000	722,000	7,853,000
Outfall Bridge and Levee Improvements	2,301,622	299,000	4,929,000	619,000			5,847,000
Tertiary Wastewater Treatment	**6,896,156**	**1,325,000**	**39,155,000**	**8,736,000**	**8,373,000**	**38,410,000**	**95,999,000**
Additional Digester Upgrades			1,191,000	8,031,000	1,298,000	51,576,000	62,096,000
Digested Sludge Dewatering Facility	4,376,291	10,192,000	1,708,000	95,819,000	1,563,000	212,000	109,494,000
Digester and Thickener Facilities Upgrade	119,798,072	5,108,000	1,910,000	1,113,000	220,000		8,351,000
FOG Receiving						313,000	313,000
Lagoons and Drying Beds Retirement	3,128						
Biosolids	**124,177,491**	**15,300,000**	**4,809,000**	**104,963,000**	**3,081,000**	**52,101,000**	**180,254,000**

2019-2023 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
Combined Heat and Power Equipment Repair and Rehabilitation	287,243						
Energy Generation Improvements	99,436,917	2,144,000	1,644,000				3,788,000
Plant Electrical Reliability	2,517,122	4,286,000	408,000	47,000	65,000		4,806,000
Electrical Systems and Power Generation	**102,241,282**	**6,430,000**	**2,052,000**	**47,000**	**65,000**		**8,594,000**
Advanced Facility Control and Meter Replacement	14,436,292	1,361,000	21,067,000	1,141,000	773,000	313,000	24,655,000
Treatment Plant Distributed Control System	1,515,719	1,025,000	2,000,000	1,000,000	500,000		4,525,000
Advanced Process Control & Automation	**15,952,010**	**2,386,000**	**23,067,000**	**2,141,000**	**1,273,000**	**313,000**	**29,180,000**
Construction-Enabling Improvements	1,485,138						
Equipment Replacement	1,661,194	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	8,315,000
Facility Wide Water Systems Improvements	2,538,914	366,000	447,000	11,217,000	608,000	621,000	13,259,000
Flood Protection	2,223,000	273,000	329,000	6,427,000	192,000		7,221,000
Plant Infrastructure Improvements	3,836,314	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Plant Instrument Air System Upgrade	3,583,623						
Storm Drain System Improvements	1,600,000		354,000	11,079,000	379,000	322,000	12,134,000
Support Building Improvements	6,844,175	1,701,000	11,391,000	1,614,000	3,795,000	2,139,000	20,640,000
Tunnel Rehabilitation	1,174,902	1,219,000	467,000	530,000	22,439,000	376,000	25,031,000
Urgent and Unscheduled Treatment Plant Rehabilitation	6,500,000	500,000	500,000	500,000	500,000	500,000	2,500,000
Various Infrastructure Decommissioning		469,000	2,590,000	18,470,000	691,000		22,220,000
Yard Piping and Road Improvements	3,654,253	2,327,000	14,822,000	17,873,000	17,595,000	16,345,000	68,962,000
Site Facility Maintenance and Improvements	**35,101,513**	**9,518,000**	**33,563,000**	**70,373,000**	**48,862,000**	**22,966,000**	**185,282,000**
SBWR Extension	3,691,000						
South Bay Water Recycling	**3,691,000**						
Water Pollution Control - Construction	**347,528,371**	**79,356,000**	**286,473,000**	**299,062,000**	**67,986,000**	**118,010,000**	**850,887,000**
Debt Service Repayment for Plant Capital Improvement Projects	721,000	1,815,000	3,192,000	5,834,000	307,209,000	27,238,000	345,288,000

Water Pollution Control

2019-2023 Proposed Capital Improvement Program

Use of Funds (Combined)

	Estimated 2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	5-Year Total
Owner Controlled Insurance Program	3,100,000	4,944,000	3,705,000	3,705,000	1,399,000	1,264,000	15,017,000
Master Plan Updates		3,000,000					3,000,000
Preliminary Engineering - Water Pollution Control	1,036,893	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Program Management - Water Pollution Control	10,093,578	8,258,000	7,307,000	7,505,000	7,507,000	7,569,000	38,146,000
Record Drawings	321,000	3,354,000	9,738,000	164,000	163,000	163,000	13,582,000
SBWR Master Plan	5,771						
General Non-Construction - Water Pollution Control	**15,278,242**	**22,371,000**	**24,942,000**	**18,208,000**	**317,278,000**	**37,234,000**	**420,033,000**
Water Pollution Control - Non Construction	**15,278,242**	**22,371,000**	**24,942,000**	**18,208,000**	**317,278,000**	**37,234,000**	**420,033,000**
Public Art Allocation	501,000						
Public Art Projects	**501,000**						
Capital Program and Public Works Department Support Service Costs	877,000	629,000	1,887,000	1,887,000	628,000	943,000	5,974,000
State Revolving Fund Loan Repayment	4,464,000	1,804,000					1,804,000
Payment for Clean Water Financing Authority Trustee	5,000	5,000	5,000	5,000			15,000
Allocations	**5,346,000**	**2,438,000**	**1,892,000**	**1,892,000**	**628,000**	**943,000**	**7,793,000**
City Hall Debt Service Fund	190,000	196,000	198,000	198,000	198,000	198,000	988,000
Clean Water Financing Authority Debt Service Payment Fund	5,881,000	5,524,000	5,527,000	5,526,000			16,577,000
Transfers to Special Funds	**6,071,000**	**5,720,000**	**5,725,000**	**5,724,000**	**198,000**	**198,000**	**17,565,000**
Transfers Expense	**6,071,000**	**5,720,000**	**5,725,000**	**5,724,000**	**198,000**	**198,000**	**17,565,000**
Equipment Replacement Reserve		5,000,000					5,000,000
Expense Reserves - Non Construction		**5,000,000**					**5,000,000**
Total Expenditures	**374,724,613**	**114,885,000**	**319,032,000**	**324,886,000**	**386,090,000**	**156,385,000**	**1,301,278,000**
Ending Fund Balance	12,736,816	11,073,816	5,806,816	5,464,816	82,168,816	33,200,816	33,200,816
TOTAL	**387,461,429**	**125,958,816**	**324,838,816**	**330,350,816**	**468,258,816**	**189,585,816**	**1,334,478,816**

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2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Detail of Projects

Advanced Facility Control and Meter Replacement

CSA	Environmental and Utility Services
CSA Outcome	Reliable Utility Infrastructure
Department	Environmental Services
Location	Water Pollution Control Plant
Council Districts	4
Appropriation	A7224

Initial Start Date	3rd Qtr. 2010
Initial End Date	2nd Qtr. 2014
Revised Start Date	
Revised End Date	1st Qtr. 2023
Initial Project Budget	$11,000,000
FY Initiated	2010-2011

Description This project will develop a Plant-wide automation master plan, replace existing flow meters and actuators, and upgrade sensors, controls, and monitoring equipment throughout the Plant.

Justification The Plant currently has hundreds of meters measuring liquid, sludge, and gas streams. Many existing sensors, actuators, and flow meters are inaccurate or unreliable. Due to their age, it is more cost effective to replace them with modern equipment to ensure performance reliability and assure that needed components are available for ongoing maintenance. This project will allow the Plant to move towards improved data capture, resulting in greater operational reliability and flexibility.

Notes This project corresponds to Plant Master Plan No. 90 and Validation Project PA-01.

Major Cost Changes 2012-2016 CIP - decrease of $5.9 million due to decreased scope. 2013-2017 CIP - decrease of $2.1 million due to the establishment of the Treatment Plant Distributed Control System project as part of the approval of the 2011-2012 Mid-Year Budget Review. 2014-2018 CIP - increase of $500,000 due to updated cost estimate. 2015-2019 CIP - increase of $30.4 million due to revised scope, addition of meter replacement scope, and project validation cost estimate. 2016-2020 CIP - decrease of $823,000 due to reduction of project scope. 2017-2021 CIP - decrease of $5.2 million due to decreased project scope. 2018-2022 CIP - decrease of $3.8 million due to reduction of scope. 2019-2023 CIP - increase of $17.9 million due to an increase in scope and updated construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,831	455	245					245		2,531
Design	487	1,224	130					130		1,841
Bid & Award	7	151		273				273		431
Construction	200	12,574	913	20,668	1,050	715	223	23,569		36,343
Post Construction	2	32	73	126	91	58	90	438	48	520
Total	**2,528**	**14,436**	**1,361**	**21,067**	**1,141**	**773**	**313**	**24,655**	**48**	**41,667**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	2,528	14,436	1,361	21,067	1,141	773	313	24,655	48	41,667
Total	**2,528**	**14,436**	**1,361**	**21,067**	**1,141**	**773**	**313**	**24,655**	**48**	**41,667**
Annual Operating Budget Impact (000s)										
Total										

Aeration Tanks and Blower Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	3rd Qtr. 2025
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2026
Council Districts	4	**Initial Project Budget**	$114,880,000
Appropriation	A7677	**FY Initiated**	2014-2015

Description This project rehabilitates the secondary and nitrification aeration tanks including structural, mechanical, electrical, and instrumentation upgrades. It also replaces the remaining existing coarse bubble diffusers with fine bubble diffusers; installs partition walls and reconfigures air piping to optimize process treatment capabilities; repairs concrete and applies coatings; installs Variable Frequency Drives (VFDs), new motors, new Motor Control Centers (MCC), and new controls to the electric driven blowers in Building 40 and Tertiary Blower Building; decommissions the engine driven blowers in the Secondary Blower Building; and replaces the S11 switchgear.

Justification The secondary and nitrification aeration tanks were constructed in phases between the 1960s and 1980s. Due to their age and the aggressive and corrosive environment they operate in, extensive rehabilitation is required. Conversion to fine bubble diffusers will increase the oxygen transfer efficiency and decrease energy requirements. Installing VFDs will minimize the impact of starting current on the blowers when the Plant is run on emergency power. Lastly, the S11 switchgear and MCCs are outdated and need to be upgraded to be compatible with the new VFDs.

Notes This project corresponds to Plant Master Plan Project Nos. 20, 24, and 85 and Validation Project PLS-01.

Major Cost Changes
2016-2020 CIP - increase of $4.4 million due to escalation of construction costs.
2018-2022 CIP - increase of $4.5 million due to a revised scope and cost estimate.
2019-2023 CIP – increase of $26.5 million due to an updated construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,597	5,697	401					401		7,695
Design	1,448	3,064	6,740	1,231	226			8,197		12,709
Bid & Award		267	413		387			800		1,067
Construction		29,816	32,858	838	60,600	894	955	96,145	1,884	127,845
Post Construction		132			250	334		584	224	940
Total	**3,045**	**38,977**	**40,412**	**2,069**	**61,463**	**1,228**	**955**	**106,127**	**2,108**	**150,257**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	3,045	38,977	40,412	2,069	61,463	1,228	955	106,127	2,108	150,257
Total	**3,045**	**38,977**	**40,412**	**2,069**	**61,463**	**1,228**	**955**	**106,127**	**2,108**	**150,257**
Annual Operating Budget Impact (000s)										
Total										

Digested Sludge Dewatering Facility

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2013
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2014
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
Council Districts	4	**Initial Project Budget**	$1,000,000
Appropriation	A7452	**FY Initiated**	2012-2013

Description This project will construct a new mechanical dewatering facility and support systems to replace the existing sludge storage lagoons and open air solar drying beds. All new mechanical dewatering units, feed tank, storage, conveyance, and chemical dosing facilities will be housed in an odor-controlled building.

Justification This project responds to a recommendation in the adopted Plant Master Plan to consolidate the Plant's operational area by reducing the biosolids process footprint. It also provides greater flexibility in biosolids disposal options in anticipation of the potential Newby Island landfill closure in 2025, responds to stricter regulations for landfilling and alternative daily cover, and addresses odor, noise, and aesthetics concerns from the operations of the lagoons and sludge drying beds.

Notes This project corresponds to Plant Master Plan Project Nos. 44, 54, 57-60 and Validation Project PS-03.

Major Cost Changes
2014-2018 CIP - increase of $325.0 million due to accelerated project start and compressed implementation schedule.
2015-2019 CIP - decrease of $256.8 million due to creation of separate biosolids projects through project validation.
2016-2020 CIP - increase of $1.6 million due to escalation of construction costs.
2017-2021 CIP - increase of $28.1 milion due to increased scope and revised cost estimate.
2019-2023 CIP – increase of $18.3 million due to an updated construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	3,444	3,020	287					287		6,750
Design	10		9,563	1,708	198			11,469		11,479
Bid & Award		1,357	342					342		1,699
Construction					95,621	1,563	72	97,256		97,256
Post Construction							140	140		140
Total	**3,454**	**4,376**	**10,192**	**1,708**	**95,819**	**1,563**	**212**	**109,494**		**117,324**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	3,454	4,376	10,192	1,708	95,819	1,563	212	109,494		117,324
Total	**3,454**	**4,376**	**10,192**	**1,708**	**95,819**	**1,563**	**212**	**109,494**		**117,324**

Annual Operating Budget Impact (000s)	
Operating	769
Maintenance	8,019
Total	**8,788**

Digester and Thickener Facilities Upgrade

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2006
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2008
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2021
Council Districts	4	**Initial Project Budget**	$1,000,000
Appropriation	A4127	**FY Initiated**	2006-2007

Description This project rehabilitates four digesters and modifies the system to operate as a two-phase Temperature Phased Anaerobic Digestion (TPAD) system. The project also rehabilitates and modifies six dissolved air flotation units for sludge co-thickening, pressure saturation tanks, pipes, pumps, and ancillary equipment. A new odor control system, primary sludge screening facility, heat exchangers, biogas flare, and polymer dosing facility will be constructed. A new rack mounted digester gas conveyance system will also be constructed above grade to replace existing piping in the digester tunnels.

Justification The Plant has 16 anaerobic digesters constructed between 1956 and 1983, of which six are permanently out of service. This project is needed to ensure safe and reliable operation of the digester facilities including the gas conveyance system. The upgrade to TPAD provides the facility with the ability to increase biogas production and produce Class A biosolids (if required by future regulations).

Notes This project corresponds to Plant Master Plan Project Nos. 45 - 53 and Validation Project PS-01. Prior to 2015-2019, this project was titled "Digester Rehabilitation".

Major Cost Changes 2008-2012 CIP through 2018-2022 CIP - increase of $147.2M due to increased scope, realignment of project, higher than projected construction costs, and inclusion of scope from other projects.
2019-2023 CIP - increase of $21.1 million due to unforeseen conditions during construction, including air board regulatory requirements related to digester gas venting, major utility relocations, and a 78" SES line.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	707	16								723
Design	13,769	2,204	2,000					2,000		17,973
Bid & Award	115									115
Construction	26,992	117,579	3,108	1,910	423			5,441		150,012
Post Construction					690	220		910		910
Total	**41,583**	**119,798**	**5,108**	**1,910**	**1,113**	**220**		**8,351**		**169,732**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	41,583	119,798	5,108	1,910	1,113	220		8,351		169,732
Total	**41,583**	**119,798**	**5,108**	**1,910**	**1,113**	**220**		**8,351**		**169,732**
Annual Operating Budget Impact (000s)										
Operating Maintenance					1,300	1,622	1,687			
Total					**1,300**	**1,622**	**1,687**			

East Primary Rehabilitation, Seismic Retrofit, and Odor Control

CSA	Environmental and Utility Services
CSA Outcome	Reliable Utility Infrastructure
Department	Environmental Services
Location	Water Pollution Control Plant
Council Districts	4
Appropriation	A7226

Initial Start Date	3rd Qtr. 2009
Initial End Date	4th Qtr. 2012
Revised Start Date	3rd Qtr. 2010
Revised End Date	4th Qtr. 2027
Initial Project Budget	$3,605,000
FY Initiated	2010-2011

Description This project rehabilitates the existing primary clarifiers, including the coating of concrete and replacement of clarifier mechanisms with corrosion resistant materials. It also includes structural retrofits to allow new covers to be installed over a portion or all of the primary treatment area to contain odors. A new odor extraction and treatment system will also be constructed.

Justification This project restores the mechanical and structural integrity of the aging clarifiers and provides odor control measures.

Notes This project corresponds to Plant Master Plan Project Nos. 9, 10, and 11 and Validation Project PLP-02.

Major Cost Changes 2012-2016 CIP - increase of $80.1 million; $16.6 million due to increase of scope to incorporate master planning recommendations for seismic upgrades and odor control measures; $63.5 million reflects the addition of the Beyond 5-Year expense not previously programmed.
2013-2017 CIP - decrease of $1.7 million due to revised cost estimate.
2015-2019 CIP - increase of $27.5 million due to revised project validation cost estimate.
2016-2020 CIP - increase of $3.6 million due to escalation of construction costs.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	56	40	1,000	1,321				2,321		2,417
Design	30			9,386	1,211			10,597		10,627
Bid & Award				138	70			208		208
Construction				997	20,895	686	684	23,262	75,293	98,555
Post Construction									1,167	1,167
Total	**86**	**40**	**1,000**	**11,842**	**22,176**	**686**	**684**	**36,388**	**76,460**	**112,974**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	86	40	1,000	11,842	22,176	686	684	36,388	76,460	112,974
Total	**86**	**40**	**1,000**	**11,842**	**22,176**	**686**	**684**	**36,388**	**76,460**	**112,974**
Annual Operating Budget Impact (000s)										
Total										

Energy Generation Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2013
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Pant	**Revised End Date**	2nd Qtr. 2020
Council Districts	4	**Initial Project Budget**	$1,300,000
Appropriation	A7454	**FY Initiated**	2012-2013

Description This project will install new, lower-emission engine-generators to replace the aged existing engine-generators and allow the aged engine-driven blowers to be retired. It includes a new generator building, gas cleaning and blending systems, piping, control system, and motor control centers. This project will also install emergency diesel generators and storage tanks to provide backup power in the event of an extended PG&E power outage.

Justification Energy generation capacity and operational reliability are significant issues at the Plant. The outdated engine-generators are increasingly difficult to maintain. Moreover, while the existing systems meet current air regulations, they will not meet the stricter regulations anticipated in the future. Replacing these facilities with new lower-emission engine-generators will reduce the risk of operational failure and permit violations while providing reliable energy generating facilities to power the Plant for decades.

Notes This project corresponds to Plant Master Plan Nos. 74, 75, and 76 and Validation Projects PE-01 and PE-02. Prior to 2014-2018, this project was titled "Combined Heat and Power Technology Evaluation".

