

Quarterly Progress Report

San Mateo Clean Water Program for the Wastewater Treatment Plant Projects

1st Quarter Report January 1, 2024
to March 31, 2024

Submitted on: April 23, 2024



Active Wastewater Treatment Plant Projects

46T003 WWTP Nutrient Removal and Wet Weather Flow Management Upgrade

Project Description:

The WWTP Upgrade and Expansion Project will replace aging infrastructure, provide capacity for wet weather flows, comply with regulatory requirements, enhance reliability, and produce a higher quality effluent that meets current and future permit requirements and Title 22 recycled water quality. Producing a higher quality effluent will enable the City to develop a water reuse Program.

Project Inside

| | |
|-----------------|-------------------|
| Project Manager | Leswin DCunha |
| Project Type | Wastewater System |
| Phase | Construction |

GMP1 – Contract

| | |
|--------------------------------|-----------------|
| Contractor | Sundt |
| Award Date | 5/6/2019 |
| Construction NTP | 6/4/2019 |
| Duration (calendar days) | 1124 |
| Contracted Completion Date | 7/1/2022 |
| Total Original Contract Amount | \$33,098,178.00 |
| Contingency Amount | \$1,725,000.00 |
| Substantial Completion Date | 2/1/2023 |
| Current Contracted Amount | \$34,783,550.00 |
| Actual Expended | \$31,630,697.00 |

GMP2 – Contract

| | |
|--------------------------------|-----------------|
| Contractor | Sundt |
| Award Date | 5/4/2020 |
| Construction NTP | 5/5/2020 |
| Duration (calendar days) | 619 |
| Contracted Completion Date | 01/14/2022 |
| Total Original Contract Amount | \$17,716,049.00 |
| Contingency Amount | \$1,645,000.00 |
| Acceptance Date | 3/6//2024 |
| Current Contracted Amount | \$17,963,767.00 |
| Actual Expended | \$17,206,534.00 |

GMP3 – Contract

| | |
|--------------------------------|------------------|
| Contractor | Sundt |
| Award Date | 9/21/2020 |
| Construction NTP | 9/22/2020 |
| Duration (calendar days) | 1584 |
| Contracted Completion Date | 1/23/2025 |
| Total Original Contract Amount | \$379,880,747.00 |
| Revised Contract Amount | \$383,790,833.00 |
| Original Contingency Amount | \$13,900,000.00 |
| Revised Contingency Amount | \$24,336,910.00 |
| Forecast Completion Date | 8/23/2025 |
| Current Contracted Amount | \$404,413,089.00 |
| Actual Expended | \$357,812,305.00 |

Current Period Activities

Project/Construction Management

- Coordinating the Special Inspections Services
- Providing Construction Inspection Services
- Reviewing and recommending approval of change orders
- Administering the Consultant and Subconsultants contracts
- Assisting with the Startup and Commissioning training of Plant Staff
- Monthly WWTP update meeting with Foster City management team.

Engineering Design/ Services During Construction

- Interpretive Signage -:Contractor is in the process of procuring the signage.
- ESDC: HDR continued review of submittals and RFIs on GMP 3; development of design change notices; onsite and remote support by Resident Engineer. .HDR continuing the preparation of electronic Operations and Maintenance Manuals

Permitting:**Bay Area Air Quality Management District (BAAQMD)****A/C 30448 (Liquid Processes)**

Because the A/C renewal request has been submitted, the City can continue construction/operation under the conditions of the existing permit until a new A/C permit is issued.

A/C 30449 (Generators)

Because construction is complete and source test data submitted, the City does not need to renew the A/C. The Source Test data was approved 10/26/23. The next step, issue the Permit to Operate (P/O). In the interim, the City can operate the generators under the conditions of the A/C permit.

Public Outreach

- PM/CM and the CWP Public Outreach Lead coordinated on regular project updates to the website, newsletter, social media, etc.

Construction**GMP1**

- ✓ Project close out is almost completed.

GMP-2

- ✓ Project is closed out and accepted.

