

Regional Wastewater Control Facility Modifications Project Update

Water Advisory Group

May 3, 2023

Agenda Item No. 23-0476

Project Overview

- Progressive Design-Build Project
- Replace/Rehab aging infrastructure
- Convert from Trickling Filters and Ponds to Activated Sludge for Secondary Treatment
- Replace Chlorine Disinfection and Sand Filters with UV and Disk Filters
- Relocate outfall to East Bank of San Joaquin River
- Improve working conditions
- Improve energy efficiencies
- Meet the new discharge limits required in the NPDES permit

Project Development

Key Milestones

- Phase 1 – Complete January 2019
- Phase 2A (Design) – Approved March 2019
- Phase 2A Notice to Proceed (NTP) – April 2019
- Phase 2B - Approved July 2019
- Phase 2B – NTP issued September 2019
- Construction started 9-19-2019
 - Approx. 84% complete

Contract Approach

- Phase 1 - \$5.5M
- Phase 2 A&B: \$192.6M
 - Guaranteed Maximum Price (GMP)
 - Time and Materials not to exceed GMP
 - Shared savings with 50%/50% split of unspent amount up to GMP
 - City retains first \$1M of shared savings
- Current GMP = \$220.0M
 - Includes 9 Change Orders totaling \$21.9M
- Outfall (new scope) included in change orders
- Total Project Cost = \$244.1M

Funding Approach

- Water Infrastructure and Innovation Financing Act (WIFIA)
 - \$108M
 - Accepted by Council July 2019
- Clean Water State Revolving Fund (CWSRF)
 - \$46.8M
 - Accepted by Council November 2021
- City Wastewater Fund
 - Rates set in 2019 to fund project
 - Pay-go or Municipal Bonds
- Interim Funding – Bond Anticipation Notes (BANs)
 - \$118M; 3-year term
 - Approved by Council July 2019
 - WIFIA funds used to pay back BANs December 2021

Construction Overview

- Replace/Rehab aging infrastructure
 - Headworks rehab
 - New Intake Pump Station
 - Primary Clarifiers rehab
- Convert from Trickling Filter to Activated Sludge for Secondary Treatment
 - New Secondary Clarifiers and Aeration Basins
- Replace Chlorine Disinfection and Sand Filters with UV and Disk Filters
- Relocate outfall to East Bank of San Joaquin River
- Meet the new discharge limits required in the NPDES permit

Construction Progress

- Headworks Rehab - 95% complete
- Intake Pump Station - 50% complete
- Primary Clarifier Rehab – 100% complete
- Primary Effluent Pump Station – 100% complete
- Secondary Clarifiers – 100% complete
- Aeration Basins – 100% complete
- Chemical Feed Area – 100% complete
- Tertiary Diversion Structure – 90% complete
- Final Effluent Pump Station – 50% complete
- Backwash Pump Station – 95% complete
- Solids Handling - 75% complete

