



San José-Santa Clara
Regional Wastewater Facility

Capital Improvement Program Monthly Status Report for June 2014

August 7, 2014

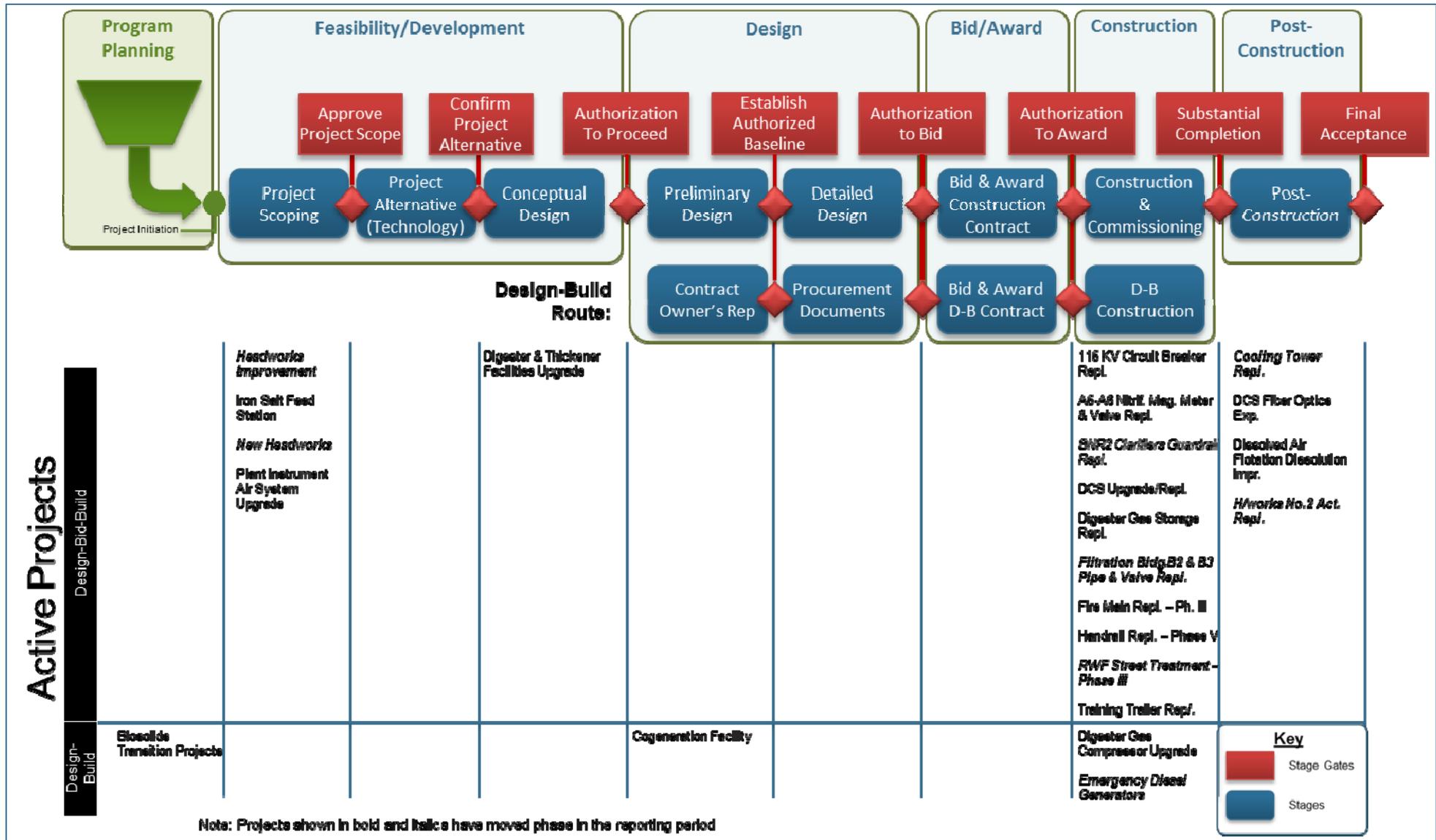
This report provides a summary of the progress and accomplishments of the Capital Improvement Program (CIP) for the San José-Santa Clara Regional Wastewater Facility (“Wastewater Facility”) for the period of June 2014.