GMP-3

- ✓ The contracted completion date for GMP3 is January.23,2025. However, in mid-January 2024, the City was informed by the contractor that the procurement of the electrical panels required for programming the SCADA have been impacted by the supply change issues as a result of the Covid pandemic, and the leak testing of the basins taking longer than originally planned, the project end date is now projected to be August 2025. The Contractor and the City are working together to minimize the potential delays and reduce this potential completion date extension. The Contractor and the City are also discussing the responsibility of the Contractor in covering the increase in management costs as a result of this schedule change.
- ✓ Commissioning meetings were held to continue discussing start-up activities, including roles and responsibilities.
- ✓ Yard piping is complete except for final connection of the force mains to the Headworks schedule for August 2024.
- ✓ Continued to install Electrical (gear including cabinets, breakers, switches, conduit and wiring) and Mechanical Equipment (piping with structural supports, motors and pumps) in Areas 51 (Headworks), 52 (Primary Clarifiers),53 (Bio- Actiflo), 55 (BNR) and 56 (MBR).

- ✓ Continued installation of the exterior siding, and ceiling in Area 80 (Admin. Building) projected to be completed in June 2024
- ✓ Continued installation of interior work for the Warehouse project to be completed by end of May 2024
- ✓ Continued improvements to the existing Sodium Hypochlorite Day and Bulk Storage Tanks, and pumping systems.
- ✓ Continued improvements to the existing Sodium Bisulfite Tanks and Pumping system.
- ✓ Continued improvements to the existing Chlorine Contact Basins.
- ✓ Parcel Map Recorded April 11, 2024

Next Period Activities

Project/Construction Management

- HDR's to continue to provide ESDC services including development of process O&M manuals, process training, expanded discipline-specific Resident Engineer services, and related known scope reflected in the contingency budget.

Engineering Design/Services During Construction

- ESDC: HDR to continue to provide onsite resident engineering services.

Permitting

- Coordination with Building and Fire Departments for Temporary Occupancy for Admin Building and Warehouse

Public Outreach

- Provide project updates to the CWP Public Outreach Lead for monthly newsletter, website, and social media updates.
- Continue as-needed support in response to resident queries via the communication hotline.

Construction

GMP-1

- Close out project

GMP-2

- Completed.

GMP-3

- ✓ Continue to install Electrical (gear including cabinets, breakers, switches, conduit and wiring) and Mechanical Equipment (piping with structural supports, motors and pumps) in Areas 51 (Headworks), 52 (Primary Clarifiers), 53 (Bio-Actiflo), 55 (BNR) and 56 (MBR).
- ✓ Continue exterior of building, including installation of siding, installation of interior ceiling for Area 80 (Admin. Building)
- ✓ Continue installation of the interior work for the Warehouse
- ✓ Continue the improvements to the existing Sodium Hypochlorite and Sodium Bisulfite systems.
- ✓ Continue improvements to the Chlorine Contact Basins

Risks and Opportunities

- **Cal Water's New Potable Water Main Extension:** Completed
- **PG&E's New Primary Service:** Completed
- **Relocation of PG&E's Utilities from Detroit Drive:** Completed

Financial Status

- ☐ Current update shows an overrun (\$39.4M) of original budget.

Millions

| | | |
|------------------------|--|----------|
| Budget | <div style="width: 100%; height: 15px; background-color: #FFD700;"></div> | \$532.71 |
| Actual Cost to date | <div style="width: 92.5%; height: 15px; background-color: #669933; display: inline-block;"></div> <div style="width: 7.5%; height: 15px; background-color: #008000; display: inline-block;"></div> | \$494.26 |
| Estimate at Completion | <div style="width: 100%; height: 15px; background-color: #FF0000;"></div> | \$572.08 |

Schedule Status

- ☐ As part of re-baseline efforts, the current forecast as of March 2024 , shows project completion to be in August 2025.

46T009 IAP Package II

Project Description:

Replace and repair aging infrastructure at the WWTP by adding screening, flexibility, and redundancy for WWTP solids processes. The project includes: (1) Mechanical bar screen and repair of concrete wall at the IJB; (2) Effluent PS #1 pumping and piping improvements; (3) replace two of the oldest pumps in PS #1; (4) Cake pumping system: add second cake pumping system; and (5) Second cake hopper system: add a second cake hopper, slide gate, access walkway, and platform.

Project Inside

| | |
|-----------------|-------------------|
| Project Manager | Tyler Kirkendall |
| Project Type | Wastewater System |
| Phase | Construction |
| Design Firm | Stantec, HDR |

Current Period Activities

Project/Construction Management

- Coordinated City negotiations with Contractor for time extension / delays.

☐ Worked with Contractor on Cake pump issues.

Engineering Design/ Services During Construction (Various)

- Stantec ESDC is ongoing through the remainder of its construction period.

