



San José-Santa Clara
Regional Wastewater Facility

Capital Improvement Program Monthly Status Report for February 2014

April 3, 2014

This report provides a summary of the progress and accomplishments of the Capital Improvement Program (CIP) for the San José-Santa Clara Regional Wastewater Facility (“Wastewater Facility”) for the period of February 2014.

Report Contents

Project Delivery Model	2
Program Summary	3
Program Performance Summary	4
Program Cost Performance	5
Project Performance	7
Project Profile	9
Regional Wastewater Facility Treatment Process Flow Diagram	11
Active Construction Projects – Aerial Plan	12

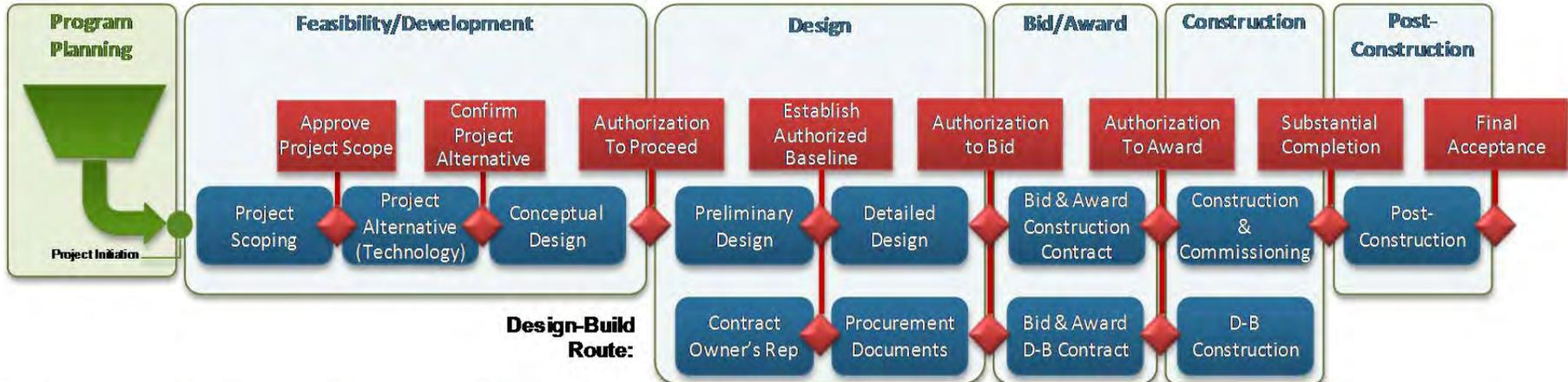


Project Delivery Model



San José-Santa Clara
Regional Wastewater Facility

Project Delivery Model



Active Projects

Project Name	Phase
<i>Iron Salt Feed Station</i>	Design-Build
	Design-Build
<i>Plant Instrument Air System Upgrade</i>	Design-Build
	Design-Build
<i>Digester & Thickener Facilities Upgrade</i>	Design-Build
	Design-Build
<i>Training Trailer Replacement</i>	Design-Build
	Design-Build
<i>Filtration Building B2 & B3 Pipe & Valve Replacement</i>	Design-Build
	Design-Build
<i>RWF Street Treatment - Phase III</i>	Design-Build
	Design-Build
<i>Digester Gas Storage Replacement</i>	Design-Build
	Design-Build
<i>115 KV Circuit Breaker Replacement</i>	Design-Build
	Design-Build
<i>Fire Main Replacement - Phase III</i>	Design-Build
	Design-Build
<i>BNR2 Clarifiers Guardrail Replacement</i>	Design-Build
	Design-Build
<i>DCS Fiber Optic Network Expansion</i>	Design-Build
	Design-Build
<i>DCS Upgrade/Replacement</i>	Design-Build
	Design-Build
<i>Dissolved Air Flotation Dissolution Impr.</i>	Design-Build
	Design-Build
<i>Headworks No.2 Actuator Replacement</i>	Design-Build
	Design-Build
<i>Cooling Tower Replacement</i>	Design-Build
	Design-Build
<i>Handrail Replacement - Phase V</i>	Design-Build
	Design-Build
<i>A5-A6 Nitrification Mag. Meter & Valve Repl.</i>	Design-Build
	Design-Build
<i>Biosolids Transition Projects</i>	Design-Build
	Design-Build
<i>Cogeneration Facility</i>	Design-Build
	Design-Build
<i>Digester Gas Compressor Upgrade</i>	Design-Build
	Design-Build
<i>Emergency Diesel Generators</i>	Design-Build
	Design-Build

