San José-Santa Clara Regional Wastewater Facility

Capital Improvement Program

Monthly Status Report: November 2018

January 3, 2019

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

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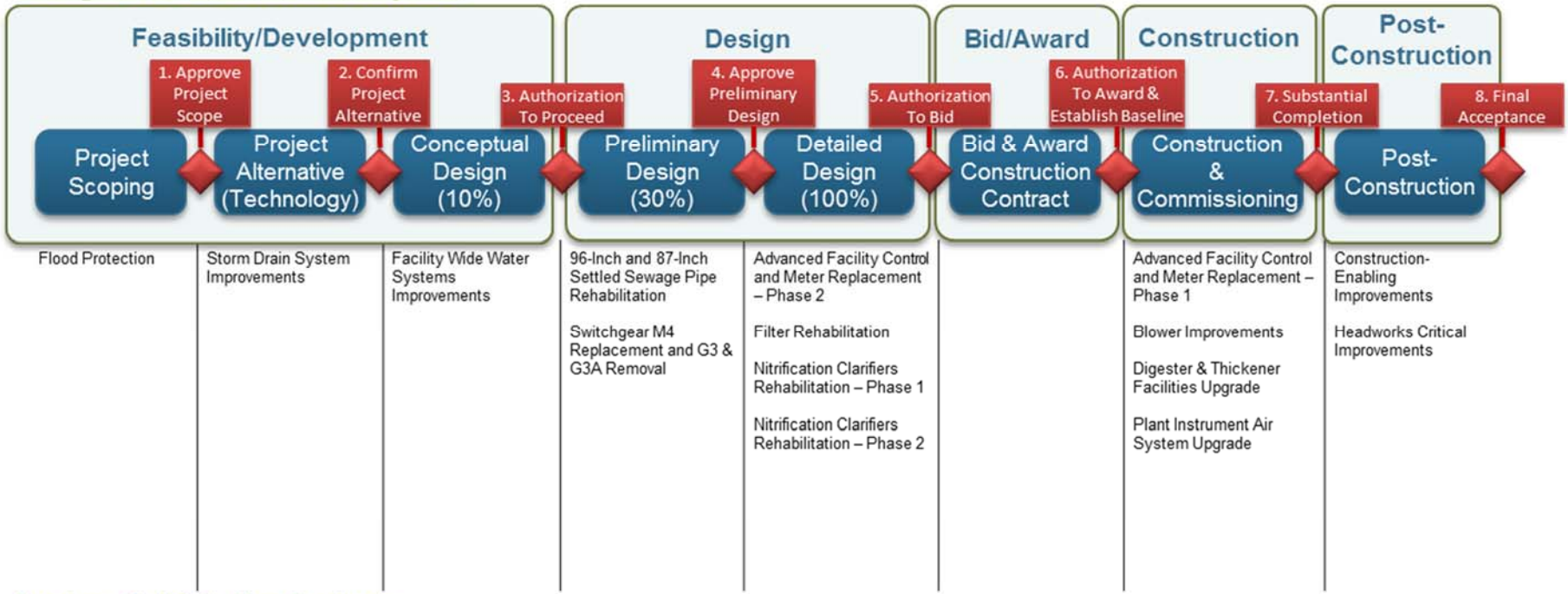
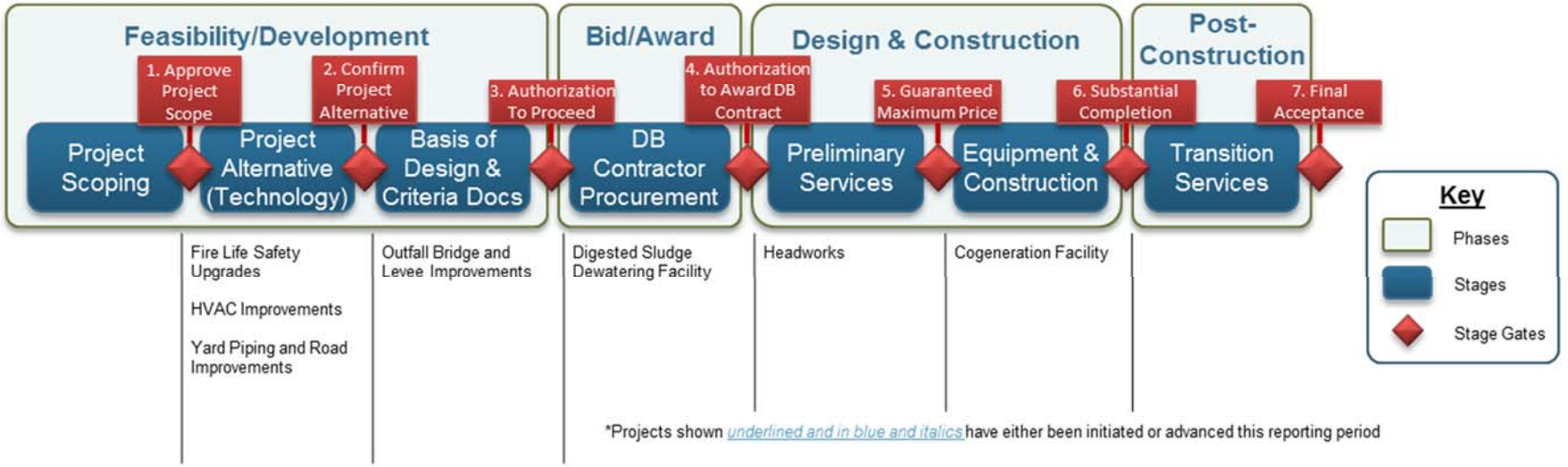
Project Delivery Model

Design-Bid-Build Active Projects



Design-Build Active Projects



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

Program Summary

November 2018

In November, the City advanced one project through the Project Delivery Model (PDM) stage gate process. The Headworks Project completed Interim Stage Gate 4.2: Revisit Budget and Schedule. In October, the stage gate panel approved the site selection for the new headworks facility, but also directed the project team to perform additional engineering evaluations on both the proposed cost estimate and schedule. This month, the team presented this additional information and the panel approved the project to proceed.