Permitting

- ✓ No activities this period.

Public Outreach

- ✓ No activities this period.

Construction

Immediate Action Projects, Package II (IAP II)

- ✓ Replaced one of the mitered pipes, Analyzing if additional measures to resolve the pressure issue are needed.

| IAP II – Contract | |
|----------------------------|--------------|
| Contractor | Myers & Sons |
| Award Date | 2/11/2019 |
| Construction NTP | 2/19/2019 |
| Duration (calendar days) | 848 |
| Contracted Completion Date | 6/14/2021 |
| Contract Amount | \$6,340,000 |
| Contingency Amount | \$1,144,000 |
| Forecast Completion Date | 9/1/2024 |
| Current Contracted Amount | \$7,167,599 |
| Actual Expended | \$7,142,099 |

☐ Next Period Activities

Project/Construction Management

☐ Continued change management support.

Engineering Design and Engineering Services During Construction

☐ Stantec ESDC is ongoing through the remainder of its construction period.

☐ Continue review of submittals and RFI.

Permitting

☐ No activities this period.

Public Outreach

- ☐ No activities this period.

Construction**Immediate Action Projects, Package II (IAP II)**

- ☐ Analyze if additional measures such as pipe supports and polymer ring are needed in order to resolve the pressure issue.

Risks and Opportunities

- ☐ Sludge Cake Hopper No. 1 has not successfully completed start-up testing. Contractor working to identify issue affecting Cake Pump No. 1 and requested both design engineer and Vendor assistance in their troubleshooting of Cake Pump No. 1. Design Engineer provided new sludge cake measurement technology selection in DC 8, which was issued to the Contractor in September. City contracted with a third party to provide recommendations for fixing the Cake pump. The third party has recommended removal of welded pipe and installation of new piping. Contractor has replaced the miter welded pipe for one of the pumps , analysis is ongoing to determine if additional measures are needed.
- ☐ Delays to the project by sludge cake pumping system will result in significant delays to the project.

Financial Status

- ☐ Current update shows an overrun (\$4.85 M) of original budget.

Millions

Budget



\$13.02

Actual Cost to date



\$13.20

Estimate at
Completion

\$18.22

Schedule Status

Project schedule temporary on hold while issues are being resolved. Anticipates construction to be completed by September 1, 2024

46T010 IAP Package III

Project Description:

Upgrade aging infrastructure and increase reliability for the effluent PS at the WWTP. Improvements include perform hydraulic analysis on the effluent PS and flow meters; replace MCCs P1, P2, P3, and P4 in the Main Structure Building; add variable-frequency drives (VFDs) and check valves on stormwater pumps; replace check valves (3) for dry weather pumps; replace MCCs/VFDs (4) and control panels (4) for dry weather pumps; and replace doors (3) and windows (10), repair roof, and add HVAC for the PS.

Project Inside

| | |
|-----------------|-------------------|
| Project Manager | TBD |
| Project Type | Wastewater System |
| Phase | Engineering |

Current Period Activities

Project/Construction Management (City/TBD)

- ☐ Project Bid opened on April 6, 2023
- ☐ Project awarded to Mountain Cascade for \$11,703,696
- ☐ EAC revised to \$17,711,486.
- ☐ Project management by City Staff with Assistance from Jacobs
- ☐ Construction Management by Tanner Pacific

Engineering Design/ Services During Construction (HDR)

- ☐ Review of Submittals and RFI's

Construction

- ☐ Started potholing to identify utilities and determine if there are any unknown conflicts.

Next Period Activities

Project/Construction Management (City/Tanner Pacific)

- ☐ Construction Management by Tanner Pacific.

Engineering Design/ Services During Construction

- ☐ HDR to continue EDSC.

Construction

- ☐ Start construction of Site Waste Pump Station
- ☐ Start replacement of Digester piping.




Risks and Opportunities

- ☐ Rescoping the project **push out the completion date of the project.**

Financial Status

- ☐ The current update shows an overrun (\$15.12M) of the original budget. The original budget was an estimate to be used as a place holder that was set prior to having any knowledge of the project scope of work. The overall program carried a large contingency to compensate for this unknown and a portion of those contingencies are being used to offset this overrun. The current estimate is based on a defined scope of work.