Note: Projects colored green and in italics have moved phase in the reporting period

Key

- Stage Gates
- Stages



Program Summary

February 2014

In 2008 the Wastewater Facility undertook a Plant Master Plan (PMP) effort which ultimately resulted in its adoption in November 2013. The Project Validation process held between October 2013 and January 2014 reviewed the projects identified in the Plant Master Plan in order to develop a five-year and ten-year CIP. This first monthly report provides a summary of the progress and accomplishments of the CIP for the month of February 2014 within Fiscal Year 2013-2014.

In the month of February the focus was on communicating the CIP results from our Validation effort to the various groups involved in budget and rate setting, and financing discussions. We also spent considerable effort defining the components of several key controls items, including our monthly reports and key performance indicators (KPIs).

On February 3rd, CIP leaders presented an update on our program start-up efforts to the City of San José City Council's Transportation & Environment (T&E) Committee, including a detailed discussion of our validation results and upcoming CIP planning efforts. We also presented updates to the Technical Advisory Committee (TAC) and to the Treatment Plant Advisory Committee (TPAC) on February 13th. Further updates will be given to TAC and TPAC in March, as financing discussions continue.

Look Ahead

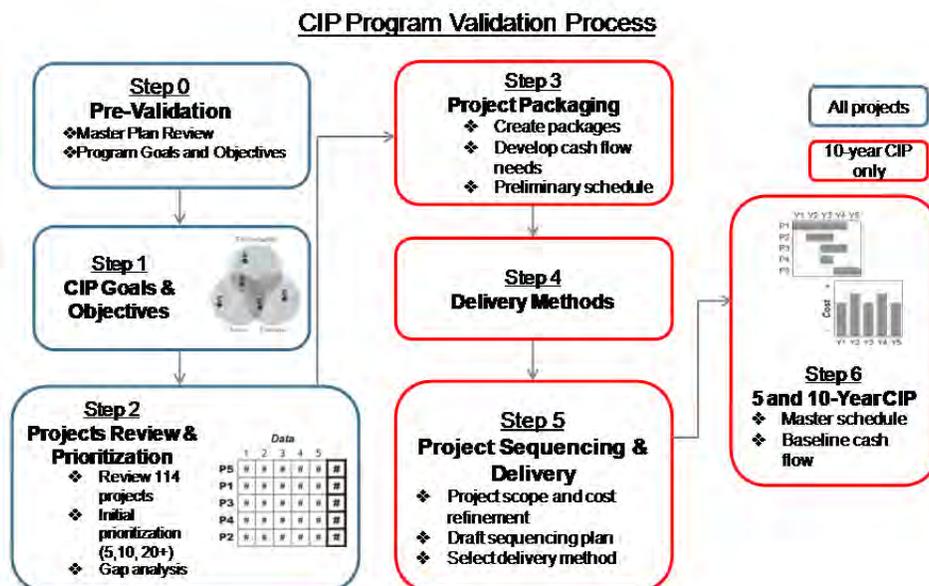
We will be conducting a detailed assessment of our future staffing needs on the program. We will also be rolling out our web-based SharePoint platform (called the "CIP Portal") which will contain many of our CIP team collaboration tools and processes. Training and implementation of these tools and processes will also continue.

Program Highlight – Project Validation

Project Validation is the process by which the CIP reviewed the current PMP, along with studies and other projects initiated since the PMP was completed, and obtained additional input from City staff related to Wastewater Facility needs in order to develop a revised five-year and ten-year CIP. The validation process was designed to be a systematic approach to project identification, prioritization and sequencing using the combined knowledge of City engineering, operation and maintenance (O&M) and executive leadership staff.

The validation process took place over a four-month period during the start-up activities of the CIP. The validation schedule was driven by a CIP budget submittal deadline. By February 5, 2014, the Environmental Services Department (ESD) was to provide an initial draft of the Proposed 2015-2019 CIP to the City Budget Office.

