



# **San Francisco Public Utilities Commission Presentation to the Capital Planning Committee**

## **Water Enterprise and Wastewater Enterprise Capital Budget and 10-Year Capital Improvement Plan**

**April 8, 2024**

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# Agenda

1. Welcome and Introduction
2. Agency Capital Budget Overview
3. Addressing Rate Impact Concerns
4. Water Enterprise and Wastewater Enterprise Financial Outlook
5. Water Enterprise Capital Plan
6. Wastewater Enterprise Capital Plan

\*\*Power Enterprise Capital Budget approved at March 4, 2024, Capital Planning Committee meeting



# Overview of the SFPUC's 10-Year Capital Improvement Plan

- As the largest 10-Year Capital Plan ever proposed, this year's \$11.8 Billion plan represents a visionary investment in San Francisco's economy, infrastructure, and resiliency
- Key Points:
  - A comprehensive plan spanning 10 years, ensuring reliable water, clean energy, and resilient infrastructure – delivering on the SFPUC's priorities
  - A catalyst for economic growth, creating and sustaining thousands of local union jobs
  - Bolstering the City's tax base, in turn supporting the City's General Fund.
  - A local solution to the global climate crisis
  - Aligned with the Mayor's priorities, building a safer, cleaner, and more prosperous San Francisco



# Addressing City Department Concerns from March 5, 2024 CPC Meeting

## *Affordability and Transparency*

- **Commitment to Affordability:** Established Water/Wastewater Affordability Policy in Nov 2023.
- **Transparency & Collaboration:** Transparent communication with public, MBO and City departments on proposed budget.

## *Efficient Capital Planning*

- **Improved Planning:** Capital Planning Improvement Initiative balances affordability with deliverability.
- **Capital Plan Optimization:** Reduced internally proposed plan by \$2.7 billion.
- **Continued Efforts to Reduce Carryforward Balance:** Decreased by \$300M (12%).

## *What's driving rates*

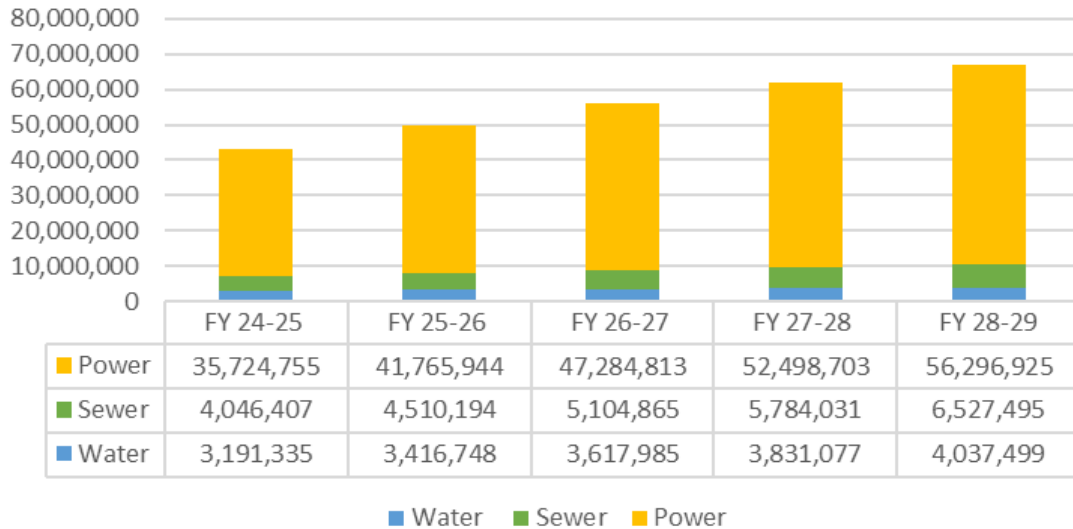
- **Rate Drivers:** Capital (Water/Wastewater), Power purchase/delivery (Power).
- **Interest Rate Impact:** Increased assumption (5% to 6%) impacts projected debt service and rates.

## *Efforts to temper rate impacts*

- **Funding Strategies:** Pursuing WIFIA, SRF loans, federal/state grants and other external sources for mandated projects.
- **Cost Offsets for Departments:** Utilizing GI Grants and Conservation programs.