Major Cost Changes 2014-2018 CIP - increase of $100.0 million due to acceleration of the implementation schedule. 2015-2019 CIP - increase of $24.5 million due to revised program validation cost estimate. 2016-2020 CIP - decrease of $10.4 million due to reduction of project scope and revised cost estimate. 2017-2021 CIP - increase of $4.9 million due to revised cost estimate. 2018-2022 increase of $7.5 million due to revised construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,219									2,219
Design	6,988	4,277	262					262		11,527
Bid & Award	1,132	136								1,268
Construction	16,399	94,790	1,882	1,602				3,484		114,673
Post Construction	20	234		42				42		296
Total	**26,757**	**99,437**	**2,144**	**1,644**				**3,788**		**129,982**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	26,757	99,437	2,144	1,644				3,788		129,982
Total	**26,757**	**99,437**	**2,144**	**1,644**				**3,788**		**129,982**
Annual Operating Budget Impact (000s)										
Operating Maintenance			82	84	87	89	92			
Total			**82**	**84**	**87**	**89**	**92**			

Facility Wide Water Systems Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	1st Qtr. 2022
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2024
Council Districts	4	**Initial Project Budget**	$14,130,000
Appropriation	A7679	**FY Initiated**	2014-2015

Description This project rehabilitates, replaces, and/or extends the Plant's four water systems including piping, valves, pumps, controls, and other ancillary equipment. The scope of work will be based on hydraulic modeling and study of existing and future water demands at the Plant. The project may be constructed in phases based on the outcome of the study and priority of needs.

Justification The Plant's four water systems include potable water, groundwater, process/fire protection water, and recycled water. These were constructed over time with various Plant expansions and are in need of rehabilitation and upgrade due to age, condition, worker safety, plant reliability, and code compliance requirements. In addition, changes to water uses and demands have not all been addressed over time. An updated hydraulic model and assessment of current and future water demands will allow for the proper sizing of these systems to improve current and future performance and reduce risk of damage to pumping equipment.

Notes This project corresponds to Plant Master Plan Project No. 105 and Validation Project PF-06. This project will have close-out costs only in 2023-2024.

Major Cost Changes 2016-2020 CIP - increase of $1.6 million due to escalation of construction costs.
2018-2022 CIP - increase of $2.1 million due to revised project delivery cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,001	1,029	17					17		2,047
Design	7	1,485	349	347				696		2,188
Bid & Award	6	25			124			124		155
Construction				100	10,993	608	621	12,322	475	12,797
Post Construction					100			100	124	224
Total	**1,014**	**2,539**	**366**	**447**	**11,217**	**608**	**621**	**13,259**	**599**	**17,411**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,014	2,539	366	447	11,217	608	621	13,259	599	17,411
Total	**1,014**	**2,539**	**366**	**447**	**11,217**	**608**	**621**	**13,259**	**599**	**17,411**
Annual Operating Budget Impact (000s)										
Total										

Filter Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2011
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2013
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2013
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
Council Districts	4	**Initial Project Budget**	$3,506,000
Appropriation	A7227	**FY Initiated**	2010-2011

Description This project will replace filter media and potentially underdrain systems for all filters. It will also include valve replacements, electrical control replacements, air scouring equipment and piping additions, and concrete repairs. The extent of rehabilitation will depend on the results of a detailed condition assessment, which will determine whether to fully refurbish the filter facility or keep it operational until a new filter complex is built. If an evaluation of different filtration technologies from what the Plant currently uses is triggered, pilot testing and verification of an alternative filtration technology will be included in the project.

Justification The existing filter complex was constructed in the 1970s and requires significant refurbishment. The filter media, consisting of anthracite and sand, needs to be replaced and some of the mechanical and electrical components need to be upgraded. These potentially interim improvements are needed to ensure continued regulatory compliance and operational reliability. In addition, pilot testing may be needed to determine the most suitable technology for the Plant's long-term tertiary treatment needs.

Notes This project corresponds to Plant Master Plan Project Nos. 31, 32, and 33 as well as Validation Project PLF-01 and PLF-02.

Major Cost Changes 2014-2018 CIP - decrease of $2.7 million due to the removal of scope that is dependent on the evaluation of the demonstration project. 2015-2019 CIP - increase of $26.9 million due to revised scope and project validation cost estimate. 2016-2020 CIP - increase of $6.5 million due to revised cost estimate and escalation of construction costs. 2017-2021 CIP - increase of $2.5 million due to increased project scope. 2019-2023 CIP - increase of $6.9 million due to a revised construction cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,535	1,340								2,874
Design	134	3,180	1,026					1,026		4,340
Bid & Award	2	75		249				249		326
Construction	227			32,975	1,166	1,090		35,231		35,458
Post Construction				100			454	554		554
Total	**1,897**	**4,595**	**1,026**	**33,324**	**1,166**	**1,090**	**454**	**37,060**		**43,552**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,897	4,595	1,026	33,324	1,166	1,090	454	37,060		43,552
Total	**1,897**	**4,595**	**1,026**	**33,324**	**1,166**	**1,090**	**454**	**37,060**		**43,552**
Annual Operating Budget Impact (000s)										
Total										

Flood Protection

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2021
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	1st Qtr. 2022
Council Districts	4	**Initial Project Budget**	$9,136,000
Appropriation	A402M	**FY Initiated**	2017-2018

Description This project provides 100-year flood protection for the Plant by constructing engineered earthen berms on the northern and eastern sides of the Plant.

Justification The Plant is a critical facility located within a Federal Emergency Management Agency (FEMA) defined flood zone and will experience significant flooding during a 100-year flood event. Until the South Bay Shoreline Project is completed by the US Army Corps of Engineers, the Plant remains at risk of flooding. This project will provide immediate protection from a 100-year flood event.

Notes

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			32					32		32
Design		2,223	241	260				501		2,724
Bid & Award				69	7			76		76
Construction					6,420	92		6,512		6,512
Post Construction						100		100		100
Total		**2,223**	**273**	**329**	**6,427**	**192**		**7,221**		**9,444**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		2,223	273	329	6,427	192		7,221		9,444
Total		**2,223**	**273**	**329**	**6,427**	**192**		**7,221**		**9,444**
Annual Operating Budget Impact (000s)										
Total										

Headworks Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2015
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
Council Districts	4	**Initial Project Budget**	$5,975,000
Appropriation	A7448	**FY Initiated**	2012-2013

Description This project will modify Headworks No. 2 (HW2) to accommodate all dry weather flow. Improvements include re-routing some inlet and recycle flow piping, new storm water pump stations, and other mechanical enhancements to improve reliability and operation performance.

Justification HW1 was built in the mid-1950s and early 1960s and is the Plant's duty headworks. HW2 was built in 2008 and designed to operate in parallel with HW1 to handle peak hour wet weather flow. This project will improve the functional reliability of HW2.

Notes This project corresponds to Plant Master Plan Project Nos. 1, 2, and 7 and Validation Project PLH-01.

Major Cost Changes
2015-2019 CIP - increase of $23.7 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
2016-2020 CIP - increase of $863,000 due to revised cost estimate.
2018-2022 CIP - decrease of $9.0 million due to reduction of scope to eliminate a condition assessment of HW1.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	1,211	670								1,881
Design	297	967	265	541				806		2,070
Bid & Award	214	574								788
Construction	29	2,181	5	12,960	366	312	72	13,715		15,925
Post Construction		64					32	32		96
Total	**1,751**	**4,456**	**270**	**13,501**	**366**	**312**	**104**	**14,553**		**20,760**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,751	4,456	270	13,501	366	312	104	14,553		20,760
Total	**1,751**	**4,456**	**270**	**13,501**	**366**	**312**	**104**	**14,553**		**20,760**
Annual Operating Budget Impact (000s)										
Total										

New Headworks

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2013
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2022
Council Districts	4	**Initial Project Budget**	$79,400,000
Appropriation	A7449	**FY Initiated**	2012-2013

Description This project will construct a new headworks to serve as the Plant's duty headworks. It also involves potentially increasing the equalization basin volume and installing lining and spraydown systems to facilitate cleaning. The project will also be tasked with odor control over select areas, such as junction boxes and grit collection. This project will need to be coordinated with the modifications made to the Headworks 2 hydraulics and the eventual decommissioning of Headworks 1.

Justification Headworks No. 1 was built in the mid-1950s and further expanded in the 1960s. Due to its age and condition, extensive structural rehabilitation and mechanical rehabilitation would be needed to operate it as the Plant's long-term duty headworks. Based on previous studies, building a new duty headworks facility would be more cost effective and provide greater operational reliability and enhanced treatment, potentially piping and hydraulic simplification, addressing some of the operational issues currently experienced at the Plant, such as the deposition of grit in downstream processes.

Notes This project corresponds to Plant Master Plan Project Nos. 1, 3, 4, 5, and 8 and Validation Project PLH-02. This project will have close-out costs only in 2022-2023.

Major Cost Changes
2015-2019 CIP - increase of $11.8 million due to incorporation of a portion of Headworks No. 2 Enhancement project.
2016-2020 CIP - increase of $4.8 million due to revised cost estimate.
2018-2022 CIP - increase of $27.0 million due to revised project cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,800	1,800								4,600
Design		4,810	1,309	3,871				5,180		9,990
Bid & Award	413	1,605								2,019
Construction				106,165	2,024	1,902	451	110,542		110,542
Post Construction							182	182		182
Total	**3,213**	**8,216**	**1,309**	**110,036**	**2,024**	**1,902**	**633**	**115,904**		**127,333**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	3,213	8,216	1,309	110,036	2,024	1,902	633	115,904		127,333
Total	**3,213**	**8,216**	**1,309**	**110,036**	**2,024**	**1,902**	**633**	**115,904**		**127,333**
Annual Operating Budget Impact (000s)										
Operating Maintenance							21			
Total							**21**			

Nitrification Clarifier Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2009
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2024
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2024
Council Districts	4	**Initial Project Budget**	$26,701,000
Appropriation	A7074	**FY Initiated**	2009-2010

Description This project includes phased rehabilitation of the 16 nitrification clarifiers. Structural improvements may include concrete repairs and coating, new clarifier mechanisms and baffle installations, pipe support and meter vault replacements, and walkway improvements. Mechanical improvements may include piping, valve and actuator replacements, spray water system replacements, scum skimmer system upgrades, and return activated sludge piping lining. Electrical and instrumentation improvements may include motor control center replacements, new wiring, and other electrical equipment upgrades. Other incidental work may include grouting, painting, coating, and other surface treatments.

Justification The Plant's 16 nitrification clarifiers have been in service for 30 to 40 years depending on the year of construction. A condition assessment study, completed in 2011, recommended phased rehabilitation of the nitrification clarifiers. The improvements are needed to address structural, mechanical, electrical, and instrumentation deficiencies and will extend the useful life of the clarifier assets for an additional 30 years.

Notes This project corresponds to Plant Master Plan Project No. 21 and Validation Project PLS-02. This project is planned to be completed in multiple phases.

Major Cost Changes 2014-2018 CIP - increase of $13.0 million due to revised estimate. 2015-2019 CIP - increase of $22.0 million due to revised project validation cost estimate. 2016-2020 CIP - decrease of $8.5 million due to revised scope and cost estimate. 2017-2021 CIP - decrease of $1.6 million due to revised cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	2,842	727								3,569
Design	18	3,465	807					807		4,290
Bid & Award		50	34	130				164		214
Construction				41,300	1,290	1,275	1,240	45,105	680	45,785
Post Construction				100				100	633	733
Total	**2,860**	**4,242**	**841**	**41,530**	**1,290**	**1,275**	**1,240**	**46,176**	**1,313**	**54,591**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	2,860	4,242	841	41,530	1,290	1,275	1,240	46,176	1,313	54,591
Total	**2,860**	**4,242**	**841**	**41,530**	**1,290**	**1,275**	**1,240**	**46,176**	**1,313**	**54,591**
Annual Operating Budget Impact (000s)										
Total										

Outfall Bridge and Levee Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2014
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2019
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2021
Council Districts	4	**Initial Project Budget**	$8,120,000
Appropriation	A7678	**FY Initiated**	2014-2015

Description This project includes a condition assessment, bridge repairs or replacement, levee and levee gate repairs, and electrical transformer refurbishment.

Justification The existing outfall bridge and instrumentation supports are in poor condition. In addition, the west-side levee of Pond A-18 is experiencing significant erosion. This project will improve the aging facilities to ensure reliability at the outfall compliance point.

Notes This project corresponds to Validation Project PLD-02.

Major Cost Changes
2016-2020 CIP - increase of $1.7 million due to escalation of construction costs.
2018-2022 CIP - decrease of $776,000 due to reduction of project scope.
2019-2023 CIP - decrease of $764,000 due to revised cost estimates.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	141	1,327	80					80		1,548
Design	2	150	219	174				393		545
Bid & Award		25		50				50		75
Construction		800		4,705	494			5,199		5,999
Post Construction					125			125		125
Total	**143**	**2,302**	**299**	**4,929**	**619**			**5,847**		**8,292**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	143	2,302	299	4,929	619			5,847		8,292
Total	**143**	**2,302**	**299**	**4,929**	**619**			**5,847**		**8,292**
Annual Operating Budget Impact (000s)										
Total										

Plant Electrical Reliability

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2003
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2014
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2022
Council Districts	4	**Initial Project Budget**	$7,671,000
Appropriation	A4341	**FY Initiated**	2003-2004

Description This project replaces substations and switches, modifies power distribution buses and cabling, and provides backup systems to enhance the overall safety and reliability of the Plant electrical systems. The project includes a multi-phase construction schedule based upon a study completed in 2004.

Justification The current power distribution network has grown in a patched manner over the years, and many electrical system components have reached the end of their service life. This project addresses immediate safety needs and provides for future reliability needs.

Notes This project replaces a formerly ongoing allocation titled "Electrical System Improvements".

Major Cost Changes
2005-2009 CIP - increase of $33.5 million to fund construction/rehabilitation costs due to increased project scope.
2007-2011 CIP - increase of $15.6 million to fund construction/rehabilitation costs due to increased project scope.
2008-2012 CIP - increase of $26.5 million to fund construction/rehabilitation costs due to increased project scope.
2009-2013 CIP - decrease of $3.0 million to reflect a project scope change.
2011-2015 CIP - increase of $11.4 million due to increased project scope.
2013-2017 CIP - decrease of $64.7 million due to removal of the Gas Turbine/Internal Combustion Engine project scope, which is being refined and will be included as part of the Energy Generation Improvements project.
2014-2018 CIP - decrease of $1.4 million due to decreased project scope.
2015-2019 CIP - increase of $6.0 million due to revised project validation cost estimate.
2017-2021 CIP - decrease of $1.2 million due to revised project scope.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	584	57								641
Design	1,146	1,917	118					118		3,181
Bid & Award	49	25								74
Construction	20,512	518	4,168	408	31			4,607		25,637
Post Construction	23				16	65		81		104
Total	**22,315**	**2,517**	**4,286**	**408**	**47**	**65**		**4,806**		**29,638**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	22,315	2,517	4,286	408	47	65		4,806		29,638
Total	**22,315**	**2,517**	**4,286**	**408**	**47**	**65**		**4,806**		**29,638**
Annual Operating Budget Impact (000s)										
Total										

Secondary Clarifier Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2024
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2024
Council Districts	4	**Initial Project Budget**	$26,559,000
Appropriation	A7803	**FY Initiated**	2016-2017

Description The Plant has 26 secondary clarifiers configured with peripheral mix liquor feed channel, and either central or peripheral launders. The first phase of this project rehabilitates one secondary (BNR1) clarifier and retrofits it to receive a new baffle configuration based on computational fluid dynamic (CFD) modeling results. The new configuration is expected to improve clarifier performance and efficiency. The subsequent phases of the project will rehabilitate and convert the remaining 25 clarifiers based on the results of the first phase. Rehabilitation will include structural, mechanical, electrical, and instrumentation improvements.

Justification The Plant's 26 secondary clarifiers have been in service for 30 to 50 years depending on the year of construction. A condition assessment study, completed in 2012, recommended phased rehabilitation of the secondary clarifiers. The improvements are needed to address structural, mechanical, electrical, and instrumentation deficiencies and will extend the useful life of the clarifier assets for an additional 30 years. The study also recommended the replacement of central effluent launders with a new peripheral launders to improve clarifier performance and efficiency. The pilot is needed to confirm modeling results before converting the remaining 25 clarifiers to new peripheral launders.

Notes This project corresponds to Plant Master Plan Project No. 22 and 23 and Validation Project PLS-04. This project is planned to be completed in multiple phases.

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			565	19				584		584
Design				2,773				2,773		2,773
Bid & Award				41	14			55		55
Construction				1,017	21,195	159	164	22,535	240	22,775
Post Construction				153				153	115	268
Total			**565**	**4,003**	**21,209**	**159**	**164**	**26,100**	**355**	**26,455**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			565	4,003	21,209	159	164	26,100	355	26,455
Total			**565**	**4,003**	**21,209**	**159**	**164**	**26,100**	**355**	**26,455**
Annual Operating Budget Impact (000s)										
Total										

Storm Drain System Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2017
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2021
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2023
Council Districts	4	**Initial Project Budget**	$10,195,000
Appropriation	A404V	**FY Initiated**	2017-2018

Description This project upgrades the existing Plant stormwater drainage system to meet current City standards. The project includes modifying existing drainage facilities and constructing new storm system facilities to meet the City's 10-year design standard.

Justification The Plant's stormwater drainage facilities do not meet the City's 10-year storm event standard. Upgrades to the existing systems are needed to prevent stormwater flooding in and around the Plant's operational area.

Notes

Major Cost Changes 2019-2023 CIP – increase of $3.7 million due to an escalation of construction costs.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		550								550
Design		650		354	146			500		1,150
Bid & Award		100			119			119		219
Construction		250			10,814	379	322	11,515		11,765
Post Construction		50							202	252
Total		**1,600**		**354**	**11,079**	**379**	**322**	**12,134**	**202**	**13,936**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		1,600		354	11,079	379	322	12,134	202	13,936
Total		**1,600**		**354**	**11,079**	**379**	**322**	**12,134**	**202**	**13,936**
Annual Operating Budget Impact (000s)										
Total										

Support Building Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	3rd Qtr. 2023
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2015
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr. 2028
Council Districts	4	**Initial Project Budget**	$55,590,000
Appropriation	A7681	**FY Initiated**	2014-2015

Description This project constructs various tenant improvements to the administration, operations, engineering, and other support buildings located throughout the Plant. It may include floor, ceiling, wall, partition, plumbing, heating, ventilation and air conditioning upgrades, fire protection, and security improvements, as well as ancillary landscaping improvements. It also constructs new warehousing facilities and an electronic warehouse management system which may include new computers, a central database, barcode scanners, mobile tablets, and other technology improvements. This project will be constructed in phases based on a detailed tenant improvement study, warehouse design study, and priority of needs.

Justification Most of the buildings at the Plant are between 30 and 50 years old and are in need of refurbishment to improve worker health, safety, and environment. The tenant improvements are also needed to bring the buildings into compliance with current building and safety codes. The new warehousing facility and warehouse management system will improve operational efficiency through better control of the movement and storage of materials, including shipping, receiving, material stocking, use, and distribution.

Notes This project corresponds to Plant Master Plan Project Nos. 94, 95, 96, 98, 106, and 107 and Validation Project PF-02.