☐

| | | |
|---------------------------|--|--------------------|
| Budget |  | \$2.47 million |
| Actual Cost to date |  | \$2.38 million |
| Estimate at Completion |  | \$17.71 million |

Schedule Status

- ☐ Current forecast shows final completion in May 2025.

46T090 Annual Major Component WWTP

Project Description:

Maintain reliable plant operations to meet regulatory permit requirements and repair and replace critical WWTP infrastructure. The operations and maintenance team maintain an active list of potential projects that are implemented as funds are available.

| Project Inside | |
|-----------------|-------------------|
| Project Manager | TBD |
| Project Type | Wastewater System |
| Phase | Engineering |

Current Period Activities

Project/Construction Management (City/ TBD)

- ☐ City to manage with City staff the Project Management with assistance from Jacobs.
- ☐ AMC project
 - ✓ Update WWTP Biosolids and Energy Management Plan - Requests for proposal being finalized.
 - ✓ Digester 1 Improvements - waiting for biosolids report to be completed.
 - ✓ Centrifuge and Centrifuge Feed Pump Replacement - waiting for biosolids report to be completed.
 - ✓ Solids Handling Systems I&C Improvements - waiting for biosolids report to be completed.
 - ✓ Digester Transfer Pump Project – Awarded contractor currently procuring equipment.
 - ✓ 3 Water Pumping Improvements – design ongoing anticipated November 2024 award
 - ✓ DAFT Corrosion Improvements – recommendations for improvements being analyzed by City staff.
 - ✓ Digest 2 Mixer Repair/Replacement – quote for repair being analyzed to determine in repair or replacement is the most cost-effective solution.

Permitting (Various)

None

Construction

- ☐ Digester Transfer Pump Project was awarded in November 2023. The contractor is currently procuring equipment.

Next Period Activities

Project/Construction Management (City/ Tanner Pacific)

- ☐ Begin CM on the Digester Transfer Pump Project

Engineering Design/ Services During Construction

- Design Consultants providing EDSC for the Digester Transfer Pump project.
- .Monthly WWTP update meeting with Foster City management team.
for the AMC projects.

Permitting

- ☐ None

Construction

- ☐ Begin on site Construction on the Digester Transfer Pump project.

Risks and Opportunities

- ☐ AMC 36 Centrifuge Conveyor Replacement is on hold.

Financial Status

- ☐ Project shows EAC over budget by \$4.03 million. The original budget was an estimate to be used as a placeholder that was set prior to having any knowledge of the project scope of work. The overall program carried a large contingency to compensate for this unknown and a portion of those contingencies are being used to offset this overrun. The current estimate is based on a defined scope of work.
- ☐

Millions

| | | |
|------------------------|-------------|---------|
| Budget | <div></div> | \$8.92 |
| Actual Cost to date | <div></div> | \$1.60 |
| Estimate at Completion | <div></div> | \$12.92 |

Schedule Status

- ☐ AMC 6 +23 was completed in November 2022.
- ☐ AMC Digester 2 Mixer Repair/Replace, quote to repair mixer is being evaluated, approximately 6 months without Digester 2 online.
- ☐ AMC Digester Transfer Pump was awarded in November 2023 to Contractor procuring equipment.
- ☐ All other AMC projects are in the design or pre-design phase.

Completed Projects

Wastewater Treatment Plant Projects

Updated to latest values from EDEN (January 2020)

| Name | Start Date | Finish Date | Actual Cost |
|---|------------|-------------|---------------------|
| 469948: SCADA Immediate Projects: Phase 2 (IAP) | 1/2/2015 | 11/25/2015 | \$1,524,717 |
| 469962: Short-Term MCC Replacement Project (IAP) | 1/2/2015 | 11/25/2015 | \$49,628 |
| 469973: Secondary System: Immediate Projects: SCs 1-4 and return-activated sludge Pump Values (IAP) | 1/2/2015 | 11/25/2015 | \$426,918 |
| 469975: Solids: Immediate Projects: GT 1&2 (IAP) | 1/2/2015 | 11/25/2015 | \$372,358 |
| 469976: Immediate Projects: Boiler Replacement | 1/2/2015 | 4/29/2016 | \$475,296 |
| 469978: Solids Building: Immediate. Projects: Centrifuge Hoist Project (IAP) | 1/2/2015 | 11/25/2015 | \$2,410 |
| 46T002 IAP Package I | 8/1/2018 | 8/28/19 | \$18,621,868 |
| TOTAL | | | \$21,472,951 |