# Projecting Utility Costs for General Fund Departments

Projected General Fund Utility Costs

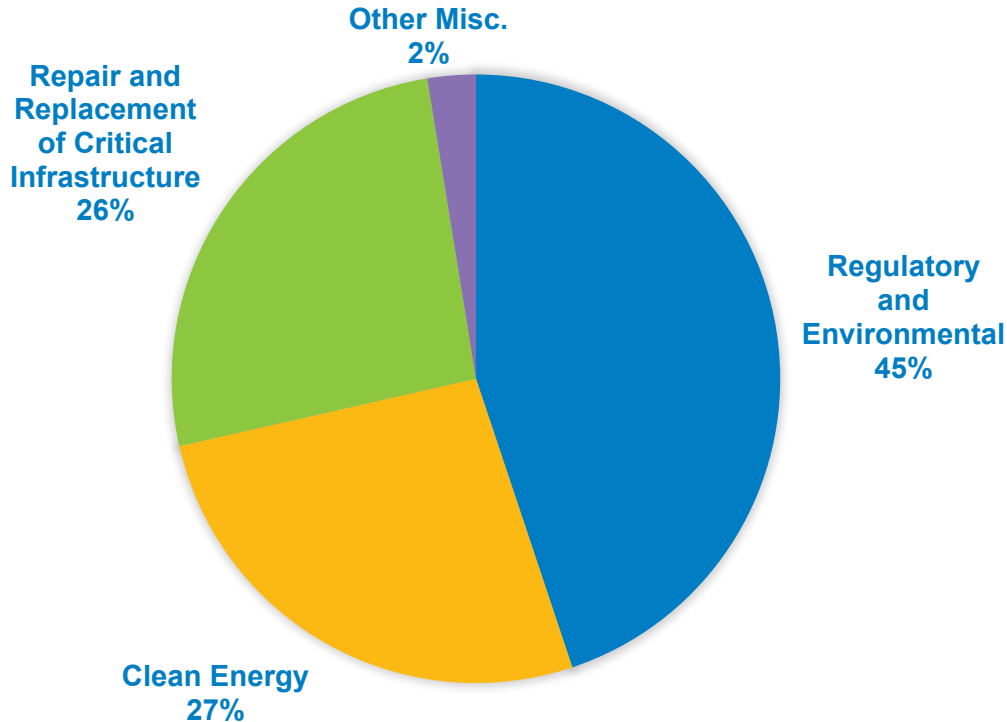


- Water and Wastewater rates are adopted for the next two years.
- The increase in Power utility costs to General Fund departments is the 3 center per KWH rate increase intended to bring General Use Customers up to cost of service.
- When GUSE customers do reach retail rate levels, rates will continue to be significantly below PG&E.
- Power purchase and delivery is the primary driver in rate increases for retail ratepayers.
- Capital projects are the primary drivers for rate increases in the Water and Wastewater enterprises.

***\*\*Retail power rates now projected to be 12% vs 14% next year\*\****

# Capital Plan Growth drivers by Project Category

**\$3 Billion Growth in the Capital Improvement Plan by project type**



The growth in this year's Capital Plan is overwhelmingly driven by regulatory and environmental obligations, clean energy investments, and repair and replacement of aging critical infrastructure

# Economic Impact: Sustaining Jobs, Strengthening San Francisco

- Every \$1 million expended on construction creates and sustains roughly 5.93 jobs.<sup>1</sup>
- The SFBOS assumes over 80% of the capital plan is dedicated to construction. That's over 50,000 jobs.
  - 2/3 of which are good paying construction jobs, either created or sustained by SFPUC's 10-Year CIP.<sup>2</sup>
  - Multiplier Effect: Capital investment stimulates local businesses, generating additional jobs and economic activity/vitality.



1. <https://onesanfrancisco.org/the-plan-2020/appendices-methodology-and-assumptions>

2. <https://sfbos.org/6-capital-project-design-costs>

# Commitment to Labor: A Partnership for a Stronger San Francisco



- The multiplier effect of the \$11.8 billion investment in San Francisco infrastructure will especially benefit union jobs, ensuring:
  - Access to locally sourced skilled labor and expertise in project completion
  - Investment in local communities and workforce development
  - Jobs that are safe, and provide fair wages and benefits for our community
- Recent capital investments have yielded:
  - Local residents performing a minimum of 30% of all work hours on projects >\$400,000
  - 44% of workers assigned to SFPUC capital projects were San Francisco residents (2022)
  - 1,400 internships per year