Major Cost Changes 2016-2020 CIP - decrease of $856,000 due to revised cost estimate. 2018-2022 CIP - increase of $2.2 million due to revised project delivery cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	0									0
Project Feasibility Development	669	2,883	1,180	667	686	495		3,028		6,580
Design		1,369	451	262		2,669	985	4,367	539	6,275
Bid & Award		154	70	105			244	419	249	822
Construction		2,438		10,357	928	631	576	12,492	26,390	41,320
Post Construction							334	334	1,413	1,747
Equipment, Materials and Supplies	346									346
Total	**1,015**	**6,844**	**1,701**	**11,391**	**1,614**	**3,795**	**2,139**	**20,640**	**28,591**	**57,090**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,015	6,844	1,701	11,391	1,614	3,795	2,139	20,640	28,591	57,090
Total	**1,015**	**6,844**	**1,701**	**11,391**	**1,614**	**3,795**	**2,139**	**20,640**	**28,591**	**57,090**
Annual Operating Budget Impact (000s)										
Total										

Treatment Plant Distributed Control System

CSA	Environmental and Utility Services	**Initial Start Date**	1st Qtr. 2012
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2016
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	2nd Qtr. 2022
Council Districts	4	**Initial Project Budget**	$4,065,000
Appropriation	A7394	**FY Initiated**	2012-2013

Description This project will upgrade and convert the existing Distributed Control System (DCS) at the Plant. The system is composed of a network of field controllers, workstations, and servers that control most aspects of Plant operations. This project consists of three phases. Phase I is completed and ensured that the system was upgraded and will be supported by the vendor. The wiring and replacement of field communication hardware will be done in Phase II, and a new controller and programming will be added in Phase III.

Justification Upgrading this system is vital to maintaining efficient operations and improving monitoring capabilities.

Notes

Major Cost Changes
2014-2018 CIP - increase of $499,000 due to higher than expected consultant costs.
2015-2019 CIP - decrease of $163,000 due to lower than expected construction costs.
2016-2020 CIP - increase of $894,000 due to inclusion of an additional project phase that will convert and configure the hardware for 18 distributed control unit controllers.
2017-2021 CIP - increase of $1.6 million due to revised cost estimate.
2019-2023 CIP - increase of $2.8 million due to revised cost estimate.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design	320									320
Construction	3,324	1,516	1,025	2,000	1,000	500		4,525		9,365
Total	**3,644**	**1,516**	**1,025**	**2,000**	**1,000**	**500**		**4,525**		**9,685**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	3,644	1,516	1,025	2,000	1,000	500		4,525		9,685
Total	**3,644**	**1,516**	**1,025**	**2,000**	**1,000**	**500**		**4,525**		**9,685**
Annual Operating Budget Impact (000s)										
Maintenance										
Total										

Tunnel Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	2nt Qtr. 2015
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	4th Qtr. 2024
Department	Environmental Services	**Revised Start Date**	3rd Qtr. 2016
Location	Water Pollution Control Plant	**Revised End Date**	4th Qtr. 2026
Council Districts	4	**Initial Project Budget**	$25,550,000
Appropriation	A7698	**FY Initiated**	2014-2015

Description This project will rehabilitate and make safety improvements to the tunnel system throughout the Plant. The work may include structural, mechanical, electrical, ventilation, fire safety, and coating improvements and will be completed in phases based on a detailed condition assessment, physical testing, and prioritization of needs.

Justification The Plant has an extensive tunnel system that houses piping, valves, pumps, controls, and other equipment. Many of these tunnels were built more than 50 years ago and need to be rehabilitated and upgraded to ensure compliance with safety requirements. To the extent practical, obsolete piping in the tunnels will also be removed to improve maintenance access and make room for new process piping.

Notes This project corresponds to Plant Master Plan Project Nos. 12, 13, 46, 103, and 104 and Validation Project PF-01.

Major Cost Changes 2016-2020 CIP - increase of $2.2 million due to escalation of construction costs.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	45	1,106	262	129				391		1,542
Design		69	957	338	430	153		1,878		1,947
Bid & Award					100	126		226		226
Construction						22,160	376	22,536	1,117	23,653
Post Construction									281	281
Total	**45**	**1,175**	**1,219**	**467**	**530**	**22,439**	**376**	**25,031**	**1,398**	**27,649**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	45	1,175	1,219	467	530	22,439	376	25,031	1,398	27,649
Total	**45**	**1,175**	**1,219**	**467**	**530**	**22,439**	**376**	**25,031**	**1,398**	**27,649**
Annual Operating Budget Impact (000s)										
Total										

Various Infrastructure Decommissioning

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2018
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	2nd Qtr. 2022
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	$22,220,000
Appropriation	TEMP_122	**FY Initiated**	2018-2019

Description This project will decommission and remove equipment, structures, and piping located in Building 40, Pump and Engine Building, Sludge Control Building, digester campus, and tunnels.

Justification The decommissioning and removal of obsolete and abandoned equipment, structures, and piping will free up valuable space for future equipment or systems and improves operational and maintenance efficiencies of existing systems. The majority of the infrastructure and equipment at the Plant is more than 60 years old. It is best practice to remove obsolete facilities and equipment to avoid ongoing maintenance, comply with permit requirements, and to free up space for new equipment.

Notes

Major Cost Changes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Design			469	2,590				3,059		3,059
Construction					18,470	628		19,098		19,098
Post Construction						63		63		63
Total			**469**	**2,590**	**18,470**	**691**		**22,220**		**22,220**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			469	2,590	18,470	691		22,220		22,220
Total			**469**	**2,590**	**18,470**	**691**		**22,220**		**22,220**

Annual Operating Budget Impact (000s)

Total

Yard Piping and Road Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	3rd Qtr. 2011
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	4th Qtr. 2026
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	3rd Qtr 2026
Council Districts	4	**Initial Project Budget**	N/A
Appropriation	A7396	**FY Initiated**	2011-2012

Description This project will rehabilitate and/or replace process piping systems, valves, and related appurtenances throughout the Plant. The work will be completed in phases based on the outcome of a detailed condition assessment, physical testing, and prioritization of needs. This project will also make roadway and drainage-related improvements throughout the Plant's main operations and residual management areas.

Justification The Plant has approximately 300,000 linear feet of piping along with associated valves and related appurtenances. The pipes range in diameter from 8 inches to 144 inches and carry gas, liquids, sludge, air, steam, and other process streams to and from the various treatment areas. The pipes vary in age, material, condition, reliability, and redundancy. Over 70 percent of the piping was installed more than 25 years ago and is in need of rehabilitation or replacement due to age, failure, and/or excessive maintenance. The Plant also has an extensive roadway network, nearly 40,000 linear feet of paved surfaces, that needs rehabilitation and/or replacement due to excessive wear, heavy vehicle traffic, and drainage issues.

Notes This project corresponds to Plant Master Plan Project Nos. 98 and 100 and Validation Project PF-04. Prior to 2018-2022, this project was ongoing in nature; it has since become a finite project.

Major Cost Changes 2019-2023 CIP – decrease of $14.3 million due to a decrease in project scope and a 78" SES pipe that will be replaced in the Digester and Thickener Facilities Upgrade project.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development	704	1,434	309	279				588		2,726
Design	154	1,600	189	1,869	2,842	2,207	2,140	9,247	4,619	15,620
Bid & Award	35	620	104	573				677		1,332
Construction	935		1,725	12,101	15,031	15,388	14,205	58,450	41,764	101,149
Post Construction									525	525
Total	**1,828**	**3,654**	**2,327**	**14,822**	**17,873**	**17,595**	**16,345**	**68,962**	**46,908**	**121,352**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	1,828	3,654	2,327	14,822	17,873	17,595	16,345	68,962	46,908	121,352
Total	**1,828**	**3,654**	**2,327**	**14,822**	**17,873**	**17,595**	**16,345**	**68,962**	**46,908**	**121,352**
Annual Operating Budget Impact (000s)										
Total										

Equipment Replacement

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
Appropriation	A4332		

Description This allocation provides for the urgent replacement of equipment at the Plant that is not identified in any other project.

Justification The replacement and rehabilitation of Plant equipment are necessary as a result of wear or obsolescence and will ensure continued efficient operation of the Plant facilities.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Equipment, Materials and Supplies	1,661	1,663	1,663	1,663	1,663	1,663	8,315
Total	**1,661**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**

Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	1,661	1,663	1,663	1,663	1,663	1,663	8,315
Total	**1,661**	**1,663**	**1,663**	**1,663**	**1,663**	**1,663**	**8,315**

Annual Operating Budget Impact (000s)
Total

Plant Infrastructure Improvements

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
Appropriation	A5690		

Description This allocation provides for improvements, rehabilitation, or replacement of existing Plant infrastructure. Examples of the ongoing replacement and rehabilitation work include handrail replacement, concrete repairs, telecommunication systems upgrade, and Plant support system improvements.

Justification Many mechanical, electrical, and structural assets at the Plant are in poor condition due to age and wear. Rehabilitation, improvements, and replacement of capital infrastructure are necessary to maintain process viability and to ensure regulatory compliance, structural integrity, reliability, functionality, and safety of Plant buildings and process facilities.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	3,836	1,000	1,000	1,000	1,000	1,000	5,000
Total	**3,836**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	3,836	1,000	1,000	1,000	1,000	1,000	5,000
Total	**3,836**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**
Annual Operating Budget Impact (000s)							
Total							

Urgent and Unscheduled Treatment Plant Rehabilitation

CSA	Environmental and Utility Services	**Initial Start Date**	Ongoing
CSA Outcome	Reliable Utility Infrastructure	**Initial End Date**	Ongoing
Department	Environmental Services	**Revised Start Date**	
Location	Water Pollution Control Plant	**Revised End Date**	
Council Districts	4	**Initial Project Budget**	
Appropriation	A7395		

Description This ongoing allocation is used to investigate, prioritize, and rehabilitate structures and systems at the Water Pollution Control Plant. This funding will be used to respond to the Plant's urgent maintenance and rehabilitation needs that cannot be programmed during the annual CIP budget process.

Justification This allocation is required due to the deterioration of structures and systems at the Plant.

Notes Project schedule dates and selected budget information are not provided due to the ongoing nature of this project.

Major Cost Changes

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Construction	6,500	500	500	500	500	500	2,500
Total	**6,500**	**500**	**500**	**500**	**500**	**500**	**2,500**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	6,500	500	500	500	500	500	2,500
Total	**6,500**	**500**	**500**	**500**	**500**	**500**	**2,500**
Annual Operating Budget Impact (000s)							
Total							

Debt Service Repayment for Plant Capital Improvement Projects

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A402C

Description This allocation provides for the repayment of financing proceeds, including short-term wastewater revenue notes and long-term bonds, drawn for the Plant Capital Improvement Projects.

Notes The use of Wastewater Revenue Notes for funding began in October 2017.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration		721	1,815	3,192	5,834	307,209	27,238	345,288		346,009
Total		**721**	**1,815**	**3,192**	**5,834**	**307,209**	**27,238**	**345,288**		**346,009**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund		721	1,815	3,192	5,834	307,209	27,238	345,288		346,009
Total		**721**	**1,815**	**3,192**	**5,834**	**307,209**	**27,238**	**345,288**		**346,009**

Master Plan Updates

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation TEMP_149

Description This project will periodically review and update the Plant Master Plan to ensure program goals and objectives are being met and incorporate any major changes that may be triggered by operational, regulatory, technological, and economic conditions.

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development			3,000					3,000		3,000
Total			**3,000**					**3,000**		**3,000**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund			3,000					3,000		3,000
Total			**3,000**					**3,000**		**3,000**

Owner Controlled Insurance Program

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts N/A
Appropriation A401B

Description This allocation provides funding for a centrally managed insurance and risk control program for construction projects in the Water Pollution Control CIP.

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	2,831	2,731	4,944	3,705	3,705	1,399	1,264	15,017		20,579
Construction		369								369
Total	**2,831**	**3,100**	**4,944**	**3,705**	**3,705**	**1,399**	**1,264**	**15,017**		**20,948**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	2,831	3,100	4,944	3,705	3,705	1,399	1,264	15,017		20,948
Total	**2,831**	**3,100**	**4,944**	**3,705**	**3,705**	**1,399**	**1,264**	**15,017**		**20,948**

Payment for Clean Water Financing Authority Trustee

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A6584

Description This allocation provides for administrative costs of the San José/Santa Clara Clean Water Financing Authority related to bond issuances.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	437	5	5	5	5			15		457
Bid & Award	10									10
Total	**447**	**5**	**5**	**5**	**5**			**15**		**467**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	447	5	5	5	5			15		467
Total	**447**	**5**	**5**	**5**	**5**			**15**		**467**

Record Drawings

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7683

Description This project develops a document management system and standards for electronically capturing, indexing, storing, retrieving, distributing, and versioning master drawings, specifications, and other final design documents. It also involves inventorying, developing, updating, and integrating existing records and field drawings.

Notes This project corresponds to Plant Master Plan Project No. 114 and Validation Project PF-05. Funding in 2017-2018 was for consultant services and some staff costs; the remaining years fund staff costs necessary to complete the project.

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
Project Feasibility Development		321								321
Design			3,354	9,738	164	163	163	13,582	299	13,881
Post Construction									62	62
Total	**321**	**3,354**	**9,738**	**164**	**163**	**163**	**13,582**	**361**	**14,264**	
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	321	3,354	9,738	164	163	163	13,582	361	14,264	
Total	**321**	**3,354**	**9,738**	**164**	**163**	**163**	**13,582**	**361**	**14,264**	

State Revolving Fund Loan Repayment

CSA Environmental and Utility Services
CSA Outcome Healthy Streams, Rivers, Marsh and Bay
Department Environmental Services
Council Districts N/A
Appropriation A6590

Description This allocation provides for the repayment of low interest State loans awarded for South Bay Water Recycling projects.

Notes

	PRIOR YEARS	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL	BEYOND 5 YEARS	PROJECT TOTAL
Expenditure Schedule (000s)										
General Administration	76,497	4,464	1,804					1,804		82,765
Project Feasibility Development	4,421									4,421
Total	**80,917**	**4,464**	**1,804**					**1,804**		**87,185**
Funding Source Schedule (000s)										
San José-Santa Clara Treatment Plant Capital Fund	80,917	4,464	1,804					1,804		87,185
Total	**80,917**	**4,464**	**1,804**					**1,804**		**87,185**

Preliminary Engineering - Water Pollution Control

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7456

Description This allocation provides funding to support preliminary engineering for Plant-related projects, including studies, pilots, and field verifications to evaluate impacts on operations.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
Project Feasibility Development	1,037	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,037**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	1,037	1,000	1,000	1,000	1,000	1,000	5,000
Total	**1,037**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**5,000**

Detail of Ongoing Non-Construction Projects

Program Management - Water Pollution Control

CSA Environmental and Utility Services
CSA Outcome Reliable Utility Infrastructure
Department Environmental Services
Council Districts 4
Appropriation A7481

Description This allocation funds the administration and management of the Water Pollution Control CIP.

Notes Selected budget information is not provided due to the ongoing nature of this project.

	FY18 EST	FY19	FY20	FY21	FY22	FY23	5 YEAR TOTAL
Expenditure Schedule (000s)							
General Administration	10,094	8,258	7,307	7,505	7,507	7,569	38,146
Project Feasibility Development	0						
Construction	0						
Total	**10,094**	**8,258**	**7,307**	**7,505**	**7,507**	**7,569**	**38,146**
Funding Source Schedule (000s)							
San José-Santa Clara Treatment Plant Capital Fund	10,094	8,258	7,307	7,505	7,507	7,569	38,146
Total	**10,094**	**8,258**	**7,307**	**7,505**	**7,507**	**7,569**	**38,146**

2018-2019 Capital Budget

2019-2023 Capital Improvement Program

Water Pollution Control

Summary of Projects that Start After 2018-2019

Summary of Reserves

Explanation of Funds

Summary of Projects that Start After 2018-2019

Project Name	Additional Digester Upgrades	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 62,096,000	**Initial End Date**	4th Qtr. 2025
Total Budget	$ 64,475,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project will rehabilitate up to six existing anaerobic digesters, including installation of new covers and mixers, upgrades the existing sludge distribution piping, and upgrades the digester heat supply system. The project may also include the installation of batch tanks to produce Class A biosolids (if required by future regulations).

Project Name	Aeration Basin Future Modifications	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 6,330,000	**Initial End Date**	4th Qtr. 2030
Total Budget	$ 50,277,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project modifies the existing step-feed aeration basins to a Modified Ludzack-Ettinger (MLE) process, which would involve structural modifications to existing tanks and new mixers, pumps, fine bubble diffusers, and methanol feed systems.

Project Name	Final Effluent Pump Station & Stormwater Channel Improvements	**Initial Start Date**	3rd Qtr. 2019
5-Yr CIP Budget	$ 45,239,000	**Initial End Date**	3rd Qtr. 2025
Total Budget	$ 47,358,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project constructs a new pump station to hydraulically push the Plant's final treated effluent to the Coyote Creek. Additionally, it will improve the existing stormwater channel by rehabilitating the flapper gates and embankments.

Project Name	FOG Receiving	**Initial Start Date**	1st Qtr. 2023
5-Yr CIP Budget	$ 313,000	**Initial End Date**	3rd Qtr. 2029
Total Budget	$ 12,850,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project constructs a new FOG (Fats, Oils, Grease) receiving station, including storage tanks, access control, feed piping from the receiving station to the first phase anaerobic digesters, odor control and a 1/4-mile of access road improvements.

Project Name	New Disinfection Facilities	**Initial Start Date**	3rd Qtr. 2020
5-Yr CIP Budget	$ 7,853,000	**Initial End Date**	2nd Qtr. 2029
Total Budget	$ 56,977,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This project constructs a new disinfection facility (currently assumed to be based on ultraviolet (UV) technology) to replace the existing sodium hypochlorite disinfection facility. It may also expand the existing chlorine contact basins to accommodate future peak hour wet weather flows and construct a new on-site hypochlorite generation facility. This project would only be triggered if new regulations concerning emerging contaminants are issued by the Regional Water Board within the next two to three NPDES permit cycles, and additional studies confirm future flow projections.

Water Pollution Capital Program

2019-2023 Proposed Capital Improvement Program

Summary of Reserves

Project Name	Equipment Replacement Reserve	**Initial Start Date**	N/A
5-Yr CIP Budget	$	**Initial End Date**	N/A
Total Budget	$ 5,000,000	**Revised Start Date**	
Council Districts	4	**Revised End Date**	

Description This reserve provides for unforeseen replacement and rehabilitation of equipment that, due to age, wear, or obsolescence, must be replaced for the efficient operation of the Plant.

Explanation of Funds

Revenues and expenditures for the operation and maintenance of the San José-Santa Clara Water Pollution Control Plant (Plant) are accounted for by the City of San José, as the administering agency, through the San José-Santa Clara Treatment Plant Operating Fund (Operating Fund) and the San José-Santa Clara Treatment Plant Capital Fund (Capital Fund).

Revenues from tributary agencies of the San José-Santa Clara Water Pollution Control Plant are recorded directly into the Operating and Capital Funds. The tributary agencies include the City of Milpitas, City of Cupertino, Burbank Sanitary District, County Sanitation District No. 2-3, and West Valley Sanitation District.