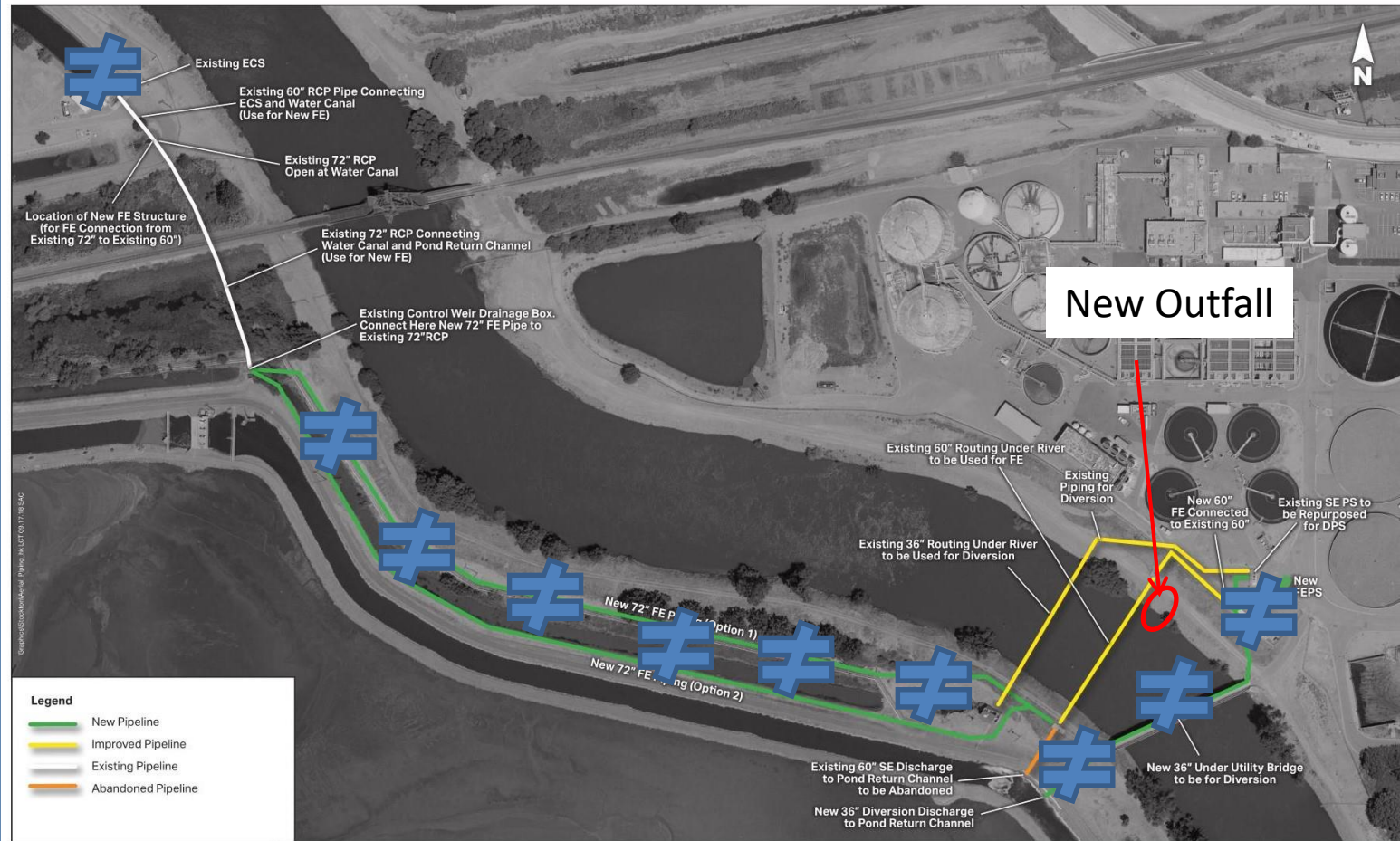
Construction Progress (cont)

- New 3MW Generator - 85% complete
- New Vactor Pad Facility – 100% complete
- Personnel Buildings - 50% complete
- Disk Filters - 90% complete
- Ultraviolet Disinfection - 90% complete
- New Outfall construction – June 2023