On the Cogeneration Facility Project, the design-builder set four 3.1-megawatt engine generators on vibration isolators incorporated into a massive concrete slab completed last month. A 330-ton crane was required to set each of the engine generators on its base. The entire effort was completed in one day.

The Plant Instrument Air System Upgrade Project completed a 28-day commissioning test and achieved Beneficial Use. The new system provides compressed air with sufficient redundancy to all critical instruments in the Secondary Blower and Nitrification buildings.

The Digester and Thickener Facilities Upgrade Project continued with concrete work for the digester roofs, digester ring beam foundations, and sludge screening building walls. The contractor made progress on installing mechanical equipment for the dissolved air flotation thickeners, including the collector mechanism, ancillary tanks, and piping.

The project team for the Advanced Facility Control and Metering Replacement - Phase 2 Project held a 90 percent design workshop with key stakeholders. The Nitrification Clarifier Rehabilitation Project performed condition assessments, including concrete testing to identify potential structural integrity issues due to chloride corrosion. The project team for the 96-Inch and 87-Inch Settled Sewage Pipe Rehabilitation Project completed the conceptual design report and began the detailed design. The Facility Wide Water System Improvements Project continued to develop a subsurface investigation plan that will identify below-grade interferences for the replacement, rehabilitation, and extension of the RWF's extensive water systems. On the Storm Drain System Improvements Project, the consultant completed condition assessments for seven stormwater pump stations and began cleaning and inspecting pipes that are not planned to be upsized.

The City accepted the Headworks Critical Improvements Project and filed the Notice of Completion and Acceptance (NOCA) with the County on November 8, 2018.

Look Ahead

The following key activities are forecast for December 2018 and January 2019:

- The CIP will hold the fifth Annual Vendor Open House event on Wednesday, December 5. This outreach effort is designed to share information with the consultant and contractor community on upcoming projects and opportunities at the RWF.
- The condition assessment work for the Storm Drain System Improvements Project will be completed and the team will begin similar assessment work on the RWF sanitary pipe network.
- The Nitrification Clarifier Rehabilitation Project design consultant will submit the 60 percent design package for both phases.
- The City will receive proposals from potential design-builders for the Digested Sludge Dewatering Facility Project.
- On the Cogeneration Facility project, the heat exchangers and gas purification skid will be delivered, and installation will commence. The masonry wall construction will begin for the generator building.
- The Fire Life Safety Upgrades Project will proceed to Stage Gate 3: Authorization to Proceed.
- A Notice to Proceed (NTP) will be issued to Monterey Mechanical to begin construction of the Blower Improvements Project.
- The HVAC Improvements Project will complete the Alternatives Analysis Report and hold a design workshop with all stakeholders.

Program Highlight – Preliminary Design

After completing the Conceptual Design stage (highlighted in the Monthly Status Report: July 2018), a project moves into the Preliminary Design stage of the PDM (see Figure 1 below). During this stage, the designer begins developing the details of the fundamental framework previously established and confirmed by CIP leadership as part of Stage Gate 3: Authorization to Proceed.

In this stage, the project team begins to define the size, quantity, and layout of those facilities and systems needed to achieve project goals. The team also begins to establish control strategies and redundancy measures to ensure satisfactory performance under a variety of operating conditions. The preliminary design stage develops major details that become fixed as the detailed design proceeds.

Key areas of project team focus during preliminary design include:

- Geotechnical – Initiate subsurface investigations of structures and foundation conditions.
- Piloting – Conclude pilot studies and incorporate results into the design.
- Performance – Establish performance standards for the project.
- Operations – Create an operations strategy with Operation and Maintenance (O&M) staff.
- Procurement – Initiate equipment pre-purchase, early work packages, and contractor pre-qualification.
- Interfaces – Identify interface mitigation measures and coordinate with other CIP projects.
- Hazard and operability (HAZOP) study – Conduct a HAZOP study to identify potential operational hazards.
- Costs – Update the project OPCC (Class 3) and operating cost estimates based on information developed in this stage.
- Risks – Refine existing threats and opportunities and develop response plans.
- Constructability – Develop a detailed sequence of construction and identify mandatory constraints.
- Commissioning and Startup - Initiate discussions about requirements with the designer and O&M.
- Permitting – Establish detailed permitting requirements and prepare permit applications.
- Schedule - Develop a medium-level construction schedule.
- Environmental – Complete CEQA documents for the project.
- Safety – Prepare an initial outline of the health and safety requirements for the general contractor.
- Report – Prepare a Preliminary Design Report (PDR) that establishes the basic design criteria, layout of facilities, location sizing, and number of items of major equipment. Minor changes to each of these components are expected during detailed design. For a design-bid-build delivery project, the report is prepared by the design consultant. In the case of a DB project, the report is prepared during the Preliminary Services stage by the DB entity.

To date, 11 projects have completed the Preliminary Design stage, with the 96-Inch and 87-Inch Settled Sewage Pipe Rehabilitation Project and the Switchgear M4 Replacement and G3 & G3A Removal Project currently progressing through it.