Tributary agencies are assessed for their share of annual operation, maintenance, equipment, and facilities replacement and capital costs, based on their respective flow and strength of sewage conveyed to the Plant.

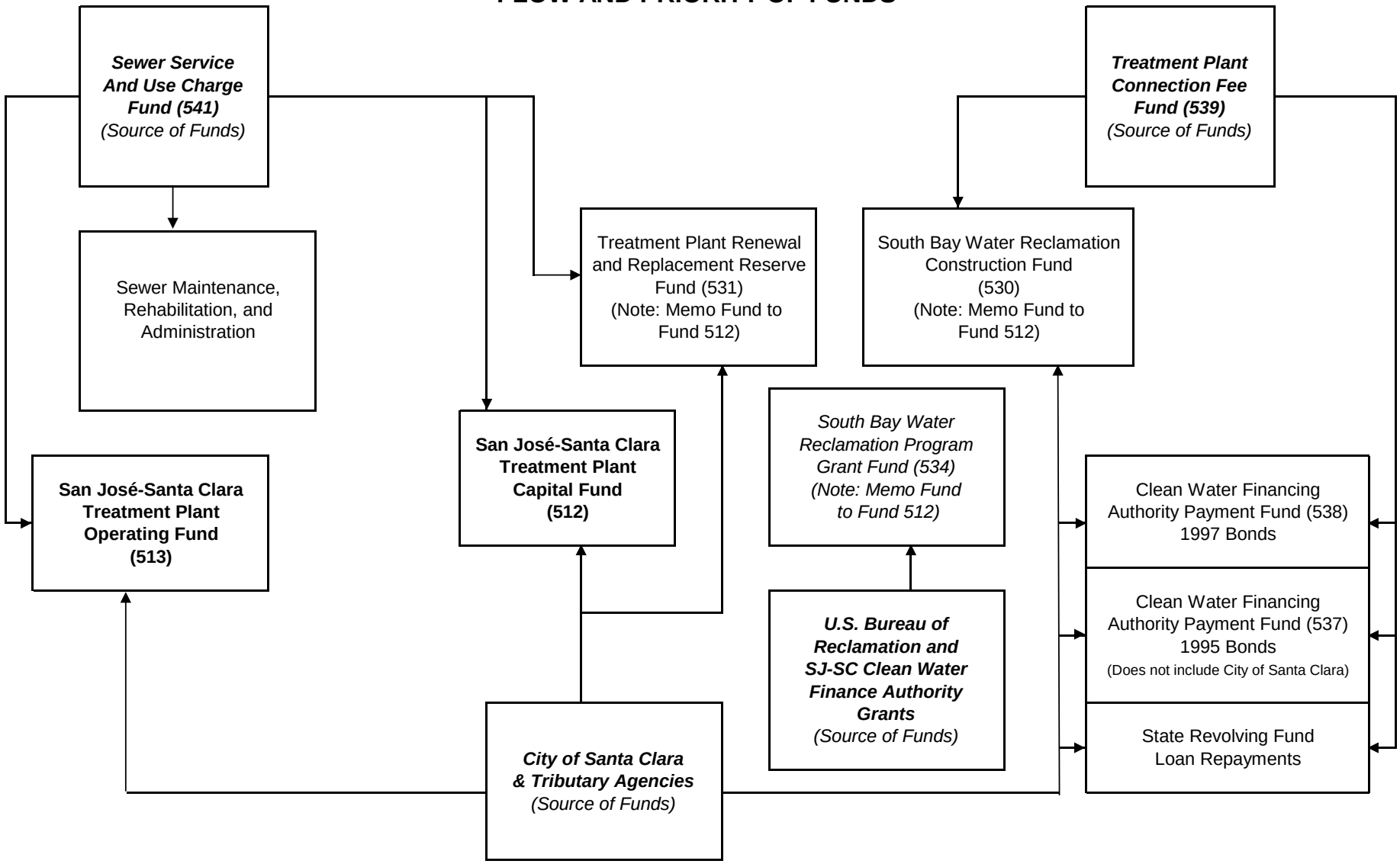
The San José Sewer Service and Use Charge Fund was established in the San José Municipal Code Section 15.12.640 in August 1959. This fund is the depository of revenues from Sewer Service and Use Charges received from residential, commercial, and industrial users of the sanitary sewer system. A portion of these monies is transferred to the Operating and Capital Funds to pay for the City of San José's share of operating and capital costs of the Plant.

The Santa Clara Sewer Revenue Fund was established by Resolution Number 916 of the City Council of Santa Clara in October 1960. Like the City of San José, revenues from this fund are transferred directly to the Operating and Capital Funds.

The Capital Fund provides all monies used for capital projects. Included in this fund is the Treatment Plant Renewal and Replacement Fund. This fund was established to satisfy the Plant's federal and State grant agreements as well as to comply with bond covenants.

The South Bay Water Recycling (SBWR) Capital Fund provides monies for capital improvement projects in support of SBWR system infrastructure.

WATER POLLUTION CONTROL PLANT
FLOW AND PRIORITY OF FUNDS



The arrows indicate the flow of funds from each of the various sources to the fund in which the revenues are expended.

ATTACHMENT A
CIP AGENCY ALLOCATIONS - TEN YEAR FORCAST

		18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	5-Year Total	10-Year Total
Santa Clara													
WPCP Projects		15,881,016	47,765,854	49,999,141	11,946,913	20,093,758	9,814,858	19,950,999	7,564,146	6,480,591	3,253,534	145,686,682	192,750,811
Equipment Replacement		0	229,976	229,976	229,976	229,976	229,976	229,976	229,976	229,976	229,976	919,904	2,069,784
SRF Loan Annual Repayment		277,978	0	0	0	0	0	0	0	0	0	277,978	277,978
CWFA Debt Service Payment		0	0	0	0	0	0	0	0	0	0	0	0
	Total	16,158,994	47,995,830	50,229,117	12,176,889	20,323,734	10,044,834	20,180,975	7,794,122	6,710,567	3,483,510	146,884,564	195,098,573
West Valley													
WPCP Projects		6,020,923	20,593,350	18,622,923	5,029,526	7,899,580	3,956,893	8,499,856	3,141,747	2,617,581	1,239,083	58,166,302	77,621,463
Equipment Replacement		0	144,565	144,565	144,565	144,565	144,565	144,565	144,565	144,565	144,565	578,260	1,301,085
SRF Loan Annual Repayment		152,402	0	0	0	0	0	0	0	0	0	152,402	152,402
CWFA Debt Service Payment		0	0	0	0	0	0	0	0	0	0	0	0
	Total	6,173,325	20,737,915	18,767,488	5,174,091	8,044,145	4,101,458	8,644,421	3,286,312	2,762,146	1,383,648	58,896,964	79,074,950
Cupertino													
WPCP Projects		3,879,885	13,582,304	11,770,359	3,313,660	5,042,420	2,575,155	5,613,984	2,051,842	1,719,819	807,982	37,588,629	50,357,411
Equipment Replacement		0	85,262	85,262	85,262	85,262	85,262	85,262	85,262	85,262	85,262	341,048	767,358
SRF Loan Annual Repayment		91,661	0	0	0	0	0	0	0	0	0	91,661	91,661
CWFA Debt Service Payment		0	0	0	0	0	0	0	0	0	0	0	0
	Total	3,971,546	13,667,566	11,855,621	3,398,922	5,127,682	2,660,417	5,699,246	2,137,104	1,805,081	893,244	38,021,338	51,216,430
Milpitas													
WPCP Projects		6,517,453	24,237,970	19,829,820	5,827,936	8,728,384	4,448,983	9,909,445	3,591,327	2,959,899	1,349,355	65,141,563	87,400,572
Equipment Replacement		0	98,882	98,882	98,882	98,882	98,882	98,882	98,882	98,882	98,882	395,528	889,938
SRF Loan Annual Repayment		8,767	0	0	0	0	0	0	0	0	0	8,767	8,767
CWFA Debt Service Payment		42,974	43,001	42,994	0	0	0	0	0	0	0	128,969	128,969
	Total	6,569,194	24,379,853	19,971,696	5,926,818	8,827,266	4,547,865	10,008,327	3,690,209	3,058,781	1,448,237	65,674,827	88,428,246
CSD 2/3													
WPCP Projects		477,662	1,690,864	1,452,632	411,421	625,083	318,894	697,740	254,971	212,714	99,265	4,657,661	6,241,245
Equipment Replacement		0	15,965	15,965	15,965	15,965	15,965	15,965	15,965	15,965	15,965	63,860	143,685
SRF Loan Annual Repayment		19,700	0	0	0	0	0	0	0	0	0	19,700	19,700
CWFA Debt Service Payment		95,946	96,006	95,990	0	0	0	0	0	0	0	287,942	287,942
	Total	593,308	1,802,834	1,564,587	427,386	641,048	334,859	713,705	270,936	228,679	115,230	5,029,162	6,692,572
Burbank													
WPCP Projects		232,376	707,903	662,549	180,294	264,458	142,920	302,696	109,135	100,391	50,958	2,047,581	2,753,681
Equipment Replacement		0	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	4,623	18,492	41,607
SRF Loan Annual Repayment		4,672	0	0	0	0	0	0	0	0	0	4,672	4,672
CWFA Debt Service Payment		15,853	15,863	15,860	0	0	0	0	0	0	0	47,576	47,576
	Total	252,901	728,389	683,032	184,917	269,081	147,543	307,319	113,758	105,014	55,581	2,118,321	2,847,536
San Jose													
WPCP Projects		66,296,686	199,406,754	208,718,576	49,874,250	83,881,317	40,973,297	83,286,280	31,576,831	27,053,003	13,582,824	608,177,582	804,649,817
Equipment Replacement		0	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	1,083,727	4,334,908	9,753,543
SRF Loan Annual Repayment		1,248,819	0	0	0	0	0	0	0	0	0	1,248,819	1,248,819
City Hall Debt Service		125,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	629,000	1,259,000
New Debt Service 2017-18		1,815,000	3,192,000	5,834,000	307,209,000	27,238,000	27,238,000	27,238,000	27,238,000	27,238,000	27,238,000	345,288,000	481,478,000
CWFA Debt Service Payment		5,368,889	5,372,219	5,371,356	0	0	0	0	0	0	0	16,112,464	16,112,464
	Total	74,854,394	209,180,699	221,133,659	358,292,977	112,329,044	69,421,024	111,734,007	60,024,558	55,500,730	42,030,551	975,790,773	1,314,501,643

ATTACHMENT A
CIP AGENCY ALLOCATIONS - TEN YEAR FORCAST

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	5-Year Total	10-Year Total
TOTAL												
WPCP Projects	99,306,000	307,985,000	311,056,000	76,584,000	126,535,000	62,231,000	128,261,000	48,290,000	41,144,000	20,383,000	921,466,000	1,221,775,000
Equipment Replacement	0	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	1,663,000	6,652,000	14,967,000
SRF Loan Annual Repmnt	1,804,000	0	0	0	0	0	0	0	0	0	1,804,000	1,804,000
City Hall Debt Service	125,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	126,000	629,000	1,259,000
New Debt Service 2017-18	1,815,000	3,192,000	5,834,000	307,209,000	27,238,000	27,238,000	27,238,000	27,238,000	27,238,000	27,238,000	345,288,000	481,478,000
CWFA Debt Service Repayment	5,524,000	5,527,000	5,526,000	0	0	0	0	0	0	0	16,577,000	16,577,000
	108,574,000	318,493,000	324,205,000	385,582,000	155,562,000	91,258,000	157,288,000	77,317,000	70,171,000	49,410,000	1,292,416,000	1,737,860,000

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TREATMENT PLANT ADVISORY COMMITTEE

FROM: Kerrie Romanow

SUBJECT: **2018-2019 PROPOSED OPERATING BUDGET**

DATE: May 10, 2018

Approved DiDSyL Date 5/10/18

This memorandum serves to transmit the San José/Santa Clara Regional Wastewater Facility (RWF) Proposed 2018-2019 Operating and Maintenance Budget. The RWF is jointly owned by the cities of San José and Santa Clara and is administered and operated by the City of San José Environmental Services Department. As a regional-serving facility, the RWF provides wastewater treatment services to other cities and sanitary districts in the South Bay including: City of Milpitas, Cupertino Sanitary District, West Valley Sanitation District (representing cities of Campbell, Los Gatos, Monte Sereno, and Saratoga), County Sanitation District 2-3, and Burbank Sanitary District. The Proposed Operating and Maintenance Budget is provided to the Treatment Plant Advisory Committee's review and for a recommendation to the San José City Council for approval.

/s/
KERRIE ROMANOW
Director, Environmental Services

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

PROPOSED

SAN JOSE / SANTA CLARA WATER POLLUTION CONTROL PLANT

700 Los Esteros Road
San José, California 95134

2018-2019

Operating & Maintenance Budget

Submitted by
Kerrie Romanow, Director
Environmental Services Department
City of San José

TO: Treatment Plant Advisory Committee

Sam Liccardo	(Chair) Mayor, City of San José
Pat Kolstad	(Vice-Chair) Council Member, City of Santa Clara
Marsha Grilli	Vice Mayor, City of Milpitas
Steven Leonardis	Board Member, West Valley Sanitation District
John M. Gatto	Board Member, Cupertino Sanitary District
David Sykes	City Manager, City of San José
Dev Davis	Council Member, City of San José
Lan Diep	Council Member, City of San José
Debi Davis	Council Member, City of Santa Clara

SAN JOSE / SANTA CLARA

WATER POLLUTION CONTROL PLANT

700 Los Esteros Road
San José, California 95134

2018-2019

PROPOSED

Operating & Maintenance Budget

Environmental Services Department
City of San José

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

Page No.

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

BUDGET SUMMARY

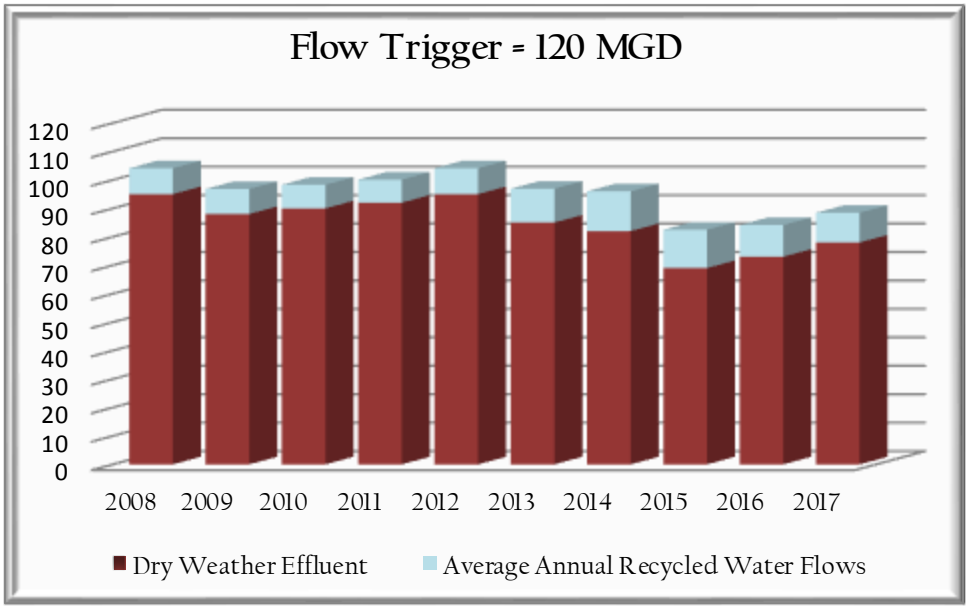
	Adopted 17-18	Proposed 18-19	% Change
Treatment Plant Operating Fund Budget	104,197,505	106,403,974	2.1%
ESD Authorized Positions	359.20	360.86	0.5%

BUDGET HIGHLIGHTS 2018-2019

- The addition of an Environmental Services Program Manager (ESPM) to the Regional Wastewater Facility Capital Improvement Program Division is a first step toward forming a Biosolids Management Team. Additional staff for the Biosolids Management Team will be determined by analysis of program needs and is anticipated to be brought forward in future years.
- The creation of the South Bay Water Recycling (SBWR) Operating Fund will serve as the depository of revenues from the sale of wholesale water produced by the SBWR program. This fund will provide monies for the operations and maintenance of the SBWR system.

Budget Byte

10 year History of Average Dry Weather Flow (in millions of gallons per day)



San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

TREATMENT PLANT OPERATING FUND BUDGET SUMMARY

Budget Summary	2016-2017 Actual Expenses	2017-2018 Adopted Budget	2018-2019 Base Budget	2018-2019 Proposed Budget
Personal Services	51,197,669	57,036,603	58,513,458	58,488,819
Non-personal Expenses	25,386,138	33,247,019	30,695,194	30,695,194
Equipment	1,109,982	926,000	906,000	906,000
Inventory	390,878	400,000	400,000	400,000
Department Expenses	**78,084,667**	**91,609,622**	**90,514,652**	**90,490,013**
Overhead	8,903,373	9,684,081	13,466,283	13,466,283
City Hall Debt Service	1,184,531	1,175,345	1,057,934	1,057,934
Workers' Compensation	434,344	675,000	607,000	607,000
City Services	901,862	1,053,457	782,744	782,744
City Expenses	**11,424,110**	**12,587,883**	**15,913,961**	**15,913,961**
TOTAL EXPENSES	**$ 89,508,777**	**$ 104,197,505**	**$ 106,428,613**	**$ 106,403,974**

ESTIMATED COST DISTRIBUTION

2018-2019 Estimated Total Gallons Treated (MG)	(1) Percent of Total Sewage Treated	City / District	2018-2019 Proposed
24,891.434	63.437	City of San Jose	$67,499,489
5,077.619	15.196	City of Santa Clara	$16,169,148
29,969.053	78.633	Sub-Total	$83,668,637
3,428.330	9.075	West Valley Sanitation District	$9,656,161
1,911.097	5.471	Cupertino Sanitary District	$5,821,361
2,058.490	5.659	City of Milpitas	$6,021,401
345.079	0.931	Sanitation District # 2 - 3	$990,621
86.089	0.231	Burbank Sanitary District	$245,793
7,829.085	21.367	Sub-Total	$22,735,337
37,798.138	**100.0**	**TOTAL**	**$ 106,403,974**

(1) Composite of four parameters (flow, BOD, SS, ammonia). Source: 2018-2019 Revenue Program.