A six-step process (shown below) was used to develop the revised CIPs, with workshops held at each step of the process to review progress and receive input from other senior leaders from the City. Documentation in the form of workshop agendas, presentation materials and minutes were produced, along with technical memoranda and other relevant documentation. These materials were uploaded to both the CIP Portal and the ESD website.



Program Performance Summary

Seven KPIs have been established to measure the overall success of the CIP. Each KPI represents a metric which will be monitored on a regular frequency. Through the life of the CIP, KPIs will be selected and measured which best reflect the current maturity of the program. In this initial report, six of the seven KPIs have measurement data available and are reported below. The target for the "Staff Count" KPI will be established as part of the analysis of future staffing needs.

Program Key Performance Indicators – Fiscal Year 2013-2014

KPI Description	Target	Actual	Status	Trend	Measurement
Schedule	85%	100% (1/1)		N/A	Percentage of CIP projects delivered within 2 months of approved baseline Beneficial Use Milestone. Target: 85% of projects delivered within 2 months of approved baseline schedule or better.
Budget	90%	100% (2/2)		N/A	Percentage of CIP projects that are completed within the approved baseline budget. Target: 90% of projects total expenditures do not exceed 101% of the baseline budget.
Expenditure	≥\$72.7M	\$83.7M		N/A	Total CIP actual + forecast committed cost for the fiscal year compared to CIP fiscal year budget. Target: Forecast committed cost meets or exceeds 50% of budget for Fiscal Year 13/14 (\$145.4 / 2 = \$72.7M)
Procurement	100%	100% (11/11)		N/A	Number of actual + forecast consultant and contractor procurements compared to planned for the fiscal year. Target: Forecast /actual procurements for fiscal year meet or exceed planned.
Safety	0	0		N/A	Number of OSHA reportable incidents associated with CIP construction for the fiscal year. Target: zero incidents.
Environment/Permits	0	0		N/A	Number of permit violations caused by CIP construction for the fiscal year. Target: zero violations.
Staff Count¹	TBD	TBD	TBD	TBD	Number of additional staff started in the previous quarter compared to planned (City/Consultant). Target: Number of City and Consultant Staff joined the program team for the quarter meets or exceeds planned.

Footnote:1 – Staff count KPI measured quarterly; all other KPIs measured monthly

KEY:

Cost:		Meets or exceeds KPI target		Does not meet KPI target
-------	---	-----------------------------	---	--------------------------

