



Wastewater
Treatment



TRANSFORMING
WASTEWATER
TO RESOURCES



Recycled
Water



Energy
Production



Biosolids
Reuse

Major Factors Impacting 5-Year CIP Development and Financial Assumptions

Board of Directors Meeting
March 13, 2024

Overview of Preliminary 5-Year Capital Improvement Program (CIP)



Description	Current CIP = \$139.1M	Prelim. CIP = \$192.8M (+\$53.7M)	Key Drivers
Secondary Process Improvements (Phase 1)	\$60M	\$110M (+\$50M)	<ul style="list-style-type: none"> Developed “Phase 1” with revised scope and cost to support future nutrient removal
Cogeneration System Improvements	\$7M	\$13.5M (+\$6.5M)	<ul style="list-style-type: none"> Updated cost based on detailed design activities, assumes IRA tax credits (\$6.5M)
Antioch Pump Station and Conveyance System Improvements	\$18.5M	\$22.0M (+\$3.5M)	<ul style="list-style-type: none"> Incorporating “alternative project delivery” (e.g., progressive design build); corridor study needed; escalated initial cost estimate
Debt Financing Assumption	\$30M	\$53.9M (+\$23.9M)	<ul style="list-style-type: none"> Mitigate rate impacts via WIFIA loan (favorable terms), potential bond issuance

Staff is incorporating significant capital (+\$100M) into long-term term financial planning assumptions (Years 6-10) for Secondary Process Improvements Phase 2 to meet nutrient removal regulations

5-Year CIP Overview	Secondary Process Improvements	Cogen System Improvements	Antioch PS and Conveyance System	Financial Assumptions	Next Steps
---------------------	--------------------------------	---------------------------	----------------------------------	-----------------------	------------

Current Nutrient Management Regulatory Framework (from Feb 2024 Board Meeting)



- Recurrence of algal blooms in summer 2023
- Significant external pressure
- Foundational shift in regulatory approach



10 years to reduce nutrients

Maximum capital and operating cost impacts to customers

Impedes near-term investment in existing infrastructure

Limited external federal and state funding sources

Limited application of emerging, cost-saving technologies



Current Regional Water Board Approach

- Achieve **40% reduction** in nutrient loading to SF Bay in **10 years** based on **2022 effluent discharges** from 37 POTWs via **individual POTW final nutrient limits**
- Replaces **prior assumption** (July 2023) of **“voluntary” actions** by Bay Area POTWs in near term with **extended compliance schedule**
- Significant financial impacts to District—expected to **add >\$140-200 million+** to **10-year CIP** with associated **rate impacts** and **external funding** needs (WIFIA, debt)
- District met with Regional Water Board staff on 2/7 to request **adjustment** to proposed final nutrient limit—**positive outcome**

Secondary Process Improvements Phase 1 Address Aging Infrastructure, Growth Needs



- Need to address **regulatory compliance vulnerability** due to **aging infrastructure** (i.e., tower trickling filters) and provide **treatment capacity** for growth in service area through ~2040
- Design contract (\$6.4M) awarded to HDR in November 2023
- Project cost estimate **increased from \$60M to \$110M** due to **significant scope changes** and **updated cost assumptions**
 - Escalated construction cost estimate to midpoint of construction (2028)
 - Increased required new aeration basin volume from 1.2 million gallons (MG) from master plan to 3.0 MG to better support construction needs, process reliability, and future nutrient removal (Phase 2)
 - Incorporated expanded scope to **provide foundational infrastructure improvements to support future nutrient removal**