OVERVIEW

This year's Water Pollution Control Plant Operating Budget recommends an increase of 2.1% from the 2017-2018 Adopted Budget, which represents an increase of approximately $2.2 million. The increase is due primarily to increased City overhead costs in 2018-2019, partially offset by decreased non-personal/equipment and City pension costs. Beginning in 2018-2019, the South Bay Water Recycling (SBWR) Operating Fund will serve as the depository of revenues from the sale of wholesale recycled water and will also be used to track the financial activities related to this important regional-serving program. The establishment of the new SBWR Operating Fund results in several notable changes to the Treatment Plant Operations and Management Budget:

- The Proposed Operating Budget includes estimated SBWR revenue of $12.5 million from the sale of wholesale recycled water during 2018-2019. In past years, these revenues were deposited into the Treatment Plant Operating Fund but will be deposited into the new SBWR Operating Fund beginning next fiscal year.
- The new SBWR Operating Fund will allow for the reporting of recycled water revenues received from individual recycled water retailers.
- The cost to produce and distribute recycled water, as well as to maintain the recycled water infrastructure, will be reported within the SBWR Operating Fund. In past years, these costs were included in the Treatment Plant Operating Fund but will be shown in the new SBWR Operating Fund beginning next fiscal year.
- A minimum Operations and Maintenance (O&M) Reserve balance will be established and maintained in the SBWR Operating Fund in accordance with the City's best budget management practices. An O&M Reserve will allow SBWR to accommodate short-term operating needs driven by fluctuations in revenues and unanticipated expenditures.

A decrease in non-personal cost is projected in 2018-2019, reflecting lower maintenance costs anticipated in the coming year due primarily to discontinued maintenance projects in the nitrification and secondary clarifier and digester DAFT areas, which are currently going through major infrastructure improvement and rehabilitation as part of the Facility Capital Improvement Program (CIP).

Retirement (Pension) costs are projected to decline in 2018-2019, due in large part to decreased City retiree healthcare contributions and updated calculation of the unfunded actuarial liability as determined by the Retirement Boards' actuary, as detailed in the City's 2019-2023 Five-Year Economic Forecast and Revenue Projections. In addition, the increase of membership in the lower cost Tier 2 retirement plans is beginning to offset the City's retirement costs over time. For 2018-2019, retirement costs in the Treatment Plant Operating Fund reflect a decrease of 2.3% from the 2017-2018 Adopted Budget.

OVERVIEW (cont'd)

The addition of an Environmental Services Program Manager (ESPM) is proposed as a first step toward forming a Biosolids Management Team. This position will provide leadership and oversight of the Facility's transition from the current biosolids disposal method, i.e., beneficial reuse of 100% of dried biosolids as Alternative Daily Cover (ADC) at the adjacent Newby Island landfill, to a diversified program that considers multiple disposition options for the dewatered biosolids that will be generated as part of the new Digested Sludge Dewatering Facility project, currently in the planning phase and anticipated to come online in 2022. The ESPM will research market options for biosolids beneficial use and procure, negotiate, and manage a broad portfolio of disposition contracts. Additional staff for the Biosolids Management Team will be determined by analysis of program needs and is anticipated to be brought forward in future years.

The Facility and the Environmental Services Department continue to focus significant efforts on attracting qualified technical and engineering professionals to fill key O&M vacancies and to support the implementation of the CIP. The Facility has seen steady improvements in the vacancy rate for several key groups. For example, the vacancy rate for the approximately 215 positions in the Wastewater O&M group has improved from 27% in September 2013 to 17% as of April 2018.

The following sections provide the budget proposal descriptions and a breakdown by program of all associated expenditures that make up the Treatment Plant Operating and Maintenance budget.

OVERVIEW CONTINUED

DEPARTMENT BUDGET SUMMARY

Budget Summary	2016-2017 Actual 1	2017-2018 Adopted 2	2018-2019 Base 3	2018-2019 Proposed 4	% Change (2 to 4)
Dollars by Program					
Treatment Plant O&M	51,899,495	60,834,478	59,596,099	59,596,099	(2.0%)
WatershedProtection	9,485,526	9,367,403	9,534,958	9,534,958	1.8%
South Bay Water Recycling	5,364,040	7,101,236	6,354,850	6,219,201	(12.4%)
CIP-Engineering Services	3,214,274	4,911,904	5,147,461	5,258,471	7.1%
Mgmt & Admin Svcs	4,950,608	5,430,116	5,729,058	5,729,058	5.5%
Envmtl Compliance & Safety	1,732,907	2,162,841	2,244,635	2,244,635	3.8%
Office of Sustainability	891,336	1,055,830	1,149,260	1,149,260	8.8%
Communications	546,481	745,814	758,331	758,331	1.7%
Total	**$ 78,084,667**	**$ 91,609,622**	**$ 90,514,652**	**$ 90,490,013**	**(1.2%)**
Dollars by Category					
Personal Services					
Salaries	28,056,161	31,520,442	33,461,661	33,474,223	6.2%
Pension	17,431,392	20,150,658	19,736,261	19,689,785	(2.3%)
Medical	3,968,520	4,713,836	4,663,870	4,673,145	(0.9%)
Overtime	1,741,596	651,667	651,666	651,666	(0.0%)
Subtotal	$ 51,197,669	$ 57,036,603	$ 58,513,458	$ 58,488,819	2.5%
Non-Personal/Equipment					
Energy	6,636,385	6,439,000	6,857,000	6,857,000	6.5%
Supplies & Materials	4,305,144	5,308,928	5,108,928	5,108,928	(3.8%)
Chemicals	1,974,688	2,717,000	2,717,000	2,717,000	0.0%
Contractual Services	9,017,239	14,598,318	11,918,318	11,918,318	(18.4%)
All Others	4,953,541	5,509,773	5,399,948	5,399,948	(2.0%)
Subtotal	$ 26,886,998	$ 34,573,019	$ 32,001,194	$ 32,001,194	-7.4%
Total	**$ 78,084,667**	**$ 91,609,622**	**$ 90,514,652**	**$ 90,490,013**	**-1.2%**
Authorized Positions	366.93	359.2	360.36	360.86	0.46%

Budget Proposals

Proposed Program Changes	Positions	Treatment Plant Appropriations
1. Biosolids Management Program Staffing	**1.00**	**111,010**

This action adds 1.0 Environmental Services Program Manager (ESPM) to the Regional Wastewater Facility (RWF) Capital Improvement Program Division as a first step toward forming a Biosolids Management Team. This position will provide leadership and oversight of the Facility's transition from the current biosolids disposal method, i.e., beneficial reuse of 100% of dried biosolids as Alternative Daily Cover (ADC) at the adjacent Newby Island landfill, to a diversified program that considers multiple disposition options for the dewatered biosolids that will be generated as part of the new Digested Sludge Dewatering Facility project, currently in the planning phase and anticipated to come online in 2022. The ESPM will research market options for biosolids beneficial use and procure, negotiate, and manage a broad portfolio of disposition contracts. Additional staff for the Biosolids Management Team will be determined by analysis of program needs and is anticipated to be brought forward in future years. (Ongoing costs: $148,012)

2. Consent Decree Compliance Funding Shift	**(0.50)**	**(135,649)**

This action continues to shift funding of 0.50 Environmental Services Program Manager position in the South Bay Water Recycling (SBWR) program to support compliance with the Consent Decree between the City of San José and San Francisco Baykeeper during 2018-2019. The position will plan, track, and actively facilitate the implementation of the terms of the 10-year settlement; provide technical support on the assessment of stormwater revenue alternatives; and ensure continued alignment of relevant activities and compliance with the City's Stormwater Permit. This position will continue to provide programmatic and policy support to SBWR albeit at a reduced level. (Ongoing savings: $0)

3. South Bay Water Recycling Program

This action establishes the South Bay Water Recycling (SBWR) Operating Fund. This action shifts ongoing funding for 25.37 positions and related non-personal/equipment from the Treatment Plant Operating Fund to support activities within this new fund. The SBWR Operating Fund is the depository of revenues from the sale of wholesale water produced by the SBWR program. This fund provides monies for the operations and maintenance of the SBWR system. A portion of these monies may be transferred to the Sewer Service and Use Charge Fund and the San Jose-Santa Clara Treatment Plant Operating Fund to reflect the proportionate participation share of the operating revenue and costs of the City of San José and the tributary agencies. (Ongoing costs: $0)

2018-2019 Total Department Proposals	**.50**	**(24,639)**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: TREATMENT PLANT O&M
RESPONSIBLE MANAGER: AMIT MUTSUDDY

PROGRAM PURPOSE AND DESCRIPTION

This program is responsible for the technologically advanced and cost-effective treatment of an average wastewater flow of over 100 million gallons per day. With a management focus on three primary areas: operations and maintenance; compliance with the Facility's three permits – National Pollution Discharge Elimination System (NPDES), and Air (Bay Area Air Quality Management); and equipment reliability, the Plant is able to produce an effluent that regularly meets or exceeds all NPDES permit conditions and represents the City's largest asset and critical public health service. The end results are a high quality effluent discharge to the Bay, and user rates that reflect a commitment to cost-efficient operations.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Air Conditioning Mech	3.00	3.00	3.00	3.00
Analyst II C	1.00	1.00	1.00	1.00
Assist Hvy Dsl Eq Op Mech	1.00	1.00	1.00	1.00
Assoc Engineer	1.00	1.00	1.00	1.00
Assoc Engineering Tech	3.00	3.00	3.00	3.00
Deputy Dir U	1.00	1.00	1.00	1.00
Division Manager	3.00	3.00	3.00	3.00
Engineerg Technician II	1.85	1.85	1.85	1.85
Geographic Systms Spec II	2.00	2.50	2.50	2.50
Groundsworker	0.95	0.95	0.95	0.95
Heavy Equip Oper	5.00	5.00	5.00	5.00
Industrial Electrician Supervisor	1.00	1.00	1.00	1.00
Industrial Process Cntrl Senr	3.00			
Industrial Process Cntrl Spec I-III	1.00	4.00	4.00	4.00
Industrial Process Control Supervisor			1.00	1.00
Industrial Electrician	8.60	8.60	8.55	8.55
Instrument Control Supvr	0.90	0.90	0.85	0.85
Instrument Control Technician I-IV	9.50	11.30	10.80	10.80
Maintenance Worker I	1.00	1.00	1.00	1.00
Network Engineer	1.00	1.00	1.00	1.00
Office Specialist II	2.00	2.00	2.00	2.00
Painter Supvr WPCP	1.00	1.00	1.00	1.00
Painter WPCP	6.00	6.00	6.00	6.00

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PERSONNEL SUMMARY (continued)				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Principal Engineer/Architect			1.00	1.00
Prin Office Specialist	1.00	1.00	1.00	1.00
Senr Air Cond Mechanic	1.00	1.00	1.00	1.00
Senr Analyst	1.00	1.00	1.00	1.00
Senr Engineer	2.00	2.00	1.00	1.00
Senr Engineering Tech	3.00	3.00	4.00	4.00
Senr Geographic Syst Spec	1.00	1.00	1.00	1.00
Senr Hvy Equipment Oper	2.00	2.00	2.00	2.00
Senr Industrial Electrician	1.90	1.90	1.90	1.90
Senr Maintenance Worker	0.95	0.95	0.95	0.95
Senr Office Specialist	1.00	1.00		
Senr Painter	1.00	1.00	1.00	1.00
Senr Warehouse Worker	0.89	0.89	0.93	0.93
Supervg Applicat Analyst	1.00	1.00		
Supply Clerk	1.00	1.00	1.00	1.00
Senr Instrument Control Tech	1.80			
Warehouse Supervisor	0.89	0.89	0.93	0.93
Warehouse Worker I/II	2.67	2.67	2.79	2.79
Wastewater Attendant	19.00	19.00	19.00	19.00
Wastewater Maintenance Supt	2.85	2.85	2.85	2.85
Wastewater Mechanic II	30.75	30.75	30.75	30.75
Wastewater Mechanical Supvr I-II	7.00	6.00	6.00	6.00
Wastewater Operations Supt I-II	7.00	7.00	7.00	7.00
Wastewater Operator I-III	33.00	36.00	36.00	36.00
Wastewater Ops Foreperson I/II	20.00	20.00	20.00	20.00
Wastewater Senior Mechanic I/II	11.00	11.00	11.00	11.00
Total Full-Time Positions	212.50	215.00	214.60	214.60

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	Actual	Adopted	Base	Proposed
Salaries-Reg-Full Time	15,983,437	18,769,945	18,672,672	18,672,672
Salaries-Reg-Part Time	272,762	-		0
Salaries - Overtime	1,681,354	599,573	599,573	599,573
Other Personnel	880			0
Benefits: Retirement Contrib	9,462,395	10,413,093	11,293,287	11,293,287
Other Fringe Benefits	2,462,059	2,984,290	2,894,738	2,894,738
OPEB (Other Post Employment Benefits)	825,770	1,839,396		
Sub Total	**$ 30,688,658**	**$ 34,606,296**	**$ 33,460,270**	**$ 33,460,270**
Utilities: Gas	1,708,727	2,200,000	1,900,000	1,900,000
Utilities: Electricity	4,216,315	3,512,000	4,200,920	4,200,920
Supplies and Materials	3,596,411	4,352,662	4,352,662	4,352,662
Comm Expnse: Telephne-Telegrph	83,840	43,805	43,805	43,805
Comm Expnse: Postage	1,077	6,000	6,000	6,000
Print/Adv-Outside Vendors	1,330	5,750	5,750	5,750
Utilities: Other	186,799	139,000	139,000	139,000
Chemicals	1,974,688	2,717,000	2,717,000	2,717,000
Rent: Equipment & Vehicles	184,664	340,546	340,546	340,546
Trans/Travel: In County	3	14,144	14,144	14,144
Trans/Travel: Out of County	4,249	28,395	28,395	28,395
Trans/Travel: Out of State	2,563	51,069	51,069	51,069
Training	101,209	139,404	139,404	139,404
Mileage Reimbursement	720	150	150	150
Vehicle Operating Costs	573,552	650,573	589,300	589,300
Dues & Subscriptions	1,179,809	1,124,973	1,124,973	1,124,973
Computer Data Processing	448,126	354,000	354,000	354,000
Prof & Consultant Svcs	5,576,661	9,214,119	8,814,119	8,814,119
Insurance	124,975	564,592	564,592	564,592
Taxes	335,439			
Capital Outlay	78,556			
Machnry/Equipmt: Machinery	831,126	770,000	750,000	750,000
Sub Total	**$ 21,210,837**	**$ 26,228,182**	**$ 26,135,829**	**$ 26,135,829**
Combined Totals	**$ 51,899,495**	**$ 60,834,478**	**$ 59,596,099**	**$ 59,596,099**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: WATERSHED PROTECTION
RESPONSIBLE MANAGER: NAPP FUKUDA

PROGRAM PURPOSE AND DESCRIPTION

Provides environmental enforcement and technical support functions to support Department programs, enforce Federal, State, and local regulations pertaining to industrial and commercial waste discharges to the sanitary system. The Source Control/Pretreatment Program provides engineering evaluation, permitting, inspection, and monitoring of industrial waste dischargers and ensures that industrial discharges to the SJ/SC Water Pollution Control Plant comply with all applicable industrial waste ordinances within San José and the tributary agencies. The Laboratory Services Program provides analytical support to monitor wastewater treatment processes and NPDES compliance and support related special projects.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Analyst II C	0.75	0.75	0.50	0.50
Aquatic Toxicologist	1.00			0.00
Assoc Engineer	1.00	1.00	1.00	1.00
Biologist	1.00	1.00	1.00	1.00
Chemist	9.00	9.00	9.00	9.00
Deputy Dir U	0.75	0.75	0.50	0.50
Environment Insp, Assistant	4.00	3.00	3.00	3.00
Environment Inspector I/II	20.00	12.00	12.00	12.00
Environment Inspector, Sr	2.00	2.00	2.00	2.00
Environment Serv Prog Mgr	1.50	1.00	1.00	1.00
Environmental Laboratory Mgr	1.00	1.00	1.00	1.00
Environmental Laboratory Supvr	3.00	3.00	3.00	3.00
Laboratory Tech I/ II	13.00	13.00	13.00	13.00
Microbiologist	1.00	1.00	1.00	1.00
Office Specialist II	2.28	2.28	2.52	2.52
Prin Office Specialist	0.85	0.85	0.85	0.85
Sanitary Engineer	3.00	3.00	3.00	3.00
Senr Office Specialist	1.52	1.52	1.52	1.52
Staff Specialist	0.76	0.76	0.76	0.76
Total Full-Time Positions	67.41	56.91	56.65	56.65

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	4,721,596	4,522,019	4,754,913	4,754,913
Salaries - Overtime	20,225	27,733	27,733	27,733
Other Personnel	4,069			
Benefits: Retirement Contrib	2,623,334	2,293,423	2,723,004	2,723,004
Other Fringe Benefits	648,538	578,802	562,163	562,163
OPEB (Other Post Employment Benefits)	247,647	471,413		
Sub Total	**$ 8,265,409**	**$ 7,893,391**	**$ 8,067,813**	**$ 8,067,813**
Supplies and Materials	418,999	540,823	540,823	540,823
Comm Expnse: Telephne-Telegrph	22,935	34,550	34,550	34,550
Comm Expnse: Postage	2,175	11,500	11,500	11,500
Print/Adv-Outside Vendors	2,482	15,000	15,000	15,000
Rent: Land & Buildings		315	315	315
Rent: Equipment & Vehicles	10,523	35,000	35,000	35,000
Trans/Travel: In County	7	10,700	10,700	10,700
Trans/Travel: Out of County	5,459	26,234	26,234	26,234
Trans/Travel: Out of State	3,443	30,200	30,200	30,200
Training	9,461	41,430	41,430	41,430
Mileage Reimbursement	966	4,825	4,825	4,825
Vehicle Operating Costs	37,165	28,652	21,785	21,785
Dues & Subscriptions	15,053	21,227	21,227	21,227
Computer Data Processing	55,780	64,375	64,375	64,375
Prof & Consultant Svcs	401,955	459,181	459,181	459,181
Machnry/Equimt: Machinery	233,713	150,000	150,000	150,000
Sub Total	**$ 1,220,116**	**$ 1,474,012**	**$ 1,467,145**	**$ 1,467,145**
Combined Totals	**$ 9,485,526**	**$ 9,367,403**	**$ 9,534,958**	**$ 9,534,958**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: SOUTH BAY WATER RECYCLING
RESPONSIBLE MANAGER: JEFF PROVENZANO