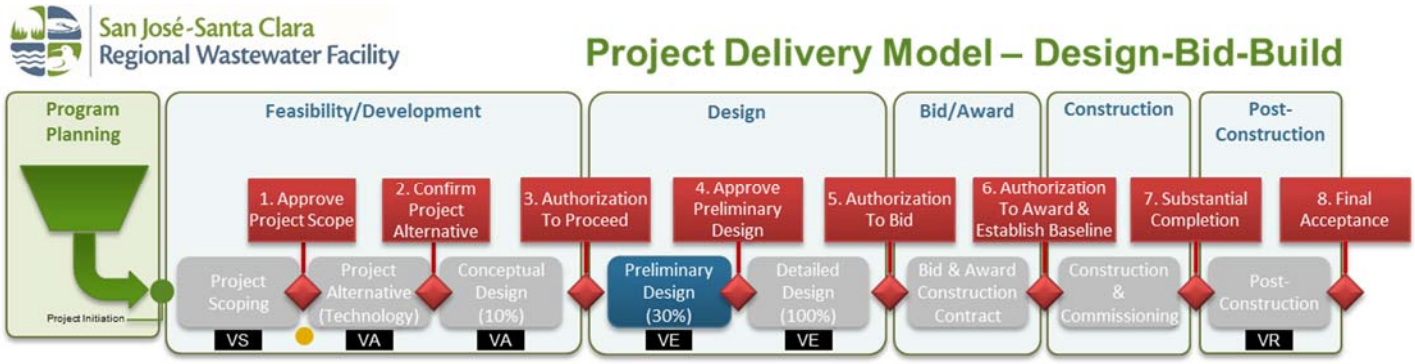


Figure 1: Design-Bid-Build Project Delivery Model

Program Performance Summary

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

Program Key Performance Indicators – Fiscal Year 2018-2019

KPI	Target	Fiscal Year to Date			Fiscal Year End		
		Actual	Status	Trend	Forecast	Status	Trend
Stage Gates	90%	90% 9/10	●	→	95% 18/19	●	→
Measurement: Percentage of initiated projects and studies that successfully pass each stage gate on their first attempt. Target: Green: >= 90%; Amber: 75% to 90%; Red: < 75%							
Schedule	90%	33% 1/3 [1]	◆	↓	33% 1/3	◆	→
Measurement: Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone.[2] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Budget	90%	100% 2/2 [3]	●	→	75% 3/4	▲	→
Measurement: Percentage of CIP projects that are accepted by the City within the approved baseline budget.[2] Target: Green: >= 90%; Amber: 75% to 89%; Red: < 75%							
Expenditure	$253M	$231M	●	↑	$301M [4]	●	↑
Measurement: CIP FY18-19 committed costs. Target: Committed cost meets or exceeds 70% of planned Budget. 70% of $362M = $253M. Therefore Green: >=$253M; Amber: $199M to $253M; Red: < $199M							
Safety	0	0	●	→	0	●	→
Measurement: Number of OSHA reportable incidents associated with CIP delivery for the fiscal year. Criteria: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Environmental	0	0	●	→	0	●	→
Measurement: Number of permit violations caused by CIP delivery for the fiscal year. Target: Green: zero incidents; Amber: 1 to 2; Red: > 2							
Vacancy Rate[5]	10%	18% 15/84	▲	→	6% 5/84	●	→
Measurement: Ratio of the number of vacant approved positions to approved positions. Target: Green: <= 10%; Amber: 10% to 20%; Red: > 20%							

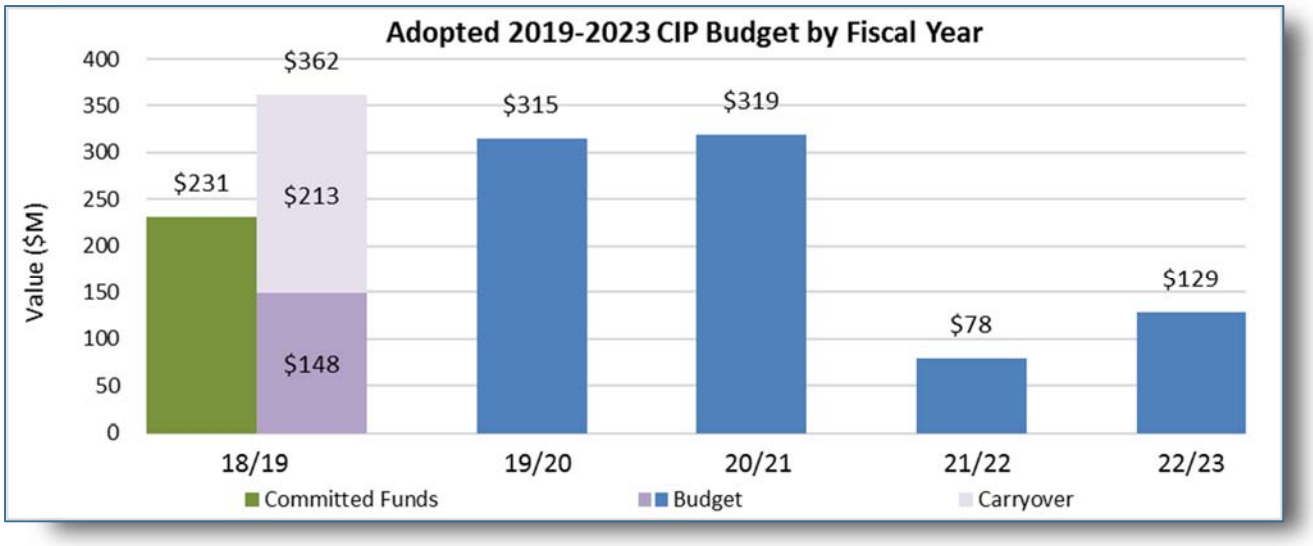
Notes

1. The Plant Instrument Air Systems Upgrade Project achieved Beneficial Use this month but was more than two months late.
2. The baseline Beneficial Use date and the baseline budget for each project are established at construction contract award and execution.
3. The City accepted the Headworks Critical Improvements Project with project expenses within the approved baseline budget.
4. The fiscal year-end forecast increased approximately $5 million due to revised encumbrance forecasts.
5. The Vacancy Rate KPI measures City CIP-approved positions (ESD and Public Works) and program management consultant full-time staff.

Program Budget Performance Summary

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

Adopted 2019-2023 CIP Expenditure and Encumbrances



Notes:

Committed Funds: Total of expenditures and encumbrances.