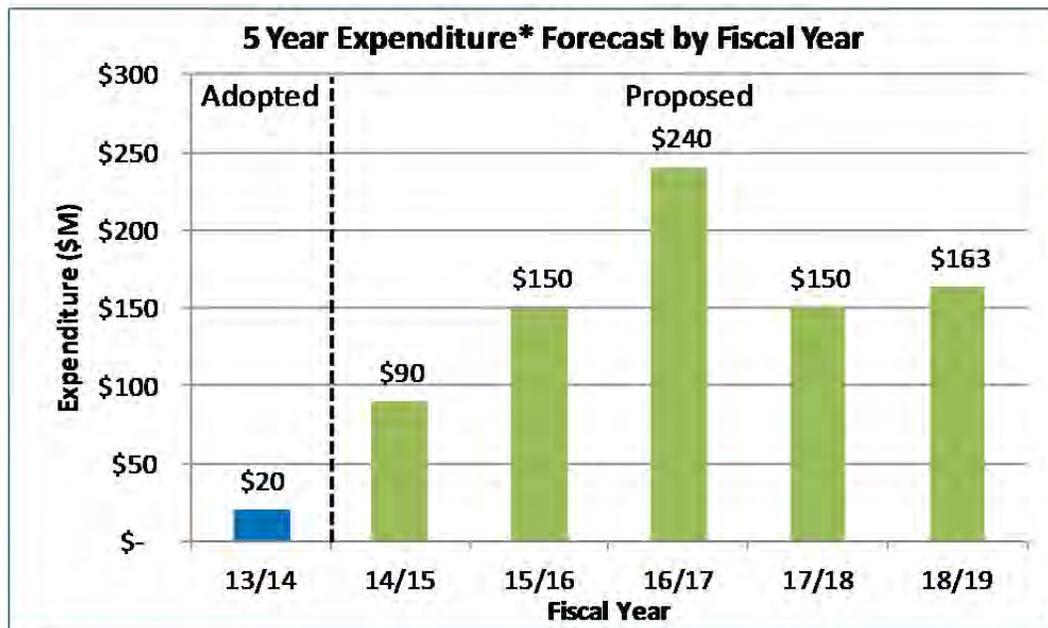


Program Cost Performance

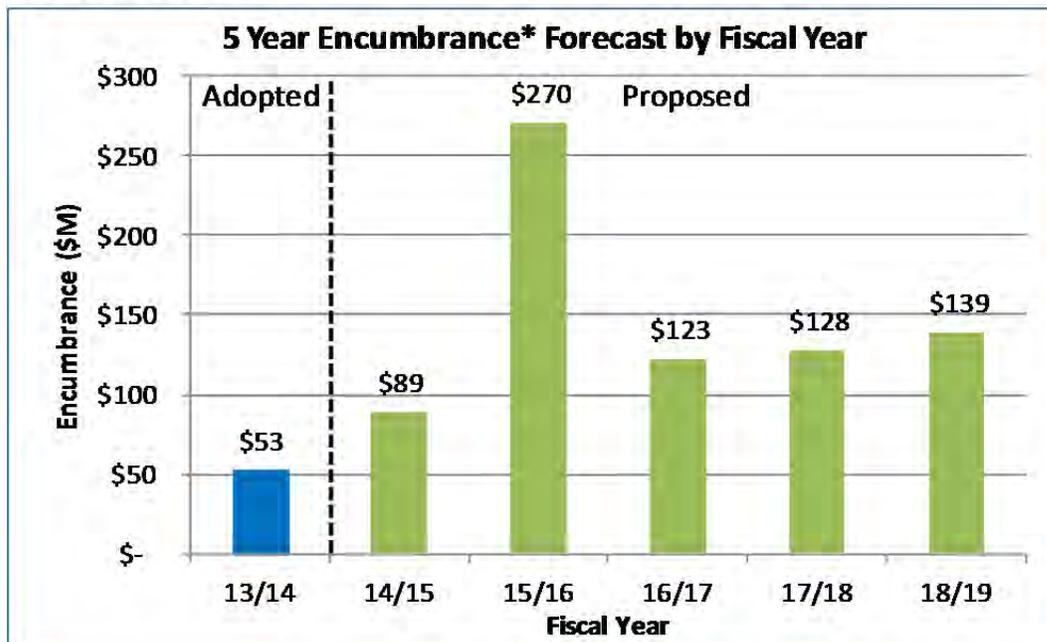
This section provides a summary of CIP cost performance for all construction projects and non-construction activities for FY13-14 and the 5 Year CIP.

Proposed 2015-2019 CIP Expenditure and Encumbrances

To accommodate the proposed increase in expenditures and encumbrances over the next five years, the City is developing a long-term financial strategy to fund the needed, major capital improvements while minimizing the impact to ratepayers. The City will be holding special study sessions with TAC and TPAC in April to discuss funding strategy and the financing plan.



*Expenditure defined as: Actual cost expended associated with services and construction of physical assets