PROGRAM PURPOSE AND DESCRIPTION

This program is responsible for coordinating the operations, maintenance and capital improvements of the water recycling system in the three cities it serves; providing customer support and Site Supervisor training; planning and implementing SBWR system improvements; facilitating compliance with local and State regulations; coordinating with regional agencies; and implementing practices to increase water reuse in order to achieve maximum revenue with existing infrastructure and continued wastewater diversion.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Analyst II C	0.30	0.30	0.30	0.30
Assoc Construction Insp	0.70	0.70	0.70	0.70
Assoc Engineer	3.15	3.15	3.15	3.15
Assoc Engineering Tech	1.00	1.00	1.00	1.00
Asst Water Systems Operator		0.15	0.15	0.15
Cross Connection Spec	0.30	0.30	0.30	0.30
Deputy Dir	0.35	0.35	0.35	0.35
Engineer I/II	0.20	0.20	0.20	0.20
Engineerg Technician II	0.40	0.40	0.40	0.40
Environmental Inspector II	0.50	0.50	0.50	0.50
Environment Serv Prog Mgr	1.00	0.50	1.00	0.50
Environment Serv Spec	1.00	1.00	1.00	1.00
Groundsworker	0.05	0.05	0.05	0.05
Industrial Electrician	0.40	0.40	0.45	0.45
Instrument Control Supvr	0.10	0.10	0.15	0.15
Instrument Control Technician I-IV	0.70	0.70	1.20	1.20
Maintenance Superintend	0.10			
Maintenance Supervisor	0.20			
Prin Construction Inspect	0.30	0.30	0.30	0.30
Principal Engineer/Architect			0.40	0.40
Senior Industrial Electrician	0.10		0.10	0.10
Senr Construction Insp	0.30	0.30	0.30	0.30
Senr Engineer	0.40	1.40	1.00	1.00
Senr Engineering Tech	1.00	1.00	1.00	1.00
Senr Maintenance Worker	0.05	0.05	0.05	0.05
Senr Water Systems Tech	0.15			
Wastewater Maintenance Supt	0.15	0.15	0.15	0.15
Wastewater Mechanic I/II	0.25	0.25	0.25	0.25
Water Syst Op Foreperson I/II		0.15	0.15	0.15
Water Systems Operator II		0.50	0.50	0.50
Water Syt Op Superindent I		0.20	0.20	0.20
Water Syt Operations Manager		0.10	0.10	0.10
Water Meter Reader	0.15			
Water Systems Technician	0.50			
Total Full-Time Positions	13.80	14.20	15.40	14.90

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	1,051,726	1,375,901	2,336,378	2,269,857
Compensated Absence	4,672			
Salaries-Reg-Part Time	35,620			
Salaries - Overtime	11,783	12,218	12,217	12,217
Benefits: Retirement Contrib	602,779	753,691	1,392,234	1,330,273
Other Fringe Benefits	147,220	205,012	340,778	333,611
OPEB (Other Post Employment Benefits)	54,531	110,251		
Sub Total	**$ 1,908,332**	**$ 2,457,073**	**$ 4,081,607**	**$ 3,945,958**
Utilities: Electricity	711,343	727,000	756,080	756,080
Supplies and Materials	155,539	280,575	80,575	80,575
Comm Expnse: Telephne-Telegrph	3,623	10,700	10,700	10,700
Comm Expnse: Postage		2,000	2,000	2,000
Print/Adv-Outside Vendors	333	11,720	11,720	11,720
Utilities: Other	3,447			
Chemicals	1,248			
Rent: Equipment & Vehicles	673	3,000	3,000	3,000
Trans/Travel: In County		3,500	3,500	3,500
Trans/Travel: Out of County	1,312	5,200	5,200	5,200
Trans/Travel: Out of State		7,000	7,000	7,000
Training	3,032	9,000	9,000	9,000
Mileage Reimbursement	1,553	2,400	2,400	2,400
Vehicle Operating Costs	3,883	40,100	40,100	40,100
Dues & Subscriptions	31,065	41,000	41,000	41,000
Computer Data Processing	10,264	16,200	16,200	16,200
Prof & Consultant Svcs	2,480,996	3,478,768	1,278,768	1,278,768
PW Capital Support Charge	1,592			
Capital Outlay	661			
Machnry/Equimt: Machinery	45,143	6,000	6,000	6,000
Sub Total	**$ 3,455,708**	**$ 4,644,163**	**$ 2,273,243**	**$ 2,273,243**
Combined Totals	**$ 5,364,040**	**$ 7,101,236**	**$ 6,354,850**	**$ 6,219,201**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: MGMT & ADMINISTRATIVE SERVICES
RESPONSIBLE MANAGER: LINDA CHARFAUROS

PROGRAM PURPOSE AND DESCRIPTION

Provides support services including: financial and accounting services, human resources, information technology services, contract administration, grant administration, capital improvements and operating budget management.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Account Clerk II	0.68	0.68	0.69	0.69
Accountant II	1.68	1.68	1.69	1.69
Accounting Tech	1.36	1.36	1.38	1.38
Administrative Assist C	0.68	0.68	0.69	0.69
Administrative Officer	0.68	0.68	0.69	0.69
Analyst I/ II C	2.72	2.72	2.76	2.76
Assist DirU	0.68	0.68	0.69	0.69
Dept Information Tech Mgr	0.65	0.65	0.66	0.66
Dir Environmental Serv U	0.68	0.68	0.69	0.69
Division Manger	0.83	0.83	0.82	0.82
Information Sys Analyst	1.25	1.25	1.20	1.20
Network Engineer	0.68	0.68	0.68	0.68
Network Technician II-III	1.36	1.36	1.28	1.28
Office Specialist II	1.36	1.36	1.38	1.38
Prin Accountant	0.68	0.68	0.69	0.69
Prin Office Specialist	1.36	1.36	1.37	1.37
Program Manager I	0.68	0.68	0.69	0.69
Senr Account Clerk	2.72	2.72	2.76	2.76
Senr Accountant	2.72	2.72	2.76	2.76
Senr Analyst	2.72	2.72	2.76	2.76
Staff Specialist	1.36	1.36	2.07	2.07
Staff Technician	0.68	0.68	0.00	0.00
Systems Apps Progmr II	1.25	1.25	1.30	1.30
Total Full-Time Positions	29.46	29.46	29.70	29.70

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	Actual	Adopted	Base	Proposed
Salaries-Reg-Full Time	2,611,494	2,676,824	2,953,077	2,953,077
Salaries-Reg-Part Time	6,274			
Salaries - Overtime	26,503	12,143	12,143	12,143
Other Personnel	15,665		13,000	13,000
Benefits: Retirement Contrib	1,659,176	1,858,031	2,120,867	2,120,867
Other Fringe Benefits	303,132	310,397	302,986	302,986
OPEB (Other Post Employment Benefits)	126,308	245,850		
Sub Total	**$ 4,748,551**	**$ 5,103,246**	**$ 5,402,073**	**$ 5,402,073**
Supplies and Materials	25,531	35,430	35,430	35,430
Comm Expnse: Telephne-Telegrph	31,721	30,722	30,722	30,722
Comm Expnse: Postage	2,920	15,640	15,640	15,640
Print/Adv-Outside Vendors	168	4,591	4,591	4,591
Rent: Equipment & Vehicles	20,930	21,138	21,138	21,138
Trans/Travel: In County	342	1,370	1,370	1,370
Trans/Travel: Out of County	3,536	2,720	2,720	2,720
Trans/Travel: Out of State	2,954	2,040	2,040	2,040
Training	7,749	28,971	28,971	28,971
Mileage Reimbursement	828	1,803	1,803	1,803
Vehicle Operating Costs	1,911		115	115
Dues & Subscriptions	3,336	8,331	8,331	8,331
Computer Data Processing	19,953	81,140	81,140	81,140
Prof & Consultant Svcs	80,179	92,974	92,974	92,974
Sub Total	**$ 202,057**	**$ 326,870**	**$ 326,985**	**$ 326,985**
Combined Totals	**$ 4,950,608**	**$ 5,430,116**	**$ 5,729,058**	**$ 5,729,058**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: CIP-ENGINEERING SVCS
RESPONSIBLE MANAGER: JULIA NGUYEN

PROGRAM PURPOSE AND DESCRIPTION

This program provides services for both capital project planning, design and construction of major projects as well as process engineering services within the Water Pollution Control Plant. With the adoption of the Plant Master Plan in 2013, which identified over $2.1 billion in long-term capital projects over the next thirty years, the group's primary responsibility is to deliver the projects to address critical aging infrastructure, future regulatory requirements, and improved performance needs. Additional responsibilities include troubleshooting and improving the treatment process, primarily through research and development projects, to ensure efficient and cost effective operations of the Plant.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Analyst II C	1.30	1.30	1.30	1.30
Assoc Engineer	5.50	5.50	5.50	5.50
Assoc Engineering Tech	1.50	1.50	1.50	1.50
Deputy DirU	1.00	1.00	1.00	1.00
Division Manager	1.00	1.00	1.00	1.00
Engineer II	0.60	0.60	0.60	0.60
Environment Serv Prog Mgr				1.00
Office Specialist II	1.00	1.00	1.00	1.00
Principal Engineer	1.30	1.80	1.80	1.80
Sanitary Engineer	3.30	3.30	3.30	3.30
Senr Engineer	4.50	4.50	4.50	4.50
Senr Engineering Tech	1.20	1.20	0.90	0.90
Senr Office Specialist			0.30	0.30
Staff Specialist	1.30	1.00	1.00	1.00
Staff Technician		0.30	0.30	0.30
Supervg Environ Serv Spe	0.30	0.30	0.30	0.30
Total Full-Time Positions	23.80	24.30	24.30	25.30

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	1,797,407	2,364,207	2,683,427	2,762,510
Compensated Absence	9,826			
Salaries-Reg-Part Time	1,613			
Salaries - Overtime	849			
Benefits: Retirement Contrib	863,279	858,360	1,118,551	1,134,036
Other Fringe Benefits	206,933	379,799	318,152	334,594
OPEB (Other Post Employment Benefits)	104,835	260,708		
Sub Total	**$ 2,984,743**	**$ 3,863,073**	**$ 4,120,130**	**$ 4,231,140**
Supplies and Materials	58,514	41,881	41,881	41,881
Comm Expnse: Telephne	27,801	3,500	3,500	3,500
Comm Expnse: Postage	79	1,000	1,000	1,000
Print/Adv-Outside Vendors	1,864	5,000	5,000	5,000
Rent: Land & Buildings	46,609			
Rent: Equipment & Vehicles	10,583	29,000	29,000	29,000
Trans/Travel: In County	-	3,500	3,500	3,500
Trans/Travel: Out of County	5,086	5,000	5,000	5,000
Trans/Travel: Out of State	4,396	9,000	9,000	9,000
Training	11,491	24,750	24,750	24,750
Mileage Reimbursement	401	2,000	2,000	2,000
Vehicle Operating Costs	954	5,700	5,700	5,700
Dues & Subscriptions	2,902	5,000	5,000	5,000
Computer Data Processing	45,085	43,500	42,000	42,000
Prof & Consultant Svcs	10,419	850,000	850,000	850,000
PW CAP Support Charge	3,349			
Machinery/ Equipment: Machinery		20,000		
Sub Total	**$ 229,531**	**$ 1,048,831**	**$ 1,027,331**	**$ 1,027,331**
Combined Totals	**$ 3,214,274**	**$ 4,911,904**	**$ 5,147,461**	**$ 5,258,471**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: ENVIRONMENTAL COMPLIANCE /SAFETY
RESPONSIBLE MANAGER: KEN DAVIES

PROGRAM PURPOSE AND DESCRIPTION

Provides general regulatory compliance (NPDES, Title V, OSHA, etc.) and environmental health and safety support (EH&S) to the Plant and the rest of the department, as needed, through a variety of programs as required by local, State, and Federal regulations. The desired outcome is to protect environmental and public health, create a safe working environment for employees, and maintain compliance with all local, State, and Federal regulations pertaining to environmental compliance and occupational safety.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Assoc Engineer	0.30	0.30	0.30	0.30
Assoc Environ Serv Spec	1.00	1.30	1.00	1.00
Biologist	1.82	1.82	1.82	1.82
Engineer II			1.00	1.00
Environment Compl Officer	0.63	0.63	0.63	0.63
Environment Serv Prog Mgr	0.91	0.91	0.91	0.91
Environment Serv Spec	4.12	3.82	3.12	3.12
Senr Analyst			0.10	0.10
Senr Engineer	1.00	1.00	1.00	1.00
Supervg Environ Serv Spec	0.91	0.91	0.91	0.91
Total Full-Time Positions	10.69	10.69	10.79	10.79

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	772,514	1,003,766	1,124,937	1,124,937
Salaries-Reg-Part Time	1,037			
Salaries - Overtime	291			
Other Personnel	190			
Benefits: Retirement Contrib	414,878	521,998	662,621	662,621
Other Fringe Benefits	110,911	145,391	146,140	146,140
OPEB (Other Post Employment Benefits)	41,796	100,749		
Sub Total	**$ 1,341,618**	**$ 1,771,904**	**$ 1,933,698**	**$ 1,933,698**
Supplies and Materials	37,923	25,575	25,575	25,575
Comm Expnse: Telephne-Telegrph	4,014	231	231	231
Comm Expnse: Postage	787	268	268	268
Print/Adv-Outside Vendors	535	225	225	225
Rent: Land & Buildings		210	210	210
Rent: Equipment & Vehicles		65	65	65
Trans/Travel: In County	75	518	518	518
Trans/Travel: Out of County	1,556	1,765	1,765	1,765
Trans/Travel: Out of State		3,685	3,685	3,685
Training	1,355	4,664	4,664	4,664
Mileage Reimbursement	2,663	939	939	939
Vehicle Operating Costs	1,397			
Dues & Subscriptions	8	51,318	51,318	51,318
Computer Data Processing	1,094	1,638	1,638	1,638
Prof & Consultant Svcs	335,842	299,836	219,836	219,836
Taxes	4,042			
Sub Total	**$ 391,289**	**$ 390,937**	**$ 310,937**	**$ 310,937**
Combined Totals	**$ 1,732,907**	**$ 2,162,841**	**$ 2,244,635**	**$ 2,244,635**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: OFFICE OF SUSTAINABILITY
RESPONSIBLE MANAGER: KEN DAVIES

PROGRAM PURPOSE AND DESCRIPTION

Provides support and technical expertise to the Water Pollution Control Plant to advance efforts related to renewable energy, zero waste, and wastewater reuse. In addition, staff focuses on supporting programs related to energy and water efficiency at the Plant, renewable energy technologies, and greenhouse gas emissions.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Environment Serv Prog Mgr	0.35	0.22	0.39	0.39
Environment Serv Spec	2.51	2.51	2.06	2.06
Environmntl Sustainability Mgr	0.39	0.39	0.39	0.39
Planner III	1.00	1.00	1.00	1.00
Supervg Environ Serv Spec	1.46	1.46	1.66	1.66
Total Full-Time Positions	5.71	5.58	5.50	5.50

DETAILED PROGRAM BUDGET				
	2016-2017	**2017-2018**	**2018-2019**	**2018-2019**
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	510,452	541,976	609,469	609,469
Salaries-Reg-Part Time	8,064			
Salaries - Overtime	154			
Benefits: Retirement Contrib	267,501	228,390	330,967	330,967
Other Fringe Benefits	57,614	62,879	44,595	44,595
OPEB (Other Post Employment Benefits)	27,030	58,056		
Sub Total	**$ 870,814**	**$ 891,301**	**$ 985,031**	**$ 985,031**
Supplies and Materials	10,592	7,187	7,187	7,187
Comm Expnse: Telephne-Telegrph	527	300	300	300
Comm Expnse: Postage		325	325	325
Print/Adv-Outside Vendors	3,499	17,149	17,149	17,149
Rent: Land & Buildings		935	935	935
Rent: Equipment & Vehicles	3			
Trans/Travel: In County	35	2,499	2,499	2,499
Trans/Travel: Out of County	584	4,057	4,057	4,057
Trans/Travel: Out of State	976	3,000	3,000	3,000
Training	522	6,099	6,099	6,099
Mileage Reimbursement	217	1,064	1,064	1,064
Vehicle Operating Costs		2,300	2,000	2,000
Dues & Subscriptions	338	13,716	13,716	13,716
Computer Data Processing	1,604	24,458	24,458	24,458
Prof & Consultant Svcs	1,624	81,440	81,440	81,440
Sub Total	**$ 20,521**	**$ 164,529**	**$ 164,229**	**$ 164,229**
Combined Totals	**$ 891,336**	**$ 1,055,830**	**$ 1,149,260**	**$ 1,149,260**

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PROGRAM: COMMUNICATIONS
RESPONSIBLE MANAGER: JENNIE LOFT

PROGRAM PURPOSE AND DESCRIPTION

This program manages the media relations and public outreach needs for the San Jose/Santa Clara Water Pollution Control Plant, the wastewater pre-treatment, pollution prevention, and recycled water programs. This includes responding to media inquiries and seeking media coverage; sharing utility and capital improvement information to neighbors and the public, representing the Department at community meetings; developing and maintaining best management practice materials including information to regulated businesses; publicizing and conducting community events to collect pharmaceuticals; supporting outreach efforts; providing information to recycled water customers; and emergency preparedness communications support

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Adopted	**Adopted**	**Base**	**Proposed**
Analyst II C	0.34	0.34	0.38	0.38
Public Information Rep II	1.86	1.36	1.52	1.52
Public Information Mgr	0.34	0.34	0.38	0.38
Senr Public Information Rep	0.68	0.68	0.76	0.76
Staff Specialist	0.34	0.34	0.38	0.38
Total Full-Time Positions	3.56	3.06	3.42	3.42

DETAILED PROGRAM BUDGET				
	2016-2017	**2017-2018**	**2018-2019**	**2018-2019**
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time	230,405	265,805	313,788	313,788
Salaries-Reg-Part Time	16,457			
Salaries - Overtime	437			
Other Personnel				
Benefits: Retirement Contrib	96,789	108,310	94,730	94,730
Other Fringe Benefits	32,112	47,266	54,318	54,318
OPEB (Other Post Employment Benefits)	13,343	28,938		
Sub Total	**$ 389,543**	**$ 450,319**	**$ 462,836**	**$ 462,836**
Supplies and Materials	1,635	24,795	24,795	24,795
Comm Expnse: Telephne-Telegrph	833	222	222	222
Comm Expnse: Postage	81	14,000	14,000	14,000
Print/Adv-Outside Vendors	19,593	129,700	129,700	129,700
Trans/Travel: In County	22	463	463	463
Trans/Travel: Out of County	1,165	105	105	105
Trans/Travel: Out of State	209	0		
Training	377	2,349	2,349	2,349
Mileage Reibursement	47	0		
Dues & Subscriptions	1,021	467	467	467
Computer Data Processing	2,390	1,394	1,394	1,394
Prof & Consultant Svcs	129,565	122,000	122,000	122,000
Sub Total	**$ 156,938**	**$ 295,495**	**$ 295,495**	**$ 295,495**
Combined Totals	**$ 546,481**	**$ 745,814**	**$ 758,331**	**$ 758,331**

Performance Measures- Conservation

Performance Measures

	2016-2017 Actual	2017-2018 Target	2017-2018 Estimated	2018-2019 Target
(Energy) % of energy used at the Water Pollution Control Plant that is renewable	40%	40%	40%	41%

Activity and Workload Highlights

	2016-2017 Actual	2017-2018 Forecast	2017-2018 Estimated	2018-2019 Forecast
City-Wide Renewable Energy Generation	37%	35%	33%	35%

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

Performance Measures-Recycled Water

Performance Measures

	2016-2017 Actual	2017-2018 Target	2017-2018 Estimated	2018-2019 Target
Millions of gallons of recycled water delivered annually	4,071	4,953	3,379	3,321
% of time recycled water quality standards are met or surpassed	100%	100%	100%	100%
% of wastewater influent recycled for beneficial purposes during the dry weather period[1]	19%	19%	16%	17%
Cost per million gallons of recycled water Delivered	$2,378	$2,399	$2,413	$2,486
% of recycled water customers rating service as good or excellent based on reliability, water quality, and responsiveness***	N/A [2]	80%	88%	N/A [2]

[1] Dry weather period is defined as the lowest continuous three-month average rainfall between May and October, which during the fiscal year reporting period is July-September.