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

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

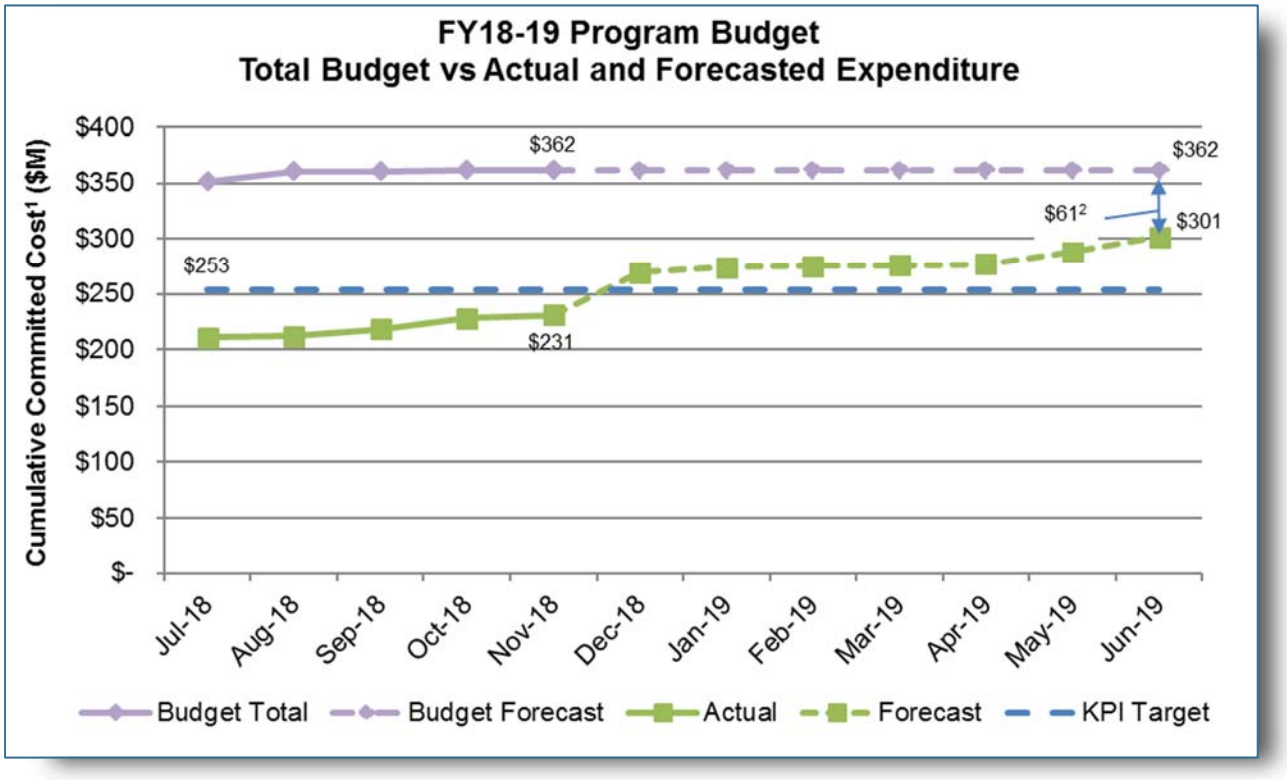
The FY18-19 budget is $185 million, which consists of $131 million in new funds and $54 million in rebudgets. For purposes of this monthly report, the adopted FY18-19 budget is adjusted from $185 million to $148 million due to the exclusion of certain appropriations that are not measured as part of the expenditure KPI. Excluded appropriations include City Hall Debt Service Fund; Clean Water Financing Authority Debt Service Payment Fund; Debt Service Repayment for Plant Capital Improvement Projects (San José only debt service); Equipment Replacement Reserve; Ending Fund Balance; Public Art; SBWR Extension; State Revolving Fund Loan Repayment; and Urgent and Unscheduled Treatment Plant Rehabilitation. Similar adjustments have been made to the budgets for FY19-20 through FY 22-23.

Carryover: Encumbrance balances at the end of the previous fiscal year are automatically carried forward to the current fiscal year as carryover funding to pay invoices for approved construction contracts and consultant agreements. FY18-19 carryover is $213 million.

Budget of $148.3 million and carryover of $213.3 million totals $361.6 million for FY18-19.

Fiscal Year 2018-2019 Program Budget Performance

The FY18-19 CIP budget is comprised of approximately $148 million in new funds, plus encumbrances carryover of $213 million for a total of $362 million. This excludes City Hall Debt Service Fund; Clean Water Financing Authority Debt Service Payment Fund; Debt Service Repayment for Plant Capital Improvement Projects (San José only debt service); Equipment Replacement Reserve; Ending Fund Balance; Public Art; SBWR Extension; State Revolving Fund Loan Repayment; and Urgent and Unscheduled Treatment Plant Rehabilitation items. Overall, the forecasted fiscal year-end committed funds exceed the fiscal year-end target by $48 million.



Notes:

1. Committed costs are expenditures and encumbrance balances, including carryover (encumbrance balances from the previous fiscal year).
2. The variance between forecasted budget and forecasted commitments can be primarily attributed to the following factors:
    a. Several construction contracts are now anticipated to be awarded in FY19-20 instead of FY18-19 based on updated schedules:
        i. Fire Life Safety Upgrades Project
        ii. Switchgear M4 Replacement and G3 & G3A Removal
    b. Several consultant service orders will not be awarded in FY18-19:
        i. Aeration Tank Rehabilitation Project
        ii. Support Facilities Project
        iii. Tunnel Rehabilitation Project
    c. The Blower Improvement Project construction bids came in under budget.
    d. Several other minor encumbrances for consultant services are either lower than budgeted or are anticipated to be awarded in FY19-20.
    e. Several authorized positions remain vacant, resulting in lower predicted personal services expenses than budgeted.
    f. The FY16-17 payment budgeted for the annual Owners Controlled Insurance Program premium covered the period through FY17-18. Funds rebudgeted from FY17-18 will be programmed in FY19-20.

Project Performance Summary

There are currently seven projects in the construction and post-construction phases and an additional 15 projects in feasibility/development, design, bid and award, or design and construction phases (see PDM, page 2). Projects in the construction phase have established cost and schedule baselines and are monitored using the City's Capital Project Management System (CPMS). Green/red icons are included in the table below to indicate whether these projects are on budget and schedule.