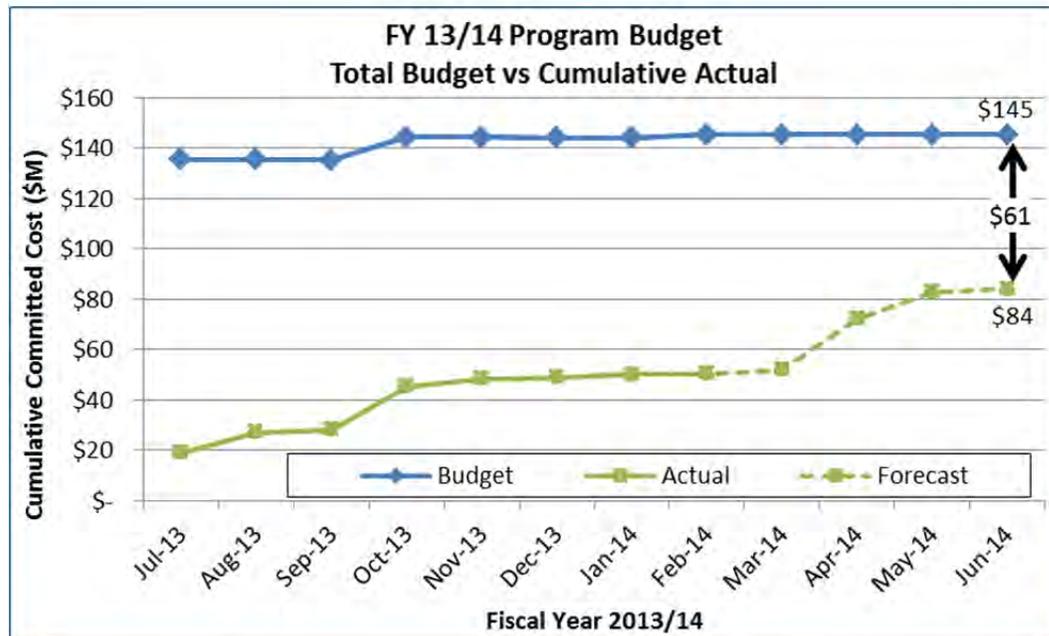
*Encumbrance defined as: Financial commitments, such as purchase orders or contracts, which are chargeable to an appropriation and for which a portion of the appropriation is reserved



Fiscal Year 2013-2014 Program Budget Performance

The fiscal year began with an initial program budget of \$135 million, with a \$9 million adjustment in October and a \$1 million adjustment in February, for a total program budget of \$145 million. Committed costs are expenditures and encumbrance balances, including carryover (encumbrance balances from the previous fiscal year). As of the close of the February reporting period, \$51 million in cumulative program spending had been achieved. This represents approximately 35% of the total program budget for FY13-14.

Committed costs are forecasted to reach \$84 million by the end of the fiscal year resulting in a projected year-end variance of approximately \$61 million as shown in the chart below. The last fiscal quarter will see a number of large construction contract awards including Digester Gas Storage Replacement, Fire Main Replacement – Phase III, Digester Gas Compressor, and Emergency Diesel Generators.



The projected year-end variance of approximately \$61 million is primarily due to the following factors:

- Cogeneration Facility (FY Budget: \$40M)** – Since the completion of the technical component of the Plant Master Plan, changes in technology and updated conditions at the Wastewater Facility required a re-evaluation of technology options for the Cogeneration Facility. This resulted in additional time and a significant effort to substantiate the project scope and evaluate technology options. A report on the recommended technology options was presented to TPAC in November 2013. A Project Definition Report was completed in December 2013 and will now serve as the basis for procuring a design-build entity. Staff continues to work on obtaining design-build authority from the state legislature and procuring specialty design-build legal counsel services; these efforts are anticipated to complete in June 2014. It is also important to note that a portion of the original project scope was pulled out to be completed as a stand-alone design-build low-bid project. The Emergency Diesel Generators project is anticipated to award in May 2014 and will provide a reliable backup power system to the Wastewater Facility.
- Headworks No. 2 Enhancement-Phase 1 (FY Budget: \$7.9M)** – This project was put on hold pending the outcome of a third-party assessment of the existing headworks and evaluation of potential operational improvements. Significant progress was made to identify current operational issues and potential solutions. These findings, combined with the Project Validation process, are expected to inform a near-term and long-term capital improvement strategy to ensure ongoing reliability and operability of the headworks.
- Various Primary, Secondary, Tertiary, and Automation Projects (FY Budget: \$9.3M)** – The initiation of several budgeted projects, identified or referenced in the PMP, were delayed while the program underwent an extensive review as part of the Project Validation Process. Many of the projects are scheduled to begin in FY14-15.
- South Bay Water Recycling (FY Budget: \$7.3M)** – Significant capital spending was put on hold pending completion of the master plan update efforts. This work is anticipated to finish in December 2014 (Note: This is not a Wastewater Facility CIP-managed effort, but is part of the capital budget and has been included for completeness).

The majority of the unspent funds will be used in FY14-15.