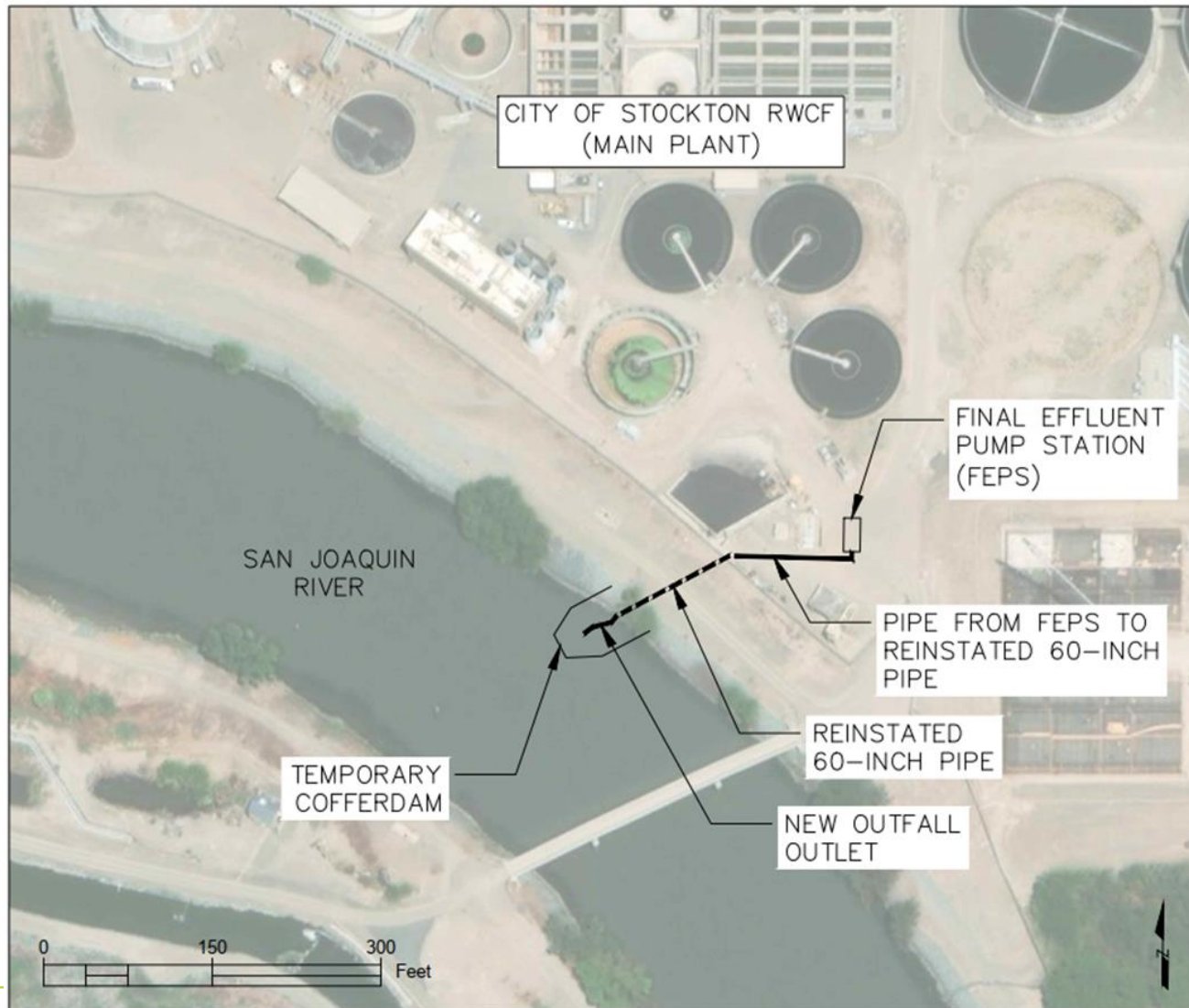
East Bank Outfall

- Consolidate all operations to one side of the River
- Initially separated from the project due to permitting complexities
- Discovered an existing pipe through the levee near the proposed location (circa 1970's)
- Inspected and determined pipe was acceptable for use
- Updated Design
 - Pipe suitable for reuse with lining
 - Modify Final Effluent Pump Station (FEPS)
 - Reroute effluent pipeline to existing outfall pipe
 - Extend existing outfall pipe out and down into river
- Eliminated construction of ~2,000 linear feet of pipe

Final Effluent Conveyance Redesign



East Bank Outfall Construction



2023 Schedule

- Project ~84% complete overall.
- Complete construction of UV and Disk Filters
- Construct new Outfall on east bank levee
- Complete new Intake Pump Station and Headworks
- Complete Solids Handling
- Rehab Collections and Maintenance Building
- Rehab Operations Building
- Begin commissioning all processes to meet permit compliance deadline of June 1, 2024