# **Water and Wastewater Capital Budget, 10-Year Capital Improvement Plan, and 10-Year Financial Plan Overview**



# 2-Year Water and Wastewater Budget

## Budget Comparison:

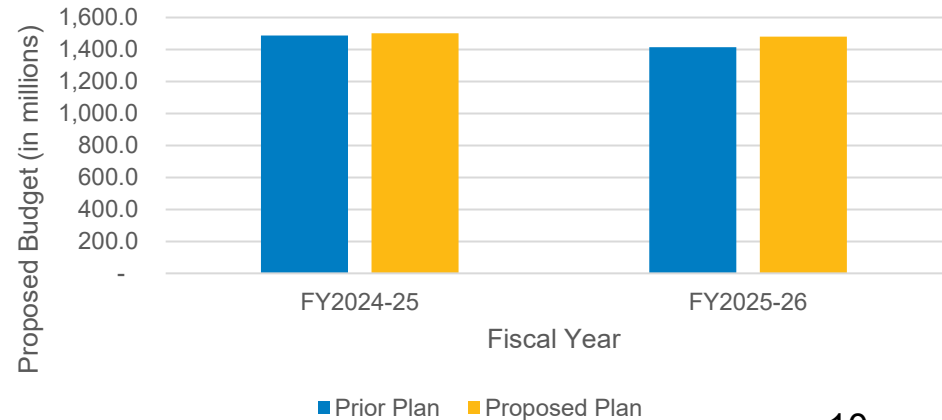
- Changes are minimal compared to what was anticipated at this point last year.
- Significant growth in the 10-Year Capital Plan is reflected in the outyears.**

\$Million	Prior Plan FY2024-25	Proposed Plan FY2024-25	Change	Prior Plan FY2025-26	Proposed Plan FY2025-26	Change
Water	895	893	(2)	818	823	5
Wastewater	437	456	19	444	477	34
Hetchy Water	156	153	(3)	153	181	28
	<b>1487</b>	<b>1501</b>	<b>14</b>	<b>1415</b>	<b>1481</b>	<b>66</b>

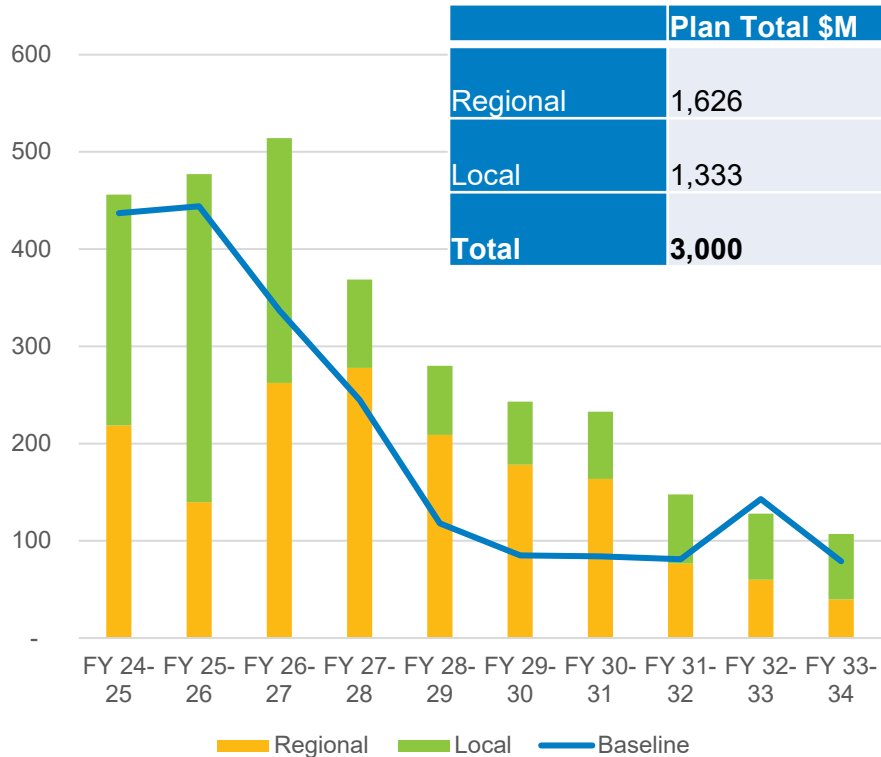
## Debt Authorization:

- Through this budget, the SFPUC is requesting **\$1.035 Billion of debt authorization** in FY2024-25 and FY2025-26 for the Water Enterprise
- Through this budget, the SFPUC is requesting **\$1.716 Billion of debt authorization** in FY2024-25 and FY2025-26 for the Wastewater Enterprise

2-Year Budget Comparison to Prior Plan