Project Performance – Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]	Cost Performance[2]	Schedule Performance[2]
1. Construction-Enabling Improvements	Post-Construction	Aug 2018[3]	◆	◆
2. Headworks Critical Improvements	Post-Construction	Aug 2018[3]	●	●
3. Plant Instrument Air System Upgrade	Construction	Nov 2018[3]	●	◆
4. Cogeneration Facility	Design & Construction	Mar 2020[4]	●	●
5. Digester and Thickener Facilities Upgrade	Construction	Jan 2021	◆	◆
6. Advanced Facility Control & Meter Replacement - Phase 1	Construction	June 2021	●	●
7. Blower Improvements	Construction	Nov 2021[4]	●	●

Key:

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

Notes

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

Project Performance – Pre-Baselined Projects

Project Name	Phase	Estimated Beneficial Use Date[1]
1. Digested Sludge Dewatering Facility	Bid/Award	Nov 2022
2. 96-Inch and 87-Inch Settled Sewage Pipe Rehabilitation	Design	Oct 2020
3. Switchgear M4 Replacement and G3 & G3A Removal	Design	Feb 2022
4. Advanced Facility Control & Meter Replacement - Phase 2	Design	Dec 2022
5. Headworks Project	Design and Construction	Dec 2022
6. Filter Rehabilitation	Design	Mar 2023
7. Nitrification Clarifiers Rehabilitation – Phase 1	Design	Oct 2023
8. Nitrification Clarifiers Rehabilitation – Phase 2	Design	Nov 2024
9. Outfall Bridge and Levee Improvements	Feasibility/Development	Jan 2021
10. Fire Life Safety Upgrades	Feasibility/Development	Sep 2022
11. Storm Drain System Improvements	Feasibility/Development	Dec 2022
12. Flood Protection	Feasibility/Development	Mar 2023
13. HVAC Improvements	Feasibility/Development	Mar 2023
14. Facility Wide Water Systems Improvements	Feasibility/Development	May 2024
15. Yard Piping and Road Improvements	Feasibility/Development	June 2027

Notes

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

Significant Accomplishments

Biosolids Package

Digester and Thickener Facilities Upgrade Project

- Contractor Walsh Construction completed one of the digester ring beam foundations and is continuing work on the remaining three. Additionally, the contractor completed installing the roof forms and placed the steel reinforcement on two of the four digesters.
- Walsh continued installing the dissolved air flotation tanks top skimmers and bottom collectors; the sludge screening building concrete walls, electrical conduits, and master control center concrete pad; and the odor control scrubber vessels, pipe rack, and appurtenances.

Facilities Package

96-Inch and 87-Inch Settled Sewage Pipe Rehabilitation Project

- The City authorized Black & Veatch to begin detailed design of the project. The project team anticipates submittal of the 50 percent design in December 2018.

Cogeneration Facility Project

- DB entity CH2M Hill hoisted into place and permanently installed all four engine-generators (60 tons each) to the engine room slab. Construction of the masonry block walls will begin in December 2018.

Construction-Enabling Improvements Project

- Construction management staff moved into the new trailer. Project closeout activities are being completed.

Outfall Bridge Improvements Project

- Design consultant AECOM completed the draft conceptual design report and conducted a conceptual design workshop. AECOM will submit the final conceptual design report in January 2019.

Storm Drain System Improvements Project

- Design consultant AECOM completed condition assessments for seven stormwater pump stations. They will conduct a condition assessment workshop in December and submit the condition assessment report in January 2019.

Liquids Package

Advanced Facility Control and Meter Replacement Project – Phase 2

- Design consultant Black and Veatch conducted a 90 percent design review workshop and submitted the 90 percent OPCC. The project team anticipates completing the final design, specifications, and cost estimate in February 2019.

Headworks Project

- DB entity CH2M Hill Engineers led four additional workshops that addressed process equipment selection; HVAC and fire protection systems; odor control alternatives; and facility configuration.
- The project team returned to the interim stage gate and presented additional cost and schedule information. The panel approved the project to proceed. The project team anticipates the Final Basis of Design Report in January 2019.

Headworks Critical Improvements Project

- The City filed the NOCA on November 8, 2018 with the County and closed the project.

Nitrification Clarifiers Rehabilitation Project

- Design consultant HDR submitted the 60 percent design, OPCC estimate, and updated schedules for both phases. The project team anticipates receiving the final design, specifications, and OPCC for the first phase in early spring 2019.

Power and Energy Package

Plant Instrument Air System Upgrade Project

- Contractor Anderson Pacific completed the 28-day commission test November 1, 2018. The City declared Beneficial Use for the project.
- The new plant air compressors are now providing plant instrument air to the RWF.

Explanation of Project Performance Issues

Construction-Enabling Improvements Project

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 on several occasions between October 2016 and April 2017. Teichert was granted extra work days for weather-related delays and for extra work associated with several contract change orders. A new contract completion date of June 8, 2017 was established. However, Teichert's subcontractor, ModSpace, was slow to respond and regularly submitted late and incomplete documentation, which resulted in the portable trailers arriving in January 2018, approximately 9 months late.

Teichert experienced additional delays completing installation of the portable trailers and submitting complete and acceptable documentation for access ramps and canopies. In early August 2018, the contractor completed installation of the electrical, communications, and wastewater utilities; the San José Building Division issued the Certificate of Occupancy permit for the trailers; and the construction management group issued the Notice of Substantial Completion indicating the project reached Beneficial Use. The project team provided Teichert with a list of remaining contract work to be completed. The project team is working with Teichert to complete the outstanding tasks and discuss negotiations for project closeout and liquidated damages. The project team anticipates accepting the project in January 2019.

Plant Instrument Air System Upgrade Project

Project construction has been delayed by seven months due to four issues: 1) The project team discovered that the planned construction site access route crossed a large settled sludge pipeline, requiring an alternative access route to be developed and constructed; 2) the contractor was temporarily unable to install a section of the conduit from the sludge control building to the new compressor building due to other work being performed in the area by a different contractor; 3) development of the 28-day commissioning test procedure took longer than anticipated; and 4) the project team discovered oxidized (rusted) carbon steel shavings in an existing condensate tank unrelated to the project construction during the eight-hour functioning test. The material was removed, and the test was successfully completed. The project achieved Beneficial Use in November 2018.