Secondary Process Improvements Phase 2 Meet Nutrient Removal Requirements

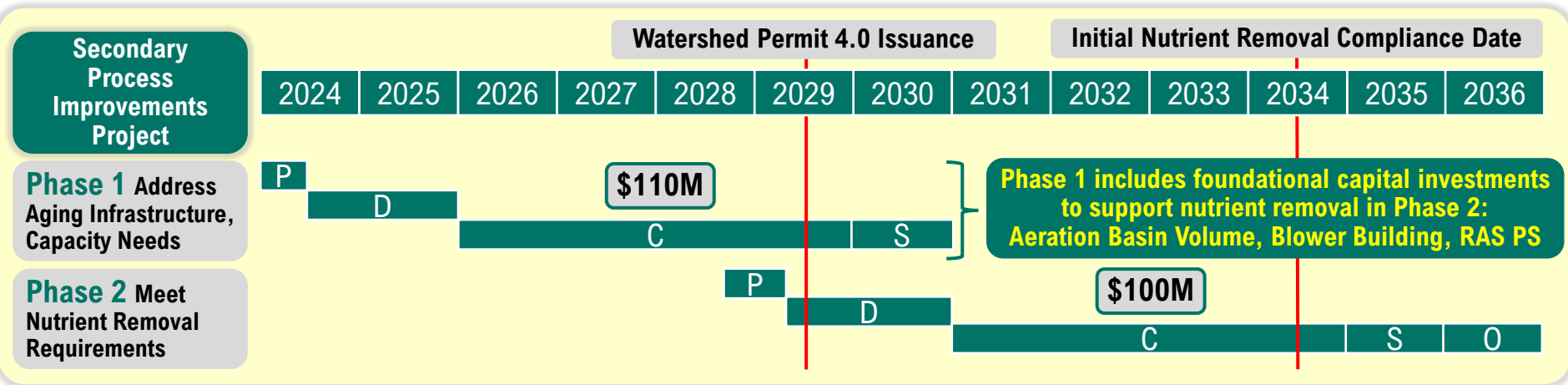


- Following award of detailed design contract in Nov 2023, staff has been working to develop nutrient removal alternatives and associated implementation timelines
 - Preliminary cost estimate = **\$100 million** (escalated to 2032)
 - Utilize extended timeline for completing Phase 2 (Years 6-10+) with associated debt financing to mitigate rate impacts in near term
- Staff has engaged with U.S. EPA (2/20) on Water Infrastructure Finance and Innovation Act (WIFIA) program
 - Positive outcome; favorable loan terms, including 49% of project cost and repayment starting up to 5 years after construction
- Staff is incorporating preliminary cost estimate, funding plan into 10-year financial planning activities

Secondary Process Improvements Proposed Project Phasing Approach



- Significant increase in capital costs assumption will require external funding sources (WIFIA, bonds) with project phasing to mitigate associated rate impacts to customers
- Extended compliance timeline would support adapting to changes in nutrient removal requirements (2029)



P = Planning, D = Design, C = Construction, S = Startup/Commissioning, O = Optimization

Secondary Process Improvements Project Phasing

Phase 1 (\$110M) (2024-2030)

- Address Aging Infrastructure (TTFs)
- Increase Capacity for Growth
- Provide Foundation for Nutrient Removal

Phase 2 (\$100M) (2029-2036)

- Meet Nutrient Removal Requirements during Dry Weather Season

New Secondary Clarifier

New RAS Pumping

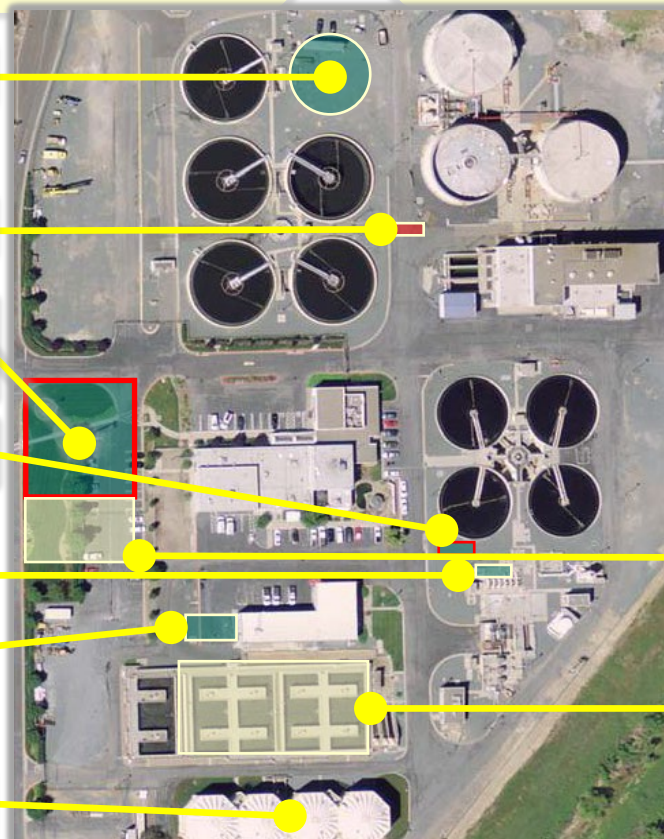
New Aeration Basins (3.0 MG)
Larger for Future Nutrient Removal

New Primary Effluent Pumping

New TTF Pump Replacement

New Aeration Blower Building

Decommission TTFs Over Time



New Aeration Basins (1.5 MG)

Retrofit 4 of 5 Existing Aeration Basins to Incorporate Various Nutrient Removal Zones

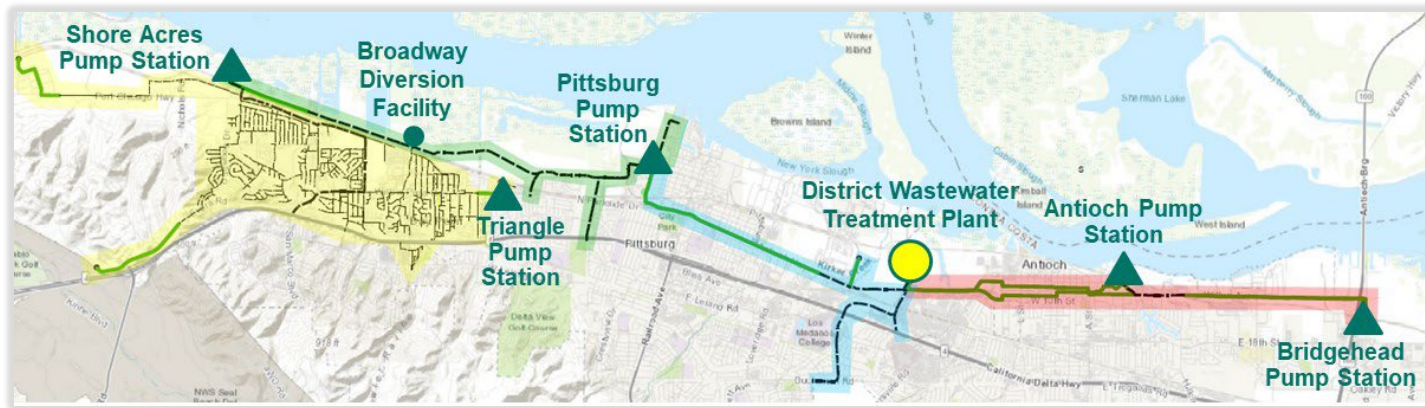
Cogeneration System Improvements Project Increased Project Cost Estimate