[2] Data for this measure is collected on a biennial basis via survey. The next survey is scheduled for 2019-2020. No survey will be conducted in 2018-2019.

Activity and Workload Highlights

	2016-2017 Actual	2017-2018 Forecast	2017-2018 Estimated	2018-2019 Forecast
Total number of South Bay Water Recycling customers	831	865	880	900

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

Performance Measures-Treatment Plant

Performance Measures

	2016-2017 Actual	2017-2018 Target	2017-2018 Estimated	2018-2019 Target
Millions of gallons per day discharged to the Bay during average dry weather season State order: 120 mgd or less[1]	73 mgd	<120 mgd	78 mgd	<120 mgd
% of time pollutant discharge requirements are met or surpassed	99.99%	100%	100%	100%
# of requirement violations				
-Pollutant discharge	0	0	0	0
-Air emissions	1	0	1	0
% of significant industrial facilities in consistent compliance with federal pretreatment requirements	94.68%	90.00%	92.25%	90.00%
Cost per million gallons treated	$1,314	$1,542	$1,382	$1,427

[1] Average dry weather season is defined as the lowest three-month continuous average between May and October, which during the fiscal year reporting period is July-September.

Activity and Workload Highlights

	2016-2017 Actual	2017-2018 Forecast	2017-2018 Estimated	2018-2019 Forecast
Average millions of gallons per day treated	103	100	103	105
Total population in service area[1]	1,457,623	1,486,603	1,463,145	1,482,721

[1] The San José/Santa Clara Water Pollution Control Plant (Plant) is a regional wastewater treatment facility serving eight South Bay cities and four sanitation districts including: San José, Santa Clara, Milpitas, Cupertino Sanitation District (Cupertino), West Valley Sanitation District (Campbell, Los Gatos, Monte Sereno and Saratoga), County Sanitation Districts 2-3 (unincorporated), and Burbank Sanitary District (unincorporated).

SAN JOSE / SANTA CLARA

WATER POLLUTION CONTROL PLANT

2018-2019

PROPOSED

South Bay Water Recycling Operating Fund
Fund 570

Environmental Services Department
City of San José

FUND: SOUTH BAY WATER RECYCLING OPERATING

PURPOSE AND DESCRIPTION

The SBWR Operating Fund is the depository of revenues from the sale of wholesale water produced by the SBWR program. This fund provides monies for the operations and maintenance of the SBWR system. The personnel summary and detailed program budget shown below reflect the department costs in this fund to effectively operate and maintain the SBWR program.

PERSONNEL SUMMARY				
Full Time Positions	**2016-2017**	**2017-2018**	**2018-2019**	**2018-2019**
	Actual	**Actual**	**Base**	**Proposed**
Account Clerk II				0.05
Accountant II				0.05
Accounting Tech				0.10
Administrative Assist C				0.05
Administrative Officer				0.05
Analyst I C				0.05
Analyst II C				0.45
Assist Dir U				0.05
Assist Hvy Dsl Eq Op Mech				0.09
Assoc Construction Insp				0.70
Assoc Engineer				1.00
Assoc Engineer (Exempt)				2.15
Assoc Engineering Tech				1.00
Cross Connection Spec				0.30
Dept Information Tech Manager				0.02
Deputy Dir U				0.35
Dir Environmental Serv U				0.05
Division Manager				0.15
Engineer II (Exempt)				0.20
Engineerg Technician II				0.40
Environment Inspector II				0.50
Environment Serv Prog Mgr				0.55
Environment Serv Spec				1.00
Geographic Info Systms Spec I				0.50
Groundsworker				0.05
Industrial Electrician				0.40

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

PERSONNEL SUMMARY (continued)				
Instrument Control Supvr				0.15
Instrument Control Tech I-IV				1.00
Instrument Control Technician				0.75
Network Engineer				0.02
Network TechnicianI- II				0.04
Office Specialist II				0.10
Prin Accountant				0.05
Prin Construction Inspect				0.30
Prin Office Specialist				0.10
Principal Engineer/Architect				0.40
Program Manager I				0.05
Senr Account Clerk				0.20
Senr Accountant				0.20
Senr Analyst				0.20
Senr Construction Insp				0.30
Senr Engineer				1.00
Senr Engineering Tech				1.00
Senr Industrial Electrician				0.10
Senr Maintenance Worker				0.05
Staff Specialist				0.15
Supervg Environ Serv Spec				0.05
Wastewater Maintenance Supt				0.15
Wastewater Mechanic I-II				2.38
Wastewater Mechanical Supvr II				0.29
Wastewater Operator I- III				2.16
Wastewater Ops Foreperson I-II				2.15
Wastewater Senr Mechanic II				0.67
Water Syst Op Assistant I				0.15
Water Systems Operator III				0.50
Water Syst Op Foreperson I				0.15
Water Syt Op Superindent I				0.20
Water Syt Operations Manager				0.10
Total Full-Time Positions	0.00	0.00	0.00	25.37

San José/Santa Clara Water Pollution Control Plant

Environmental Services Department

DETAILED PROGRAM BUDGET				
	2016-2017	2017-2018	2018-2019	2018-2019
Detail/Category	**Actual**	**Adopted**	**Base**	**Proposed**
Salaries-Reg-Full Time				2,086,442
Salaries - Overtime				
Benefits: Retirement Contrib				1,427,687
Other Fringe Benefits				304,711
OPEB (Other Post Employment Benefits)				
Sub Total	**$ -**	**$ -**	**$ -**	**$ 3,818,840**
Utilities: Gas				125,000
Utilities: Electricity				1,206,080
Supplies and Materials				231,915
Comm Expnse: Telephne-Telegrph				11,395
Comm Expnse: Postage				2,177
Print/Adv-Outside Vendors				29,730
Utilities: Other				-
Chemicals				110,000
Rent: Equipment & Vehicles				8,268
Trans/Travel: In County				3,521
Trans/Travel: Out of County				5,414
Trans/Travel: Out of State				7,179
Training				11,321
Mileage Reimbursement				2,449
Vehicle Operating Costs				40,215
Dues & Subscriptions				41,202
Computer Data Processing				17,113
Prof & Consultant Svcs				1,299,264
Taxes & Fees				2,700
Machnry/Equimt: Machinery				6,000
Sub Total	**$ -**	**$ -**	**$ -**	**$ 3,160,943**
Combined Totals	**$ -**	**$ -**	**$ -**	**$ 6,979,783**

Below is Source and Use of Funds Statement for the South Bay Water Recycling Operating Fund from the City's 2018-2019 Proposed Operating Budget.

South Bay Water Recycling Operating Fund (570)*

STATEMENT OF SOURCE AND USE OF FUNDS

	2016-2017 Actual	2017-2018 Adopted	2017-2018 Modified	2017-2018 Estimate	2018-2019 Proposed
SOURCE OF FUNDS					
Fees, Rates, and Charges					
Recycled Water Sales - Santa Clara	0	0	0	0	4,272,900
Recycled Water Sales - San Jose Water Company	0	0	0	0	2,460,000
Recycled Water Sales - Milpitas	0	0	0	0	1,100,000
Recycled Water Sales - San Jose Municipal Water System	0	0	0	0	4,707,100
Total Fees, Rates, and Charges	0	0	0	0	12,540,000
TOTAL SOURCE OF FUNDS	**0**	**0**	**0**	**0**	**12,540,000**
USE OF FUNDS					
Expenditures					
ESD Personal Services	0	0	0	0	3,818,840
ESD Non-Personal/Equipment	0	0	0	0	3,160,943
SCVWD - Advanced Water Treatment	0	0	0	0	500,000
Overhead	0	0	0	0	854,424
Total Expenditures	0	0	0	0	8,334,207
Ending Fund Balance					
Operations and Maintenance Reserve (Use)	0	0	0	0	1,287,815
Unrestricted Ending Fund Balance (Use)	0	0	0	0	2,917,978
Total Ending Fund Balance	0	0	0	0	4,205,793
TOTAL USE OF FUNDS	**0**	**0**	**0**	**0**	**12,540,000**

* This Enterprise Fund accounts for the monies received from the sale of wholesale recycled water produced by the South Bay Water Recycling (SBWR) program for the operations and maintenance of the SBWR system.

COUNCIL AGENDA: 05-22-18
FILE: 18-659
ITEM:

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: April 30, 2018

Approved D-DSyL Date 5/10/18

SUBJECT: 8641 - SOUTH BAY WATER RECYCLING PUMP STATION HVAC PROJECT

RECOMMENDATION

Report on bids and award of contract for the 8641 - South Bay Water Recycling Pump Station Heating, Ventilation, and Air Conditioning Project to the low bidder, Blocka Construction Inc., in the amount of $406,000 and approve a contingency in the amount of $40,600.

OUTCOME

Award of the construction contract to Blocka Construction, Inc. will enable the 8641 - South Bay Water Recycling (SBWR) Pump Station Heating, Ventilation, and Air Conditioning (HVAC) Project to proceed. Approval of a ten percent contingency will provide funding for any unanticipated work necessary for the proper completion or construction of the project.

BACKGROUND

The SBWR Program is responsible for the production and distribution of recycled water in the South Bay serving customers and residents in the cities of San José, Santa Clara, and Milpitas. SBWR began its operation in 1998 with a requirement to divert treated wastewater from Bay discharge. Currently, the SBWR system has five pump stations, two reservoirs, and over 150 miles of pipeline servicing more than 850 recycled water customers. The project will install air conditioning improvements to cool the mechanical control room in Pump Station 5 at 11th Street and Keyes Ave and install ventilation equipment to cool motor control equipment in Pump Station 8/11 at Yerba Buena Road and Baronet Court. The project is anticipated to be completed December 2018.

SBWR has numerous operations and maintenance projects needed to maintain system operations that impact San José-Santa Clara Regional Wastewater Facility staff, and critical customers such as power stations, and maintain system reliability that assures revenue from use, and protection

of public health and safety. This project is recommended by the 2014 South Bay Water Recycling Strategic and Master Plan be completed to maintain SBWR system operations and reliability.

ANALYSIS

Bids for the project were opened on January 25, 2018, with the following results:

Contractor	Bid Amount	Variance Amount	Over/(Under) Percent
Engineer's Estimate	**$350,000**	---	---
Blocka Construction, Inc. (Fremont)	$406,000	$56,000	16
WestCal Design and Build, Inc. (Union City)	$429,120	$79,120	23

Two bids were received for this project. The low bid submitted by Blocka Construction, Inc. is 16 percent over the Engineer's Estimate and the other bid submitted by WestCal Design and Build, Inc, is 23 percent over the Engineer's Estimate. Staff considers the low bid submitted for this project acceptable for the work involved and recommends award of the contract to Blocka Construction, Inc.

Council Policy provides for a standard contingency of 10 percent on public works projects involving building projects. The standard contingency is appropriate for this project.

EVALUATION AND FOLLOW-UP

No additional follow-up with the City Council is anticipated at this time.

PUBLIC OUTREACH

To solicit contractors, this project was listed on BidSync and advertised in the *San José Post Record.* The complete bid package and project information are available on BidSync for interested contractors, contractor organizations and builders' exchanges.

This memorandum will be posted on the City's Council Agenda website for the May 22, 2018 City Council Meeting.

COORDINATION

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

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the May 17, 2018 TPAC meeting. A supplemental memo with the committee's recommendation will be included in the amended May 22, 2018 City Council meeting agenda.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION/COST OF PROJECT: **$406,000**

Project Delivery	$125,000 *
Construction	406,000
Contingency	40,600
Total Project Costs	571,600
Cost to Date Expenditures	85,000
REMAINING PROJECT COSTS	**$486,600**

* Project delivery includes $80,000 for Design Services and $45,000 for Inspection, Testing, Construction Management, and project closeout costs.

2. COST ELEMENTS OF AGREEMENT:

Electrical Modifications	$121,000
HVAC Equipment Installation	245,000
Ceiling Tile and Insulation Installation	5,000
Controls Installation	35,000
TOTAL AGREEMENT:	$406,000

3. SOURCE OF FUNDING:
   Fund 513 – San José-Santa Clara Treatment Plant Operating Fund

BUDGET REFERENCE

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

Fund #	Appn. #	Appn. Name	Total Appn.	Amount for Agreement	2017-2018 Adopted Operating Budget Page	Last Budget Action (Date, Ord. No.)
513	0762	Non-Personal/ Equipment	$34,082,102	$406,000	1037	10/17/2017, Ord. No. 30014

CEQA

Exempt, File No. PP17-067.

/s/
KERRIE ROMANOW
Director, Environmental Services

For questions please contact Jeff Provenzano, Deputy Director, South Bay Water Recycling, at (408) 277-3288.

T&E AGENDA: 05/7/2018
ITEM: d (4)

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TRANSPORTATION & ENVIRONMENT COMMITTEE

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: April 18, 2018

Approved KH

Date 26 APRIL 2018

SUBJECT: DISCHARGE REGULATIONS AND FUTURE IMPACTS ON THE SAN JOSE – SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

Accept the annual update on regulatory items related to the San José-Santa Clara Regional Wastewater Facility.

OUTCOME

Provide an update to the Transportation and Environment (T&E) Committee on status of potential regulatory requirements that could impact the San José-Santa Clara Regional Wastewater Facility[1] (RWF).

EXECUTIVE SUMMARY

The RWF is the largest advanced wastewater treatment plant in the western United States, serving a population of 1.4 million people and over 17,000 businesses across eight cities and the County. The RWF is the largest discharger into the San Francisco Bay, a large industrial air emissions source, and is continually faced with meeting increasingly stringent regulatory requirements. The RWF is regulated under two principal operating permits: A National Pollutant Discharge Elimination System (NPDES) permit under the Clean Water Act, administered by San Francisco Bay Regional Water Quality Control Board (Water Board), and an Air Operating Permit under Title V of the Clean Air Act, administered by Bay Area Air Quality Management District (BAAQMD).

[1] *The legal facility name remains San Jose-Santa Clara Water Pollution Control Plant, but a new common name, San José-Santa Clara Regional Wastewater Facility, was approved in early 2013.*

NPDES permit requirements have become increasingly stringent over the years, but the RWF has been able to successfully meet them through capital improvements and a robust pretreatment/source control program. Since 1997, the RWF has also had a South Bay Monitoring Program (SBMP), which tracks a variety of water quality and habitat data points to demonstrate that the RWF's discharge, or effluent, is not harmful to the South San Francisco Bay (Bay). Data from the SBMP has also helped inform new regulations and facilitated a reduction in the requirements in the most recently issued NPDES permit.

New regulations related to both the air and water permits and to the disposition of biosolids have been adopted or are currently under consideration by our State regulators. For wastewater, staff is specifically focused on developing regulations for Contaminants of Emerging Concern, Toxicity, Nutrient Reduction, and more stringent Environmental Laboratory Standards. New and pending wastewater regulations represent advancements in the identification of and detection of limits for water quality contaminants. Incremental improvements in overall water quality are not typically achieved by incremental investment in treatment technologies, if those even exist, so staff continues to monitor and participate in the formal rulemaking process on behalf of the rate payers in order to advocate for reasonable requirements.

For air emissions, staff is following the rule making for Toxic Air Contaminants, and Greenhouse Gas emissions, including methane, so staff is monitoring for potential impacts on RWF operations and the capital improvement program (CIP). Air emissions are typically directly focused on human health impacts in the vicinity, but more focus on climate-related concerns is a recent trend. Emissions reductions are typically achieved through end-of-pipe and fuel-cleaning control technologies, but like their wastewater counterparts, can come with capital-level design costs. Staff must continually evaluate new rules and proposed permit conditions and look for the most cost-effective engineering and policy solutions.

The State, through new CalRecycle-sponsored regulations, is also creating a new rule that would potentially affect the RWF's ability to dispose of its biosolids at the nearby Newby Island landfill, which could significantly increase disposal costs. As adopted by the passage of SB 1383 (2016), the new rule attempts to address climate pollutants, such as methane, that result from the landfill disposal of organic material. The current definition of organics under this rule includes biosolids, so the RWF could be forced to transition out of its current drying process much sooner than planned.

This report provides a summary of these regulations and discusses how the CIP is being developed to position the RWF to respond to these new and anticipated future regulations.

BACKGROUND

Since 1956, the RWF has been continually treating Silicon Valley's wastewater and protecting public health and the South San Francisco Bay (Bay) environment. The RWF is a critical piece of regional infrastructure that powers the economy and facilitates growth for most of Santa Clara County. Since the 1950's the RWF service area population has more than tripled. Despite

extremely rapid growth, the RWF has been able to treat wastewater to the highest standards and the waters near the RWF discharge continue to have an abundance of marsh plants, fish, and birds.

The RWF is the largest wastewater discharger in San Francisco Bay and the largest advanced wastewater treatment plant in the western United States, serving a population of 1.4 million people (roughly one-fifth of the entire Bay Area population) and over 17,000 businesses across eight cities and the County. From industrial dischargers to residents and restaurants, the RWF is responsible for cleaning wastewater to the highest standards before it is discharged to the shallow waters of the South Bay. The RWF incorporates primary, secondary biological nutrient removal (BNR), filtration, and disinfection into its treatment processes.

The RWF is sized to treat 167 million gallons per day (MGD) average daily dry weather flow. Currently, the year-round and average dry weather influent flow is 100 MGD. Average effluent flow into the Bay through the Artesian Slough averages between 70 to 84 MGD, with an average of approximately 11 MGD diverted to the South Bay Water Recycling system to be used as recycled water in three cities. All solids produced as a byproduct of the treatment process are treated in digesters and sent to open air lagoons and drying beds. The dried solids are sent annually to the adjacent Newby Island Landfill to be used as Alternate Daily Cover (ADC).

The RWF operates a critical regional asset while being a good steward of the environment and enabling recreational uses by and in the Bay. The Don Edwards National Wildlife Refuge is located right near the effluent discharge. Public trails winding along Artesian Slough accommodate day hikers and wildlife photographers. Fishing enthusiasts and seasonal duck hunters launch from the new Alviso Boat Launch to fish and hunt in waters flowing from the RWF.

Regulatory Permits

The RWF is regulated under two principal operating permits:

- A NPDES permit under the Clean Water Act administered by the Water Board. The current NPDES Permit was issued in September 2014 and will be up for renewal in September 2019.
- An Air Operating Permit under Title V of the Clean Air Act administered by BAAQMD. The Air Permit was issued in March 2017 and will be up for renewal in March 2022.

The NPDES Permit mandates water quality monitoring requirements for the RWF's effluent discharges to the Bay and sets specific concentration limits for a number of metals and organic compounds. The NPDES Permit further requires that RWF effluent discharge may not cause or contribute to impairment of any beneficial use.