Digester and Thickener Facilities Upgrade Project

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

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

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

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

- Digester structural redesign: The design consultant revised the structural drawings to address seismic issues by enlarging the foundation ring beam at the base of each of the four digesters. The contractor provided a cost proposal associated with this revision and the City issued a change order for a portion of the proposal. Work associated with the new foundations is ongoing.
- Hazardous material mitigation: Testing of soils and concrete for polychlorinated biphenyls (PCBs) was completed and a final conditional approval was issued by the Environmental Protection Agency (EPA). All removal and disposal of contaminated materials has been completed to comply with the risk-based management plan approved by the EPA. All contaminated soils have been removed and disposed of and most of the impacted concrete has been encased. The

last portion of the work will be finalized once the base layer of foundations and roof work is complete. At that time, final reports on the work will be submitted to the EPA.

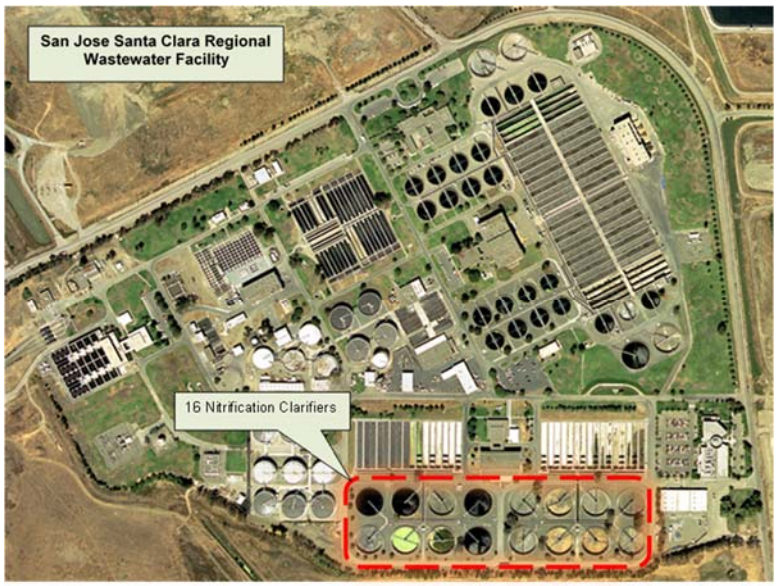
In November 2017, Council approved a contingency increase of $15 million. The City issued change orders against the increased contingency for delays associated with the conditions discovered in 2016.

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

An estimated delay of approximately 145 working days is currently reflected in the revised Beneficial Use date of January 2021. The City received an updated schedule from Contractor Walsh in November and are processing a change order to compensate for additional delays caused by the redesign and PCBs cleanup and removal.

Project Profile – Nitrification Clarifiers Rehabilitation

The RWF's 16 nitrification clarifiers (Figure 2), together with the aeration basins, are at the core of the RWF treatment process. Constructed in the 1970s and 1980s, these clarifiers separate the biomass, or sludge, in the mixed liquor from the Biological Nutrient Removal (BNR) process effluent. Their performance directly impacts the performance of downstream filters, and ultimately the quality of the final effluent, or treated wastewater, that enters the south San Francisco Bay. This project will implement cost-effective improvements to enhance the clarifiers' efficiency and minimize unscheduled maintenance on them for the next 30 years.



In September 2015, HDR Engineering, Inc. (HDR) was selected as the project's design consultant. Since the project's inception, condition assessment work has revealed:

- The groundwater relief valves are corroded and no longer function as designed;
- The control and shutoff valves (Figure 3 below) for the clarifier inlet pipelines and Return Activated Sludge (RAS) pipelines have damaged seals;
- Spare parts for existing valves are difficult to procure, with limited availability;
- The RAS pipelines' interior conditions show signs of wear and require rehabilitation;
- All steel elements of the clarifiers' mechanisms (Figure 4 below) show loss of protective coatings, areas of corrosion, isolated pitting, loss of metal, and tubercles;
- The clarifiers' concrete walls have degraded sufficiently to result in a roughened surface with loss of cement paste and exposed aggregate; and
- The electrical and control systems, while well maintained, are more than 40 years old, do not meet current codes, and have suffered the effects of prolonged outdoor exposure.

HDR and the City utilized these condition assessment results and input from O&M staff to establish the project scope of work in June 2017. HDR then completed the conceptual and preliminary design. Value Management Strategies, Inc. (VMS) performed a value engineering analysis last summer, the results of which are being incorporated into HDR's detailed design.

To address higher than expected construction cost estimates for the project, the project team worked with O&M staff and the design consultant to prioritize the scope of work and divided the project into two phases. Phase 1 addresses the more critical project elements and will include:

- Replacement of clarifier mechanisms and appurtenances (including access bridge, walkway, inlet baffles, weir plates, weir cleaning system, scum baffles, and scum collection system) for eight clarifiers;
- Replacement of drain valves and RAS valves serving A-side and B-side clarifiers;
- Rehabilitation of clarifier basin groundwater pressure relief valves for the 16 clarifiers;
- Rehabilitation of up to eight RAS pipelines;
- Installation of six groundwater monitoring wells; and
- Replacement of electrical and instrumentation and control equipment for all 16 clarifiers.

Phase 2 of the project will include:

- Rehabilitation of the remaining eight clarifiers and
- Rehabilitation of up to eight of the remaining RAS pipelines.

The construction cost estimate for Phase 1 at the 60 percent design stage is $40 million. The City will deliver the project using the conventional design-bid-build project delivery method and anticipates completing the detailed design of the first phase by May 2019. The project team anticipates awarding the construction contract for Phase 1 of the project in late fall 2019 and completing construction in fall 2023. The current Phase 2 proposed budget is $36 million. The project team anticipates completing design in summer 2022, awarding the construction contract in fall 2022, and finishing construction as early as fall 2024.