Project Performance

There are currently six active projects in the construction phase with a further twelve projects in feasibility/development, design or bid and award phases (see PDM graphic at the front of this report). All active projects are listed in the table below. Projects in the construction phase have cost and schedule baselines established and are monitored using the City's Capital Project Management System (CPMS). These projects have green/red icons included in the table below to indicate whether they are on budget and schedule using the CPMS data as a source.

Project Name	Phase	Cost Performance ¹	Schedule Performance ¹
Baselined Projects			
115KV Circuit Breaker Replacement	Construction		
DCS Fiber Optic Network Expansion	Construction		
DCS Upgrade/Replacement	Construction		
Dissolved Air Flotation (DAF) Dissolution Improvement	Construction		
Handrail Replacement - Phase V	Construction		
A5-A6 Nitrification Mag. Meter & Valve Replacement	Construction		
Pre-Baseline Projects			
BNR-2 Clarifier Guardrail Replacement	Bid & Award	N/A	N/A
Digester Gas Compressor Upgrade	Bid & Award	N/A	N/A
Digester Gas Storage Replacement	Bid & Award	N/A	N/A
Emergency Diesel Generators	Bid & Award	N/A	N/A
Fire Main Replacement - Phase III	Bid & Award	N/A	N/A
Digester & Thickener Facilities Upgrade	Design	N/A	N/A
Filtration Building B2 & B3 Pipe & Valve Replacement	Design	N/A	N/A
RWF Street Rehabilitation - Phase III	Design	N/A	N/A
Training Trailer Replacement	Design	N/A	N/A
Cogeneration Facility	Feasibility/Development	N/A	N/A
Plant Instrument Air System Upgrade	Feasibility/Development	N/A	N/A
Iron Salt Feed Station	Feasibility/Development	N/A	N/A

KEY:

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

Footnote:1 – An explanation of cost and schedule variances on specific projects identified in this table is provided on the next page.



Significant Accomplishments

After making considerable design progress during the first half of the fiscal year, a number of projects opened bids during the February reporting period and are expected to go before TPAC and to City Council for award in April, including:

- **Digester Gas Storage Replacement:** This project will demolish and replace the existing wet seal digester gas holder with a new dry seal digester gas holder. The new unit will have a total volume capacity of 50,000 cubic feet. Project Budget: \$3,200,000.
- **Fire Main Replacement – Phase III:** The third and final phase will replace approximately 7,750 linear feet (LF) of piping. In addition, the project will install or replace 22 new fire hydrants, along with gate valves, air relief valves, and associated appurtenances. Project Budget: \$2,200,000.
- **BNR-2 Clarifiers Guardrail Replacement:** This project will replace approximately 2,700 LF of existing railing, including new top-mounted posts, brackets, anchor bolts, and toe boards. Project Budget: \$550,000.

Explanation of Project Performance Issues

DAF Dissolution Improvement

This project involved the replacement of pipe sections, check valves, and knife gate valves, and the installation of new electric actuators to automate valve operations for the dissolved air flotation process in the Wastewater Facility's Sludge Control Building. One of the new valves required an extended shutdown period and repeated installation attempts. In existing facilities, it is not uncommon for new equipment to present fit and alignment challenges as was encountered in this case. In addition, the installation of the local control panel required a longer than expected submittal review period. These issues resulted in minor cost and schedule impacts (3% above target budget and 3 months beyond target schedule). All issues have been resolved and beneficial use is expected by the end of April. Project Budget: \$891,000.



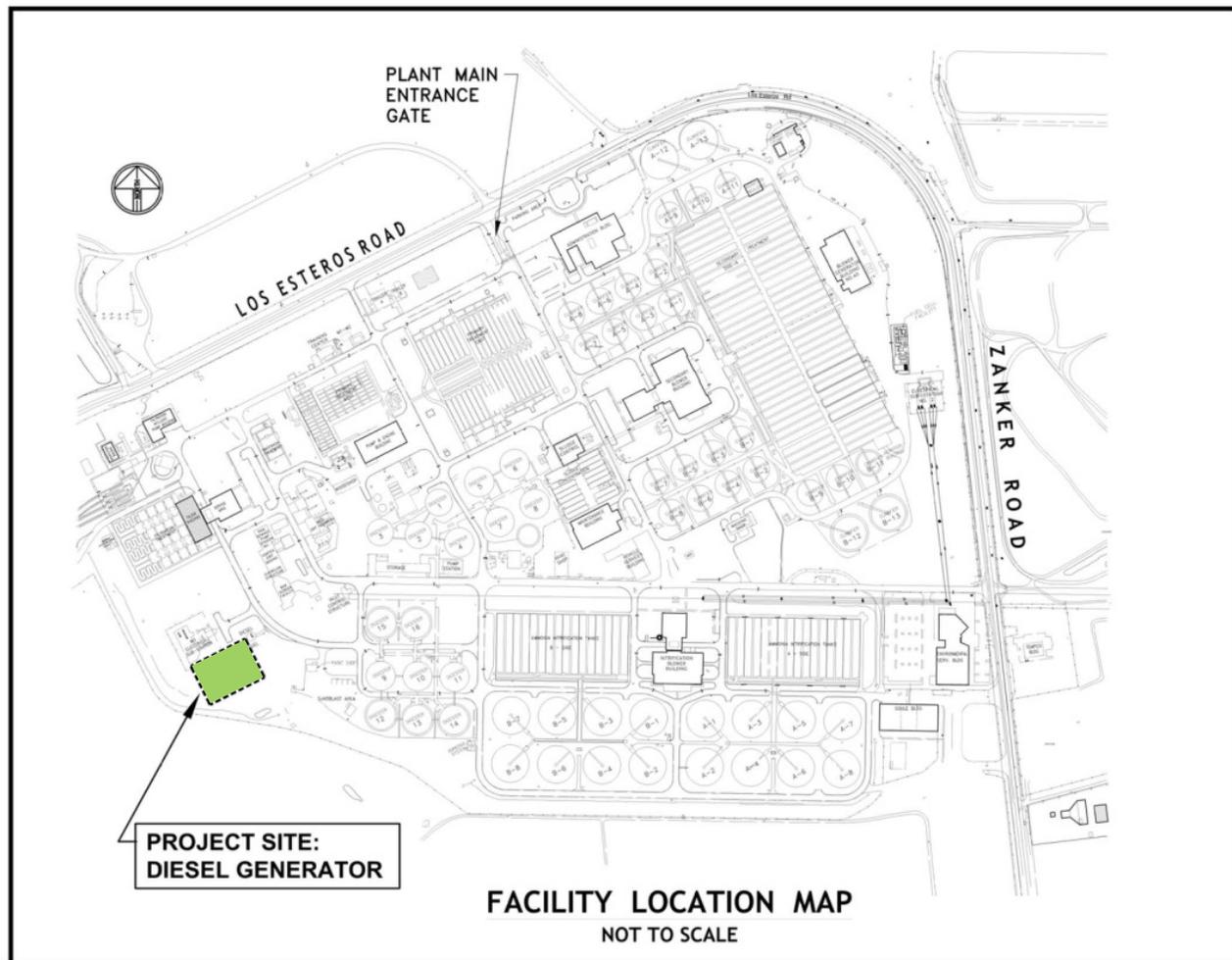
Project Profile

Emergency Diesel Generators (Design-Build Low Bid)

The project includes four Emergency Diesel Generators with a capacity of 3 Megawatts each, two 22,500 gallon on-site fuel storage tanks to provide capacity to maintain full operation for two days (48 Hours), with ability to re-fuel at any time to sustain ongoing emergency power generation. The project also includes the installation of an emissions system, fueling system, control system, monitoring system and connectivity to Wastewater Facility's Distributed Control System (DCS), electrical switchgear, synchronizing panel, protective relays and other components, and a storage building.

The generators will automatically start and energize the Wastewater Facility electrical distribution system within 5 minutes in the event of a power outage. Power will initially be provided by two emergency generators to restart critical operations while concurrently investigating the loss of power from PG&E. Concurrently, an additional two emergency generators would start to provide additional power to operate all six engine-driven blowers at Secondary Blower Building and two out of five blowers located at Tertiary Blower Building to provide aeration for secondary treatment except three (4000 HP) electrical-driven blowers at Building 40 due to the power limitation. The generators will be located south of Substation 1, in the southwest area of the Wastewater Facility, and connected to the M3 switchgear. This project is being advertised on BidSync, with eight pre-qualified bidders. Bid opening is anticipated on March 27 with the project expected to go to TPAC on May 15 and to City Council for award on May 20. Project Budget: \$21,800,000.

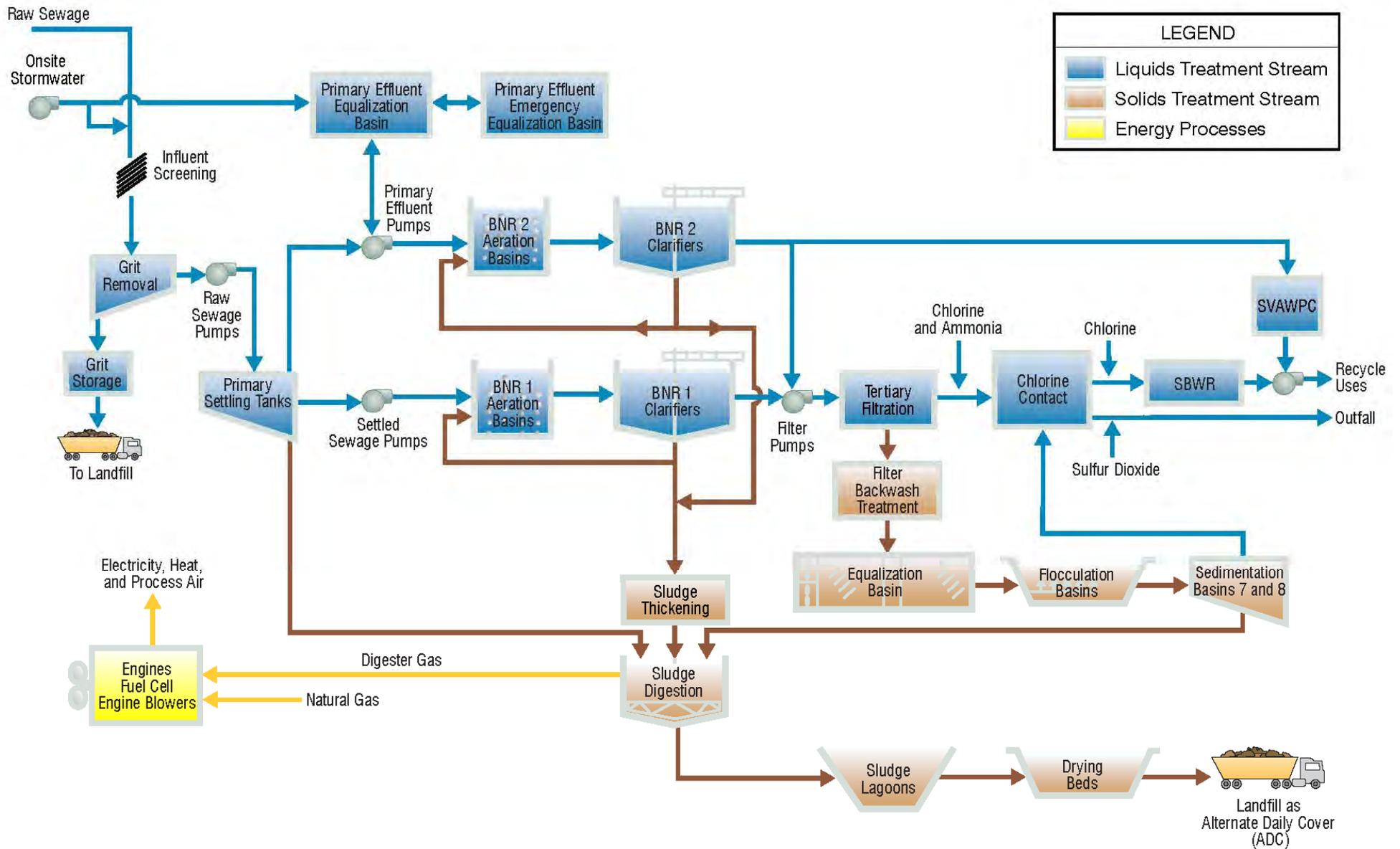
Project Location:



Page intentionally left blank



Regional Wastewater Facility Treatment Process Flow Diagram



Active Construction Projects – Aerial Plan