Over the last two decades, the EPA and the Regional Board have been developing water quality regulations related to a variety of pollutants. Regulatory focus through the late-1980s and early 1990s was on copper, nickel, and freshwater flows. In the late 1990s this focus shifted to cyanide, legacy mercury, and Polychlorinated Biphenyls (PCB).

At present, the RWF has specific effluent limits for the following chemical constituents: biochemical oxygen demand, suspended solids, ammonia, oil and grease, copper, nickel, cyanide, dioxin, indeno pyrene, pH, chlorine residual, turbidity, dissolved oxygen, enterococcus bacteria, mercury, and PCBs. The RWF has thus far successfully been able to meet or exceed increasingly stringent regulatory requirements through capital improvements and a robust pre-treatment/source control program.

The Title V program is designed to standardize air quality permits for major sources of emissions across the country and is required for facilities that emit more than the Major Source Thresholds (MSTs) of criteria pollutants. The Title V program is administered by the Air Quality Management District for the region in which the facility operates. The criteria pollutants include carbon monoxide, ozone, lead, nitrogen oxides, particulate matter, and sulfur dioxide. The Title V permit incorporates the facility permit to operate also issued by the BAAQMD and all other applicable local, state, and federal air quality regulations. A new regulation related to toxic air contaminant emissions has been adopted by the BAAQMD that could affect the RWF by 2020.

The RWF tracks emissions from its engine generators through a combination of fuel consumption, source testing, and monitoring of pollutant levels in its digester gas fuel supply. These parameters are reported to the BAAQMD on an annual basis. In addition, the RWF submits a report of Title V compliance status semi-annually.

Several new wastewater and air regulations are currently under consideration or have been adopted. These regulations have the potential to adversely impact operations and the capital improvement program at the RWF.

ANALYSIS

Wastewater Regulations

Wastewater regulations evolve somewhat slowly, over multiple 5-year permit cycles, but can have significant impacts to operational and capital costs that affect rate payers, so RWF staff must proactively engage with their regulators and push for the most cost-effective approaches. In ESD's report to the T&E Committee on April 3, 2017 (http://sanjose.granicus.com/MetaViewer.php?meta_id=625636), staff highlighted the beneficial impacts of monitoring the South Bay for wastewater-related effects through providing data to regulators to inform the best solutions for the bay and the RWF.

Wastewater Regulations under Consideration

- Reissuance, in 2019, of the San Francisco Bay Nutrient Watershed Permit. Over the past year, regional wastewater agencies have had productive dialogue and negotiations with regulators that have resulted in more certainty about requirements in the next nutrients permit. As reported in the April 2017 T&E memo, regulators were seriously considering capping current nutrient loads (no net loading increases) and not allowing nutrient increases even due to population growth. Through collective negotiation, the RWF and

partner wastewater agencies successfully delayed the no net loading increase plans until at least 2024 and secured early agreement with regulators that the 2019 Nutrient Permit will include increased funding to evaluate nutrient impacts on the Bay, and evaluate possible nutrient reduction strategies.

- Possible tighter regulations for allowable loads of selenium following additional food web modeling of selenium impacts in the South Bay by EPA using more current and relevant data.
- Tighter regulations for allowable loads of contaminants of emerging concern (CECs). Concerns in a January 2018 Report over ecological effects and increased antibiotic resistance due to CECs in wastewater discharges to the environment may increase monitoring costs and result in new limits for CECs in future wastewater discharges. Future indirect potable reuse projects may face increased costs for monitoring and additional treatment based on the Report's recommendations.
- Numeric limits for toxicity testing based on a new proposed State Toxicity Plan. Adoption of numeric toxicity limits is expected in Fall of 2018, with full implementation occurring in summer 2019. Numeric limits could result in recurring NPDES Permit violations if final limits are unreasonably stringent.

Air Quality Regulations

Toxic Air Contaminants

Since last year's update to the committee, BAAQMD has adopted a new rule, Regulation 11, Rule 18 (Rule 11-18) that is intended to assess and reduce human health risks associated with toxic air contaminant emissions from facilities throughout the Bay Area. The RWF is among the sources subject to Rule 11-18. The RWF will be required to fund a human Health Risk Assessment (HRA) to be performed by an independent contractor under the guidance of BAAQMD.

BAAQMD will utilize an updated and more conservative methodology for the HRA, so there is a potential for existing RWF sources to need greater levels of emissions control or other mitigation measures. Staff will coordinate with BAAQMD to ensure that the most up to date emissions information is used in the HRA so that the health risks associated with the RWF are not overstated. The HRA for the RWF is not expected to be conducted before 2020.

Greenhouse Gas Emissions – Cap and Trade

In the absence of federal action to reduce greenhouse gas (GHG) emissions, California has been moving forward with state level programs including a cap and trade program for GHG. The current program authorized by AB-32 in 2006 was set to expire in 2020. The program will now be extended through 2030 with the adoption of SB-32 in 2017.

The cap and trade program limits overall GHG emissions from large sources such as fossil fuel fired power plants, cement plants, and other large consumers of fossil fuel. Allowances for GHG emissions are purchased through an auction process from the California Air Resources Board (CARB), or on the secondary market through a broker. The RWF has purchased allowances for emissions for the last five years but will no longer need allowances once the RWF's 2017 GHG

emissions are accounted for, due to the consistent management of emissions under the cap for the compliance period ending in 2017.

CARB is drafting a regulation to implement the directives of SB-32. The regulation to continue the cap and trade program is expected to be similar in structure to the existing regulation. However, the overall allowable emissions cap will decrease from approximately 350 Million Metric Tons (MT) of Carbon Dioxide equivalents (CO_2e) in 2018 to 250 Million MT CO_2e in 2030. This is expected to cause an increase in the cost of GHG emission allowances and could also result in the RWF needing to purchase allowances in the future.

Greenhouse Gas Emissions – BAAQMD Methane Rules

Methane is a relatively potent (21 times as potent as carbon dioxide) GHG that is generated through the anaerobic decomposition of organic matter in processes such as the anaerobic digesters as the RWF. BAAQMD has begun rule development on measures intended to reduce methane emissions at Bay Area facilities. The first of these rules, Rule 13-2 is intended to require facilities to find and eliminate any large (defined as >10 lb/day) methane leaks. The rule is currently under development and is scheduled to be adopted later this year. City staff and BACWA are following the rule development and will provide comments to BAAQMD when the draft rule is posted.

BAAQMD also lists wastewater treatment facilities and anaerobic digesters as targets for industry-specific methane reduction rules. Formal rulemaking for these rules has not been initiated. City staff and BACWA will monitor developments, provide comments, and participate in discussions with BAAQMD during the rule development process.

Other Related Regulations

Implementation of SB 1383 – reduction of organic waste disposal to landfills

Wastewater treatment at the RWF is accomplished by using a series of physical, biological, and chemical processes to treat the liquids stream and the solids stream. Separated solids (or sludge) from wastewater is thickened and processed through anaerobic digesters to reduce pathogen content, sludge volume, and create biogas for beneficial reuse. The digested sludge is then pumped to open air lagoons and drying beds for further sludge volume reduction, treatment, and stabilization over a four-year cycle. This process generates approximately 85 tons of biosolids per day, which must be disposed of or beneficially reused. RWF biosolids are currently trucked once annually to nearby Newby Island Landfill annually and beneficially applied as Alternate Daily Cover (ADC) to cover waste in the landfill.

While not directly connected to any of the RWF permits, the SB 1383 legislation (2016) recently enacted in California has introduced uncertainty for all Publicly Owned Treatment Works, including the RWF, on the long-term viability of disposition of biosolids as ADC at landfills. The overall intent of SB 1383 is to reduce Short-Lived Climate Pollutants, and it sets a goal of diverting 50 percent of 2014 levels of organic waste from landfills by 2020, and mandates diverting 75 percent of 2014 levels of organic waste from landfills by 2025. Biosolids, such as

those produced at the RWF, are included within the definition of organics to be diverted from landfills.

The California Department of Resources Recycling and Recovery (CalRecycle) and California Air Resources Board (CARB) are jointly developing draft regulatory text to enact this legislation and are considering the complete diversion of biosolids from landfills (including ADC) to reduce organic waste to landfills. Once finalized, this legislation could preclude the RWF from continuing to dispose of its biosolids at Newby Island Landfill (or any other California landfill) as soon as January 1, 2022. Even though Newby Island Landfill recently received an extension from the City of San José Planning Commission, there is no guarantee that Newby Island Landfill will continue to accept the RWF's biosolids once the SB 1383 regulation is enacted. Although the RWF is planning to transition out of its current drying process to a mechanized, odor controlled process by 2027, as part of its capital improvement program, the new regulations would not allow adequate time for this transition and could result in an increase in operational costs due to needed interim disposal solutions.

In November 2017, CalRecycle and CARB sought informal input from stakeholders, and the City provided comments to seek a waiver for RWF biosolids from being considered as organic material due to their low moisture and organic content and low potential to generate Short-Lived Climate Pollutants. The intent of seeking this waiver is to allow the RWF sufficient time to come into compliance with the new regulations while a new dewatering facility is being constructed (discussed further in the potential impacts section). Formal regulatory review on SB 1383 is expected to take place throughout 2018, with adoption of regulation in early 2019 and implementation in early 2020.

The RWF and partner agencies, such as California Association of Sanitation Agencies (CASA) and Bay Area Clean Water Agencies (BACWA), are actively providing input to CalRecycle and CARB on this draft regulatory text. The City is also participating in the next CalRecycle informal rulemaking workshops to held in early May 2018.

New Laboratory Quality Assurance Standards

The Environmental Services Department Laboratory (ESD Lab) is accredited by the Environmental Laboratory Accreditation Program (ELAP) administered under the auspices of the State Water Board. ELAP accreditation is necessary to perform the required testing at the RWF to ensure regulatory compliance with the State and wastewater treatment process effectiveness. In 2016, the State Water Board instituted a new and more onerous quality assessment accreditation standard, referred to as The Nelac Institute Standard (TNI), and is currently in the formal rulemaking process with a tentative forecasted approval date of mid-2019. Once approved, a three-year implementation period to meet the TNI is expected.

The ESD Lab has evaluated the proposed TNI requirements and has identified several areas that will likely require significant program enhancements to ensure that the ESD Lab can continue the necessary accreditation and keep the RWF in compliance. These areas include, but are not limited to, increased document control, traceability, and validation of all data; and greater training requirements and associated documentation of staff competencies. For a laboratory with

ESD's complexity, breadth of service (i.e., over 100 EPA-approved analytical methods), and variety of technical staff, the additional workload in the development of a documented Quality Management System will be significant. The current approach is for the ESD Lab to procure the services of a quality systems consultant to assist in the TNI implementation process, timeline development, gap analysis, staff training; and provide technical support to help augment our efforts to develop and implement the new standard.

Regulatory-Driven Laboratory Instrumentation and Equipment Upgrades

The ESD Lab provides critical analytical services in support of wastewater operations, compliance monitoring of NPDES and Watershed Permit requirements, recycled water, and pretreatment monitoring at the RWF. As mentioned above, anticipated regulatory changes (e.g., CECs, toxicity) will necessitate instrumentation and equipment upgrades. Much of the Laboratory's analytical equipment and supporting peripheral components have already exceeded the general recommended life expectancy of five to ten years. More stringent or new regulations will require new analytical technologies as well as the development of enhanced or new analytical methods associated with those new technologies, with further implications to the aforementioned TNI Standards. ESD Laboratory is in the process of identifying and prioritizing equipment and peripheral replacements that will meet or exceed current and forecasted regulatory compliance monitoring requirements and data quality objectives.

The underlying challenge for the ESD Lab is the availability, capacity, and experience of laboratory staff to respond to the pending TNI Standards, engage in the equipment replacement process, and to possibly maintain the increasing level of service demands. With nearly half of the current laboratory staff having less than two years of experience, due to continuing staff turnover, the technical process of implementing the aforementioned changes, while maintaining regulatory compliance, laboratory accreditation, and avoiding added contractual lab cost, non-compliance penalties, or loss of accreditation will be challenging.

Potential Impacts of New Regulations on RWF Operations and Capital Improvements

As stated earlier, although many of the regulations being considered are in a formative stage, they do have the potential of adversely impacting operations and the capital improvement program at the RWF.

Nutrient Limits

The RWF has consistently demonstrated its effectiveness in removing nutrients (nitrogen and phosphorus) from wastewater, reliably removing approximately 50% of the nitrogen and 70% of the phosphorus from the waste stream. Although the RWF does not currently have limits for total nitrogen or phosphorus, it is anticipated that the Water Board will develop nutrient limits within the next two 5-year permit cycles. Although the extent and exact timing of future nutrient limits is still unclear, the upcoming issuance of 2019 Nutrient Watershed Permit calls for additional investment from the region's Publicly Owned Treatment Works for more scientific research in the Bay to help inform future nutrient regulations. At the completion of this 5-year research period (2024) it is anticipated that the Water Board will then work to develop nutrient limits and a specific timeline for implementation.

The CIP has a project that is currently underway (Aeration Tanks Rehabilitation) which focuses on the rehabilitation and repair of critical components of the RWF's Biological Nutrient Removal (BNR) process, where nutrient reduction occurs. This project is important for maintaining current operating systems and ensuring reliable treatment of the waste stream. The current ten-year CIP has anticipated a future project (Aeration Basin Future Modifications) that will be focused on addressing potential regulatory changes, specific to limits for total nitrogen. In order to accommodate additional nutrient removal in the BNR system, process modifications will have to be implemented which will require a change in physical infrastructure and modification to RWF operations of the system. The project is considering future regulatory requirements as regional science and nutrient regulations are developed through ongoing Nutrient Watershed Permit negotiations that will define any future treatment performance requirements.

The extent and timing of any recommended capital improvements to meet the more stringent nutrient criteria will be addressed as a second project (Aeration Basin Future Modifications) commencing in 2019 and scheduled for completion in 2030.

Constituents of Emerging Concern

Constituents of Emerging Concern, or CECs, is a term used to include a broad range of unregulated chemical components found at trace levels in many of our water supplies. An example of these components includes pharmaceuticals and personal care products, which are increasingly being detected at low levels in surface water, and there is a concern that these compounds may have an impact on aquatic life. The RWF does not currently have any regulatory requirements specific to CECs; however, as previously mentioned there are conversations ongoing pertaining to CECs and tighter regulations are anticipated in the future. Additionally, at the time of development of the Plant Master Plan, it was anticipated that CEC regulations may be in place within 2-3 permit cycles. Consequently, the current ten-year CIP envisioned a project to construct a new Ultra Violet (UV) Disinfection system to address CECs. We will continue to monitor this item over the next few permit cycles.

Toxic Air Contaminants

Recently adopted Rule 11-18 could require additional measures to reduce emissions of toxic air contaminants in the future. However, the new Cogeneration Facility currently under construction and scheduled to be commissioned in 2019 mitigates the risk of future emissions reductions, because the project includes emissions controls that comply with the requirements of the new rule. The Cogeneration Facility will also allow the decommissioning of older emissions sources that could have been subject to more stringent requirements.

Greenhouse Gas Emissions – Cap and Trade

The new Cogeneration Facility will also be affected by the extension of the cap and trade program. If the Cogeneration Facility is used as anticipated to provide all the heat and power needs for the RWF, GHG emissions will exceed the trigger threshold for the cap and trade program due to the combustion of natural gas. The RWF can avoid the cap and trade program by purchasing gas generated by biogenic sources or by directly utilizing landfill gas from the

Newby Island Landfill. Alternatively, the RWF can purchase GHG emission allowances under the cap and trade program. The costs and benefits of each of these alternatives are currently being evaluated. Use of landfill gas would result in increased initial capital costs while the other options would lead to higher annual operating costs.

Greenhouse Gas Emissions – BAAQMD Methane Rules

The RWF will be subject to BAAQMD Rule 13-2 and the upcoming wastewater methane reduction rule. All potential impacts of these rules cannot be determined until the rules have been published. However, Rule 13-2 will include at least additional monitoring requirements. An estimate of the costs of compliance with the rules will be developed when the rules are published.

Biosolids/Organics Diversion

As recommended by the Biosolids Transition Strategy, recommended by TPAC in May 2015 and approved by the City Council in June 2015, the RWF is in the process of transitioning the biosolids process from the current open lagoon and dying bed process to a fully-enclosed mechanical dewatering process. Construction of the new digested sludge dewatering facility will position the RWF to have diversified and multiple disposition options for its biosolids. Dewatered cake is a desirable end-product based on previously completed market surveys and will ensure that the RWF has biosolids disposition options in compliance with the pending SB 1383 regulations. The project is estimated to be operational by 2022 and includes developing a phased approach for transitioning out of the current open-air lagoons and drying beds by 2027, and the current landfill disposal operations.

Staff will continue to monitor development of the CalRecycle regulations and timing of their implementation and will be further refining the implementation plan for the biosolids transition including developing a comprehensive contracting strategy and updating the previously identified dispositions options and market analysis in light of SB 1383.

EVALUATION AND FOLLOW UP

Staff will continue to track regulatory discussions and communicate with regulators and with other Publicly Owned Treatment Works through member agencies through involvement in several regional groups and research efforts including BACWA, CASA, San Francisco Bay Regional Monitoring Program (RMP), San Francisco Estuary Institute (SFEI), and the San Francisco Bay Nutrient Management Strategy Steering Committee. Staff will plan to return to the T&E Committee on an annual basis with an update, and will bring forward recommendations on specific items, as appropriate.

PUBLIC OUTREACH/INTEREST

This memorandum will be posted on the City's website for the May 7, 2018 Transportation & Environment Committee agenda.

COORDINATION

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

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the May 17, 2018 Treatment Plant Advisory Committee meeting.

CEQA

Not a Project, File No. PP10-0669 (a), Staff Reports.

/s/
KERRIE ROMANOW
Director, Environmental Services

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

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

APRIL 1 - APRIL 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	PLUMBING PARTS, FITTINGS & RELATED SUPPLIES	17-18	24304	54047	SANTA CLARA WINDUSTRIAL	70,000	07/01/17	06/30/18	42,825	112,825	PUMP STATION 8 & 11 CRITICAL REPAIRS: PUMP#7 GATE & CHECK VALVE REPLACEMENTS
2	FRICTION & NON FRICTION PARTS INCLUDING BEARINGS, SEALS, DRIVE COMPONENTS AND RELATED ITEMS	17-18	24637	54207	MOTION INDUSTRIES, INC	175,000	07/01/17	06/30/18	95,000	270,000	ADDT'L REPAIRS INCLUDING VALVE REPLACEMENTS AT PEPS
3	CHRONIC TIE/TRE AND RELATED LAB SERVICES	17-18	26057	55571	PACIFIC ECORISK LABORATORY	200,000	04/15/18	04/14/19			
4	SERVICE ORDER NO. 01: POLYCHLORINATED BIPHENYLS SAMPLING AND MANAGEMENT SERVICES DURING DIGESTER AND THICKENER FACILITIES UPGRADE PROJECT	17-18		AC 27586	BROWN & CALDWELL	525,013	4/13/18	3/30/19			MASTER AGREEMENT TERM: 5/20/16-6/30/21, $5M

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