Figure 3: RAS Pipeline Gallery in Tertiary Blower Building

Figure 4: Clarifier Interior and Mechanism

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Regional Wastewater Facility Treatment – Current Treatment Process Flow Diagram

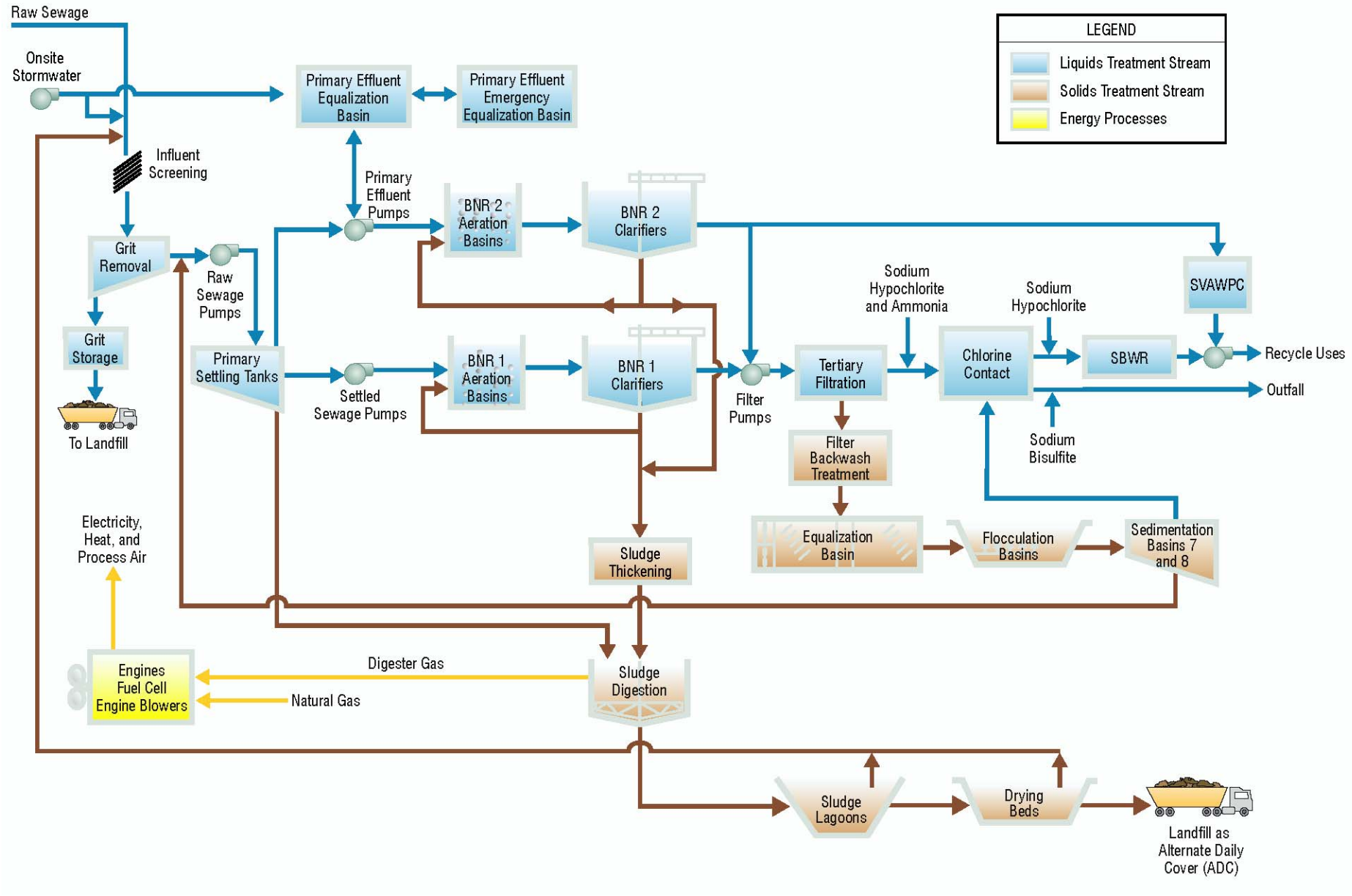

Figure 5 – Current Treatment Process Flow Diagram