- Board awarded detailed design contract in February 2023
- Staff has been implementing accelerated schedule to ensure project qualifies for **~\$6.5M in federal tax credits** under Inflation Reduction Act
 - Requires project to be in construction by end of 2024
 - On track for construction bids in June 2024
- Significant increase in project cost (\$20M) based on design progress, similar projects, construction bid climate
 - \$13.5M in preliminary 5-year CIP (**+\$6.5M** from \$7.0M in current CIP)
 - Assumes receipt of \$6.5M in tax credits



Antioch PS and Conveyance System Improvements Increased Project Cost Estimate

- Significant phased project to address deficiencies at Antioch Pump Station and associated conveyance system
- Moderate increase in project cost based on scope complexity, current market conditions, construction climate
 - \$22.0M in preliminary 5-year CIP (+\$3.5M from \$18.5M in current CIP)
- Pursuing alternative project delivery (e.g., progressive design build) to mitigate risks, potentially provide schedule benefit



5-Year CIP Overview

Secondary Process Improvements

Cogen System Improvements

Antioch PS and Conveyance System

Financial Assumptions

Next Steps

Major Impacts to Key Financial Assumptions



- Increase cash funding assumption for Secondary Process Improvements Phase 1 Project from **\$30M to \$56.1M**
 - In FY20/21, Board supported goal to provide \$30M in cash funding for \$60M Secondary Process Improvements Project (now \$110M)
 - District has increased cash reserves for anticipated capital spending needs in recent years—**optimize cash funding**, while **maintaining sufficient cash reserves** for **future debt rating** analyses, issuances
- Incorporate debt financing assumptions for Phase 1 (\$53.9M, 49%), Phase 2 (\$40-\$60M, <60%) in financial planning
 - Target WIFIA loans with **favorable loan terms** (rate, repayment)
 - **Increase Sewer Service Charges (SSCs) over time** to generate revenue for cash funding needs, future debt service payments
 - Board approved updated Debt Policy that reflects reduced Debt Service Coverage Ratio to support future debt issuances

5-Year CIP Overview

Secondary Process Improvements

Cogen System Improvements

Antioch PS and Conveyance System

Financial Assumptions

Next Steps

Major Impacts to Key Financial Assumptions (cont'd)



- Update funding sources for Secondary Process Improvements Phase 1 Project (subject to change)
 - Original \$60M Project
 - 78% (\$46.8M) WW Capital Asset Replacement
 - 16% (\$9.6M) WW Expansion
 - 6% (\$3.6M) Advanced Treatment
 - Updated \$110M Project
 - 61-67% (\$67.1-73.7M) WW Capital Asset Replacement
 - 12-13% (\$13.2-\$14.3M) WW Expansion
 - 20-27% (\$22.0-29.7M) Advanced Treatment**
- Staff expects a higher than projected (2.5%) SSC increase in FY24/25 (4.5-8.0%) due to unanticipated nutrient removal requirements on accelerated compliance schedule and an unplanned increase in operating costs (utilities)

Upcoming Board Meetings Next Steps



March 2024	<ul style="list-style-type: none"> ● 3/13 Major Factors Impacting 5-Year CIP Development and Financial Assumptions ● 3/27 Fin Comm: Review Proposed FY24/25 SSCs/Prop. 218 Notice
April 2024	<ul style="list-style-type: none"> ● 4/10 Review Proposed FY24/25 SSCs, Set Public Hearing, Approve Prop. 218 Notice ● (TBD) Fin Comm: Review Draft 5-year CIP, FY24/25 Operating Budget Assumptions
May 2024	<ul style="list-style-type: none"> ● 5/8 Review Draft 5-year CIP, Set Public Hearing Review FY24/25 Operating Budget Assumptions
June 2024	<ul style="list-style-type: none"> ● 6/12 Conduct 5-year CIP Public Hearing, Consider Approval Conduct FY24/25 SSC Public Hearing, Consider Approval, Authorize Collection Consider FY24/25 Budget Approval

5-Year CIP Overview

Secondary Process Improvements

Cogen System Improvements

Antioch PS and Conveyance System

Financial Assumptions

Next Steps