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Project Delivery Model



Program Summary

June 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 monthly report provides a summary of the progress and accomplishments of the CIP for the month of June 2014 within Fiscal Year 2013-2014.

In the month of June the focus was on moving forward with the initial stages of a number of projects, including headworks and biosolids. We also further developed several program tools, including a design guidelines library and quality management plan. We rolled out a training site on our CIP Portal (our web-based SharePoint platform, see below) to further support staff's use of our Program Execution Plan (PEP) and Project Delivery Model (PDM). On June 3rd, we held a workshop with CIP project managers and O&M lead staff to further define our project collaboration. On June 4th, we rolled out a new Delivery Organization Chart for the CIP Program. These charts show the CIP organization for Project Delivery. On June 17th, Council adopted the FY14-15 Capital Budget and the 2015-2019 CIP. On June 25th, we held a critical workshop to review business case evaluations related to biosolids transition. On June 30th, we held our first of six Asset Management workshops to develop an implementation plan for that important effort. Finally, we continued driving implementation of our program tools and processes on all existing projects, recruiting new staff to fulfill our future resource needs for the CIP Program, and developing the next fiscal year service orders for the program work.

We presented updates at regular meetings to the Technical Advisory Committee (TAC) on June 9th and the Treatment Plant Advisory Committee (TPAC) on June 12th.

Look Ahead

In July, we will initiate a number of projects scheduled for FY14-15. We will also further develop our cost estimating protocols, and continue to reinforce the use of our processes and tools. In addition, we will continue to implement the Stage Gate process. Recruiting will also continue at a fast pace to fill existing vacancies.

Program Highlight – The CIP Portal

With a team as diverse as ours, covering such a wide range of topics, it is imperative that we have a web-based tool for sharing information. We have used SharePoint, Microsoft's collaboration software, to build an extensive team collaboration website, which we call the CIP Portal. The CIP Portal supports all aspects of our team's efforts, ranging from project-specific documents to broad program items. It contains an interactive version of our PDM (see inside of front cover of this document), along with a complete electronic copy of our PEP, the handbook for delivering our program. We have training tools (including videos), a decision log, and templates for all key documents. It truly serves as a "one stop shop" to help our program team members efficiently deliver the CIP program.

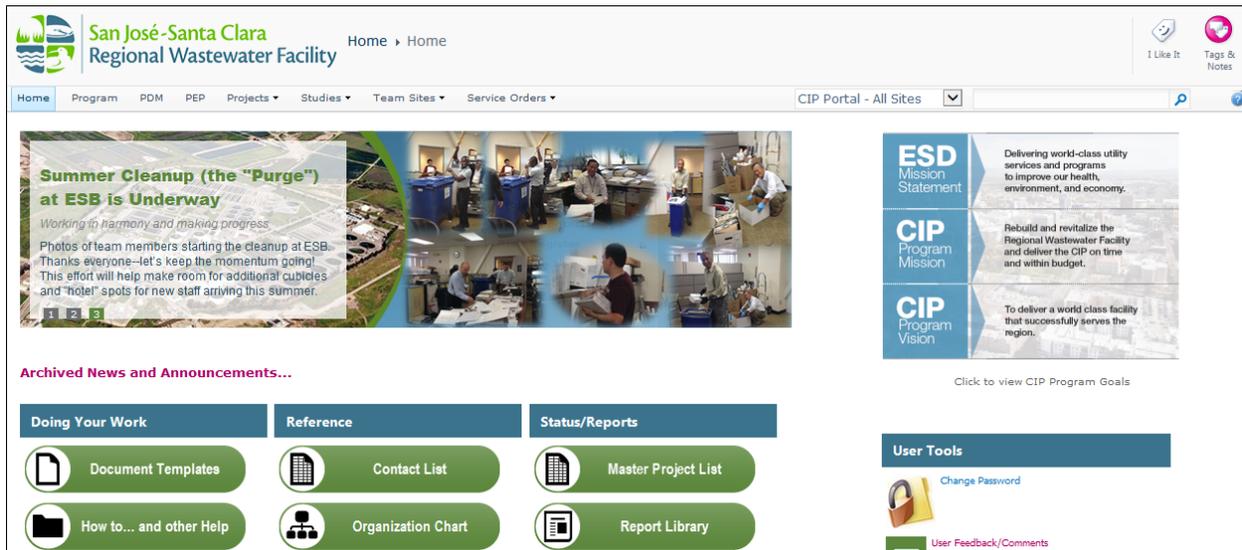


Figure 1—CIP Portal Home Page



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 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
Schedule¹	85%	67% (2/3)			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)			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.
Expenditure²	≥\$72.7M	\$89.9M			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)
Procurement³	100%	92.7% (11/12)			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			Number of OSHA reportable incidents associated with CIP construction for the fiscal year. Target: zero incidents.
Environment/Permits	0	0			Number of permit violations caused by CIP construction for the fiscal year. Target: zero violations.
Staff Count⁴	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.