Regional Wastewater Facility Treatment – Proposed Treatment Process Flow Diagram

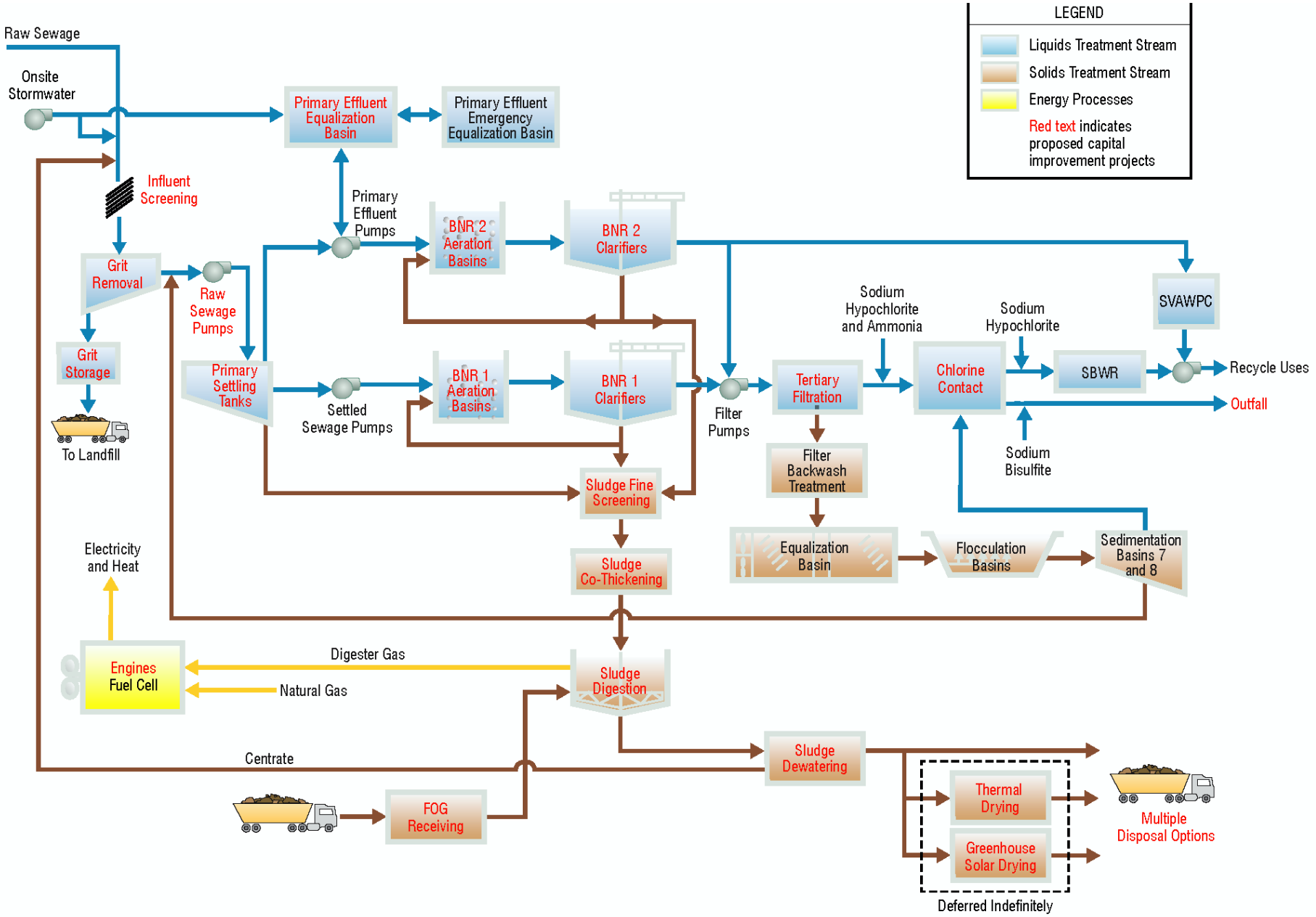

Figure 6 – Proposed Treatment Process Flow Diagram

Active Construction Projects – Aerial Plan

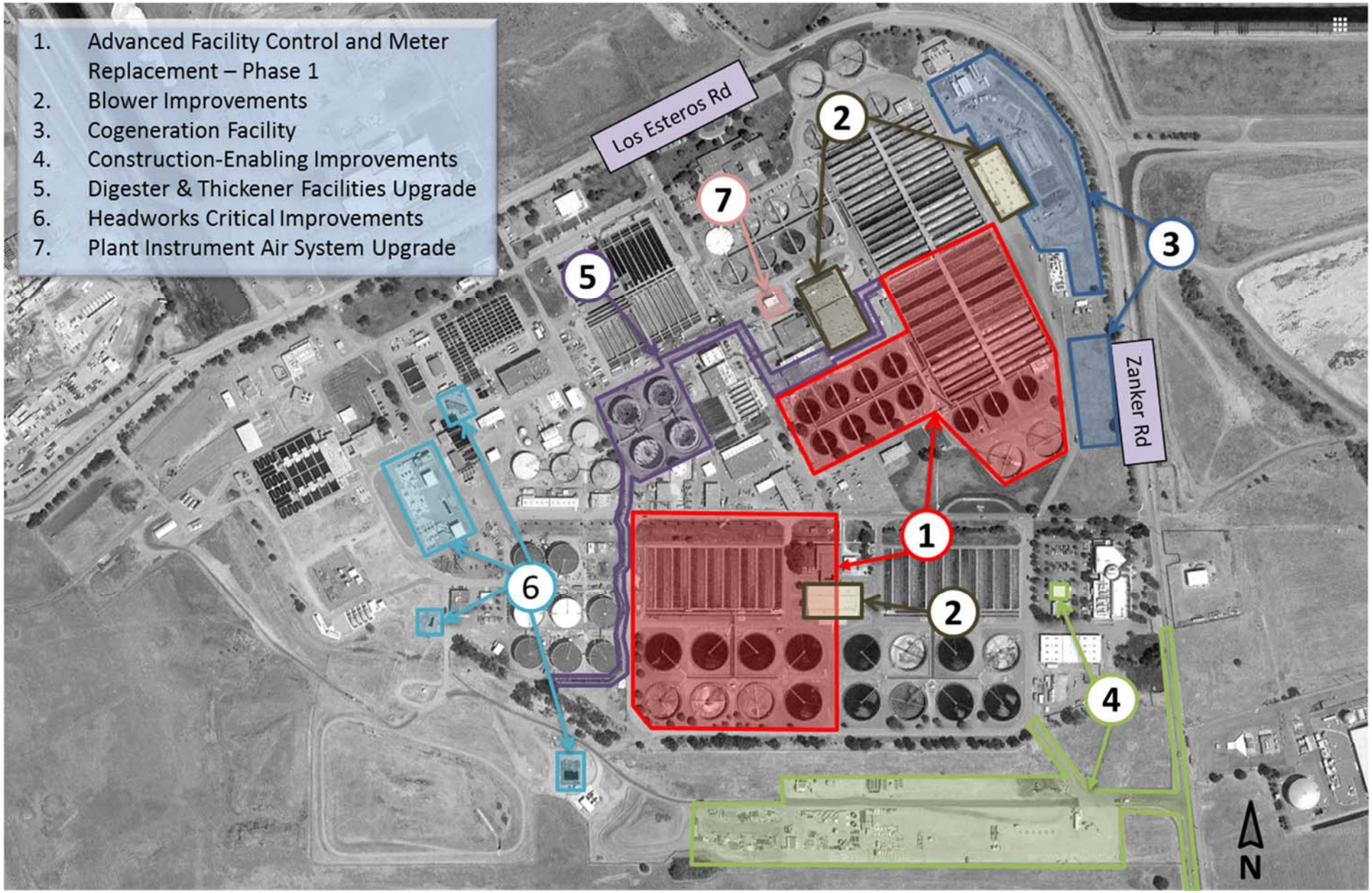

Figure 7: Active Construction Projects