KEY:

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

Notes

1. For the Schedule KPI, the number of delivered projects increased from 2 to 3, this count now includes Distributed Control System (DCS) Fiber Optics Network Expansion, which reached Beneficial Use as of May 2014.
2. Expenditure went down by \$0.7M due to Training Trailer not being encumbered in 13-14.
3. For the Procurement KPI, the design-build legal services RFQ is now expected to be awarded in September 2014.
4. Staff count KPI measured quarterly; all other KPIs measured monthly.

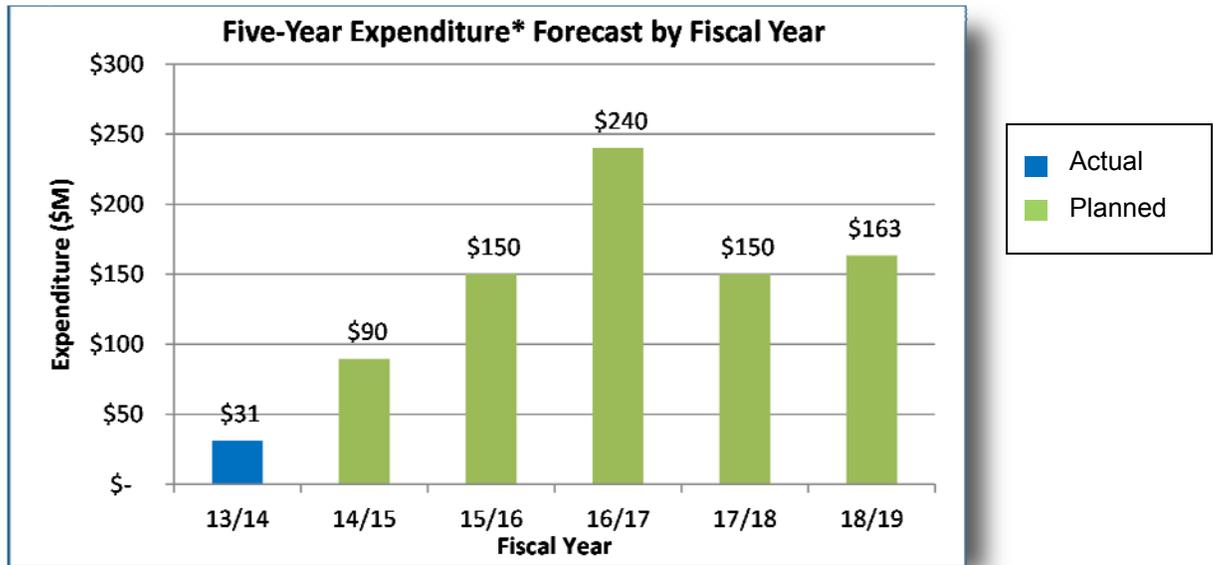


Program Cost Performance

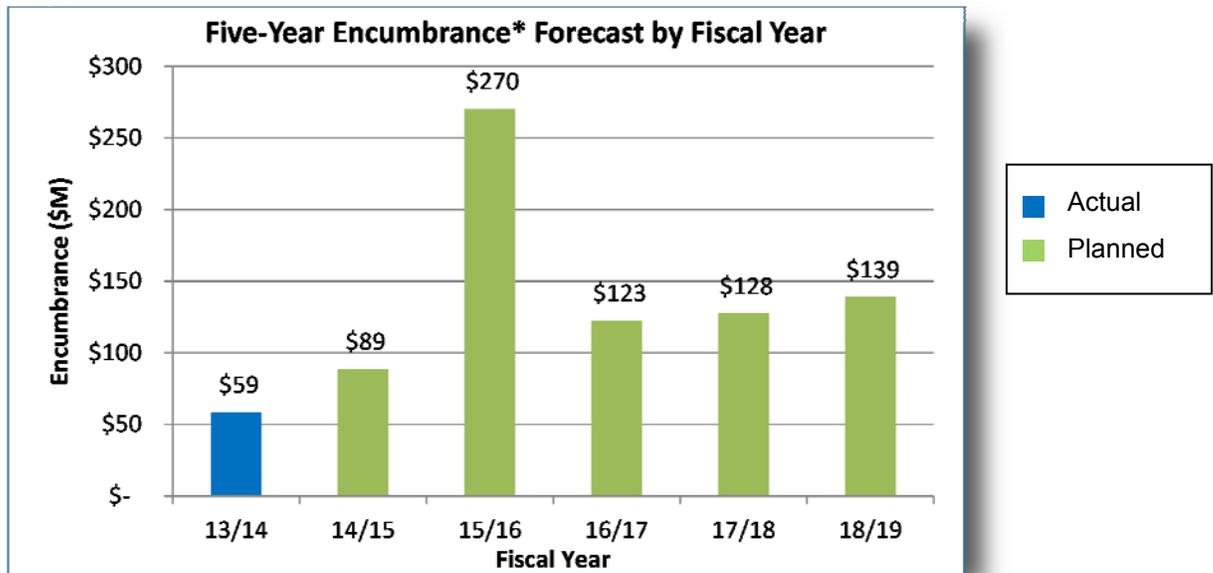
This section provides a summary of CIP cost performance for all construction projects and non-construction activities for FY13-14 and the Five-Year CIP.

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 held special study sessions with TAC and TPAC in April to discuss the ten-year funding strategy and the financing plan.



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



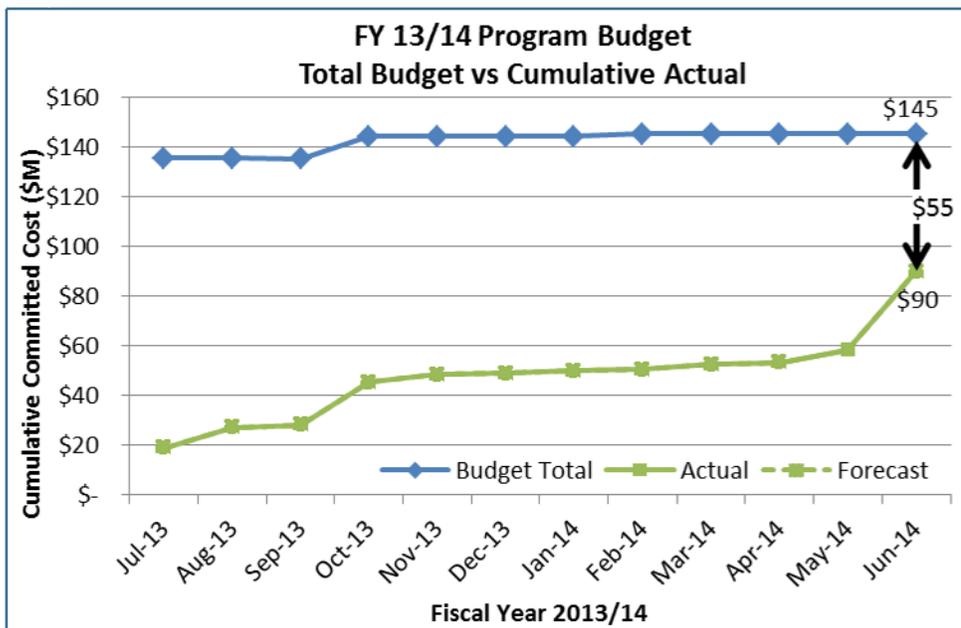
*Encumbrance defined as: Financial commitments, such as purchase orders or contracts, which are chargeable to an appropriation and for which a portion of the appropriation is reserved



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. The budget amount of \$145 million represents the 2013-2014 budget of \$193 million plus carryover of \$17 million, less reserves of \$5 million and ending fund balance of \$60 million. Committed costs are expenditures and encumbrance balances, including carryover (encumbrance balances from the previous fiscal year). As of the close of the June reporting period, \$90 million in committed cost was achieved. This represents approximately 62% of the total program budget for FY13-14.

Committed costs reached the forecasted amount of \$90 million by the end of the fiscal year resulting in a year-end variance of approximately \$55 million as shown in the chart below. The last fiscal quarter saw 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 increased from \$54 million to \$55 million due to bids coming in slightly lower than the engineer's estimates.



Project Performance

There are currently fourteen active projects in the construction or post-construction phase with a further four 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	Estimated Beneficial Use Date ¹	Cost Performance ²	Schedule Performance ²
Baselined Projects				
Dissolved Air Flotation (DAF) Dissolution Improvement	Post-Construction	Apr 2014		
Distributed Control System (DCS) Fiber Optics Network Expansion	Post-Construction	May 2014		
115KV Circuit Breaker Replacement	Construction	Aug 2014		
A5-A6 Nitrification Mag. Meter & Valve Replacement	Construction	Jul 2014		
BNR-2 Clarifier Guardrail Replacement	Construction	Dec 2014		
DCS Upgrade/Replacement	Construction	Jun 2016		
Digester Gas Compressor Upgrade	Construction	Jul 2016 ³		
Digester Gas Storage Replacement	Construction	Jun 2015		
Emergency Diesel Generators	Construction	Aug 2016 ³		
Filtration Building B2 & B3 Pipe & Valve Replacement	Construction	Apr 2015 ³		
Fire Main Replacement - Phase III	Construction	Apr 2015		
Handrail Replacement - Phase V	Construction	Mar 2015		
RWF Street Rehabilitation - Phase III	Construction	Jan 2015 ³		
Training Trailer Replacement	Construction	May 2015		
Pre-Baseline Projects				
Cogeneration Facility	Design	Mar 2017	N/A	N/A
Digester & Thickener Facilities Upgrade	Feasibility/Development	Feb 2018	N/A	N/A
Headworks Improvement	Feasibility/Development	Nov 2017	N/A	N/A
Iron Salt Feed Station	Feasibility/Development	Apr 2016	N/A	N/A
New Headworks	Feasibility/Development	Nov 2017	N/A	N/A
Plant Instrument Air System Upgrade	Feasibility/Development	Dec 2015	N/A	N/A

KEY:

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

Notes

- Beneficial Use is defined as when the work is sufficiently complete, in accordance with the contract documents, so that the City can occupy or use the work.
- An explanation of cost and schedule variances on specific projects identified in this table is provided on the next page.
- Beneficial Use date pending confirmation of Contractor's schedule



Significant Accomplishments

On June 17, the Emergency Diesel Generators, Filtration Building B2 and B3 Pipe and Valve Replacement, and RWF Street Rehabilitation – Phase III projects were awarded. For the fiscal year, the CIP team successfully awarded all eight planned construction contracts, totaling over \$31 million in work.

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).

In April, the project achieved beneficial use. The contractor's work is essentially complete, with the exception of a local control panel connection and outstanding punch list items. In-house staff is expected to finish the remaining electrical work and staff anticipates project acceptance in August.



Project Profile

Iron Salt Feed Station

The Bay Area Air Quality Management District's (BAAQMD) airborne limit for hydrogen sulfide (H_2S) in digester gas is 350 parts per million, total sulfur. While the Wastewater Facility often remains within this limit, there are periods throughout the year, typically in the warmer summer months, when this limit cannot be met without chemical additions, such as ferric chloride ($FeCl_3$) and anionic polymer.

This project constructs a ferric chloride dosing station at the Emergency Basin Overflow Structure (EBOS) and polymer dosing station at the East Primary Junction Box (EPJB), as shown in Figure 2 below. $FeCl_3$, in the form of iron salts, removes dissolved H_2S by chemically reacting to form iron sulfide, which can settle out during the primary treatment process. Anionic polymer increases the settleability of primary sludge by binding smaller particles together, effectively increasing the capacity of the primary clarifiers.

The addition of iron salts and polymer to incoming wastewater will also improve operations by reducing corrosion and odor, reducing energy usage in the secondary treatment system, and increasing feedstock to digesters, which will increase biogas production.

Between 2009 and 2012, Wastewater Facility staff conducted a series of bench-scale and full-scale trials using ferric chloride and polymer. These trials helped staff determine the dosing requirements for these two chemicals, and form the basis for the design of the new feed stations.

CH2M Hill began design in May and the project is anticipated to award in August 2015. Project Budget: \$5,290,000.

Project Location:

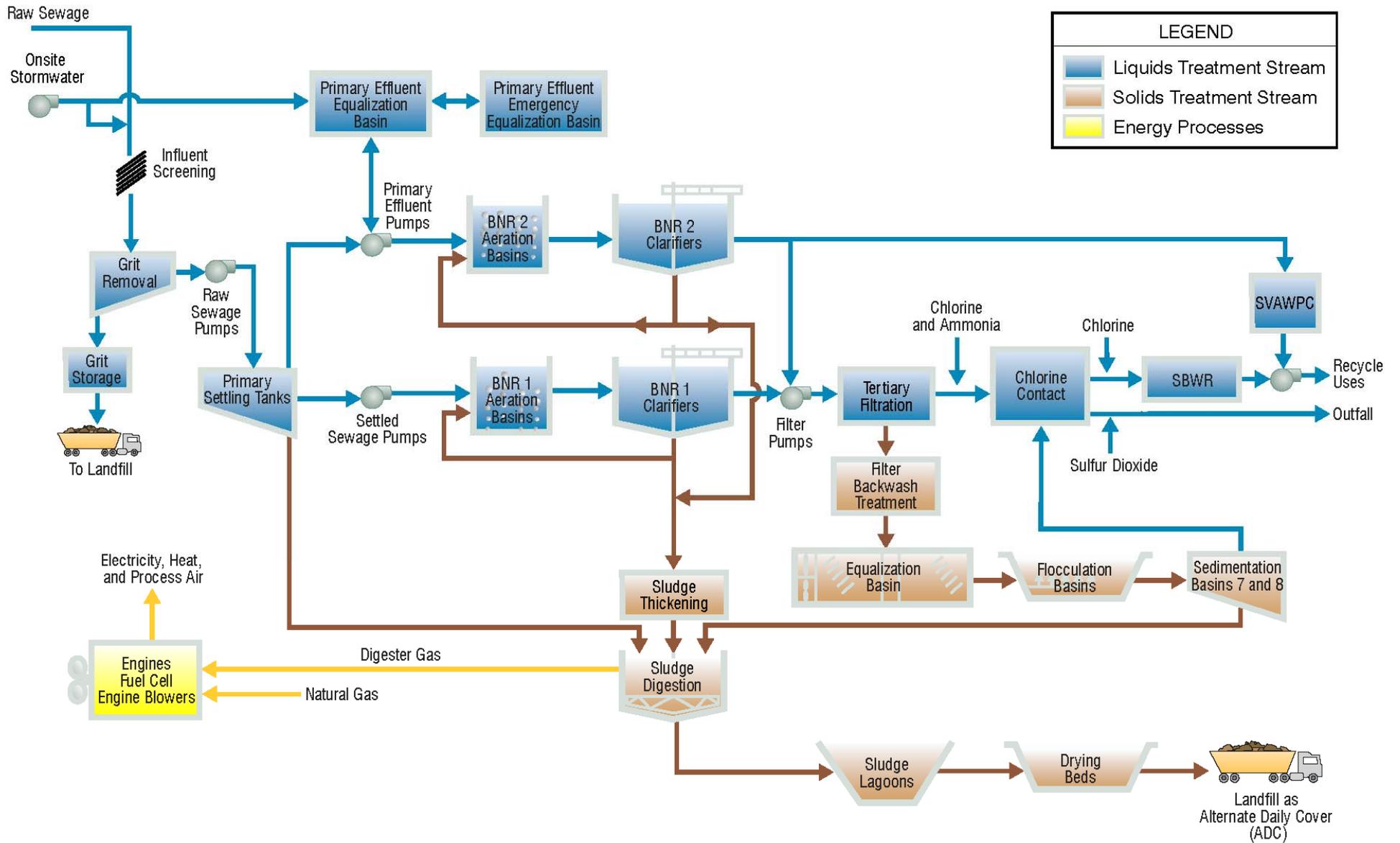


Figure 2—Iron Salt Feed Station

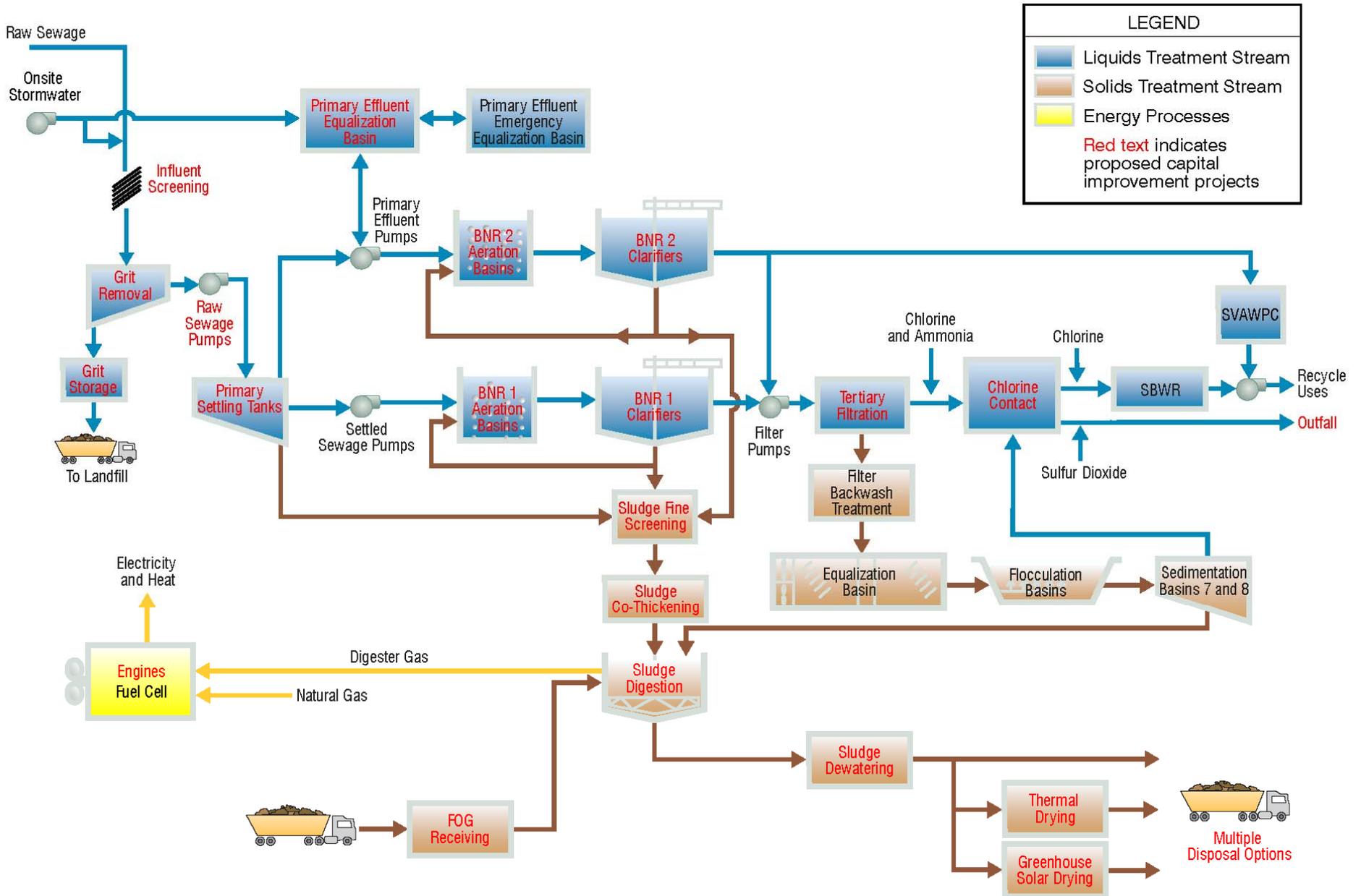


Figure 3— Example of a ferric chloride feed station similar in size to what is needed at the RWF. This installation is at Orange County Sanitation District's Plant No. 1, which treats an average flow of 96 mgd.

Regional Wastewater Facility Treatment – Current Treatment Process Flow Diagram



Regional Wastewater Facility Treatment – Proposed Treatment Process Flow Diagram



Active Construction Projects – Aerial Plan

1. 115kV Breaker Replacement
2. A5 A6 Nitrification Mag. Meter & Valve Replacement
3. BNR2 Clarifiers Guardrail Replacement
4. Digester Gas Storage Replacement
5. Handrail Replacement Phase V
6. Training Trailer Replacement
7. Digester Gas Compressor Upgrade

Facility Wide Projects (Not Shown)

- DCS Upgrade/Replacement
- Fire Main Replacement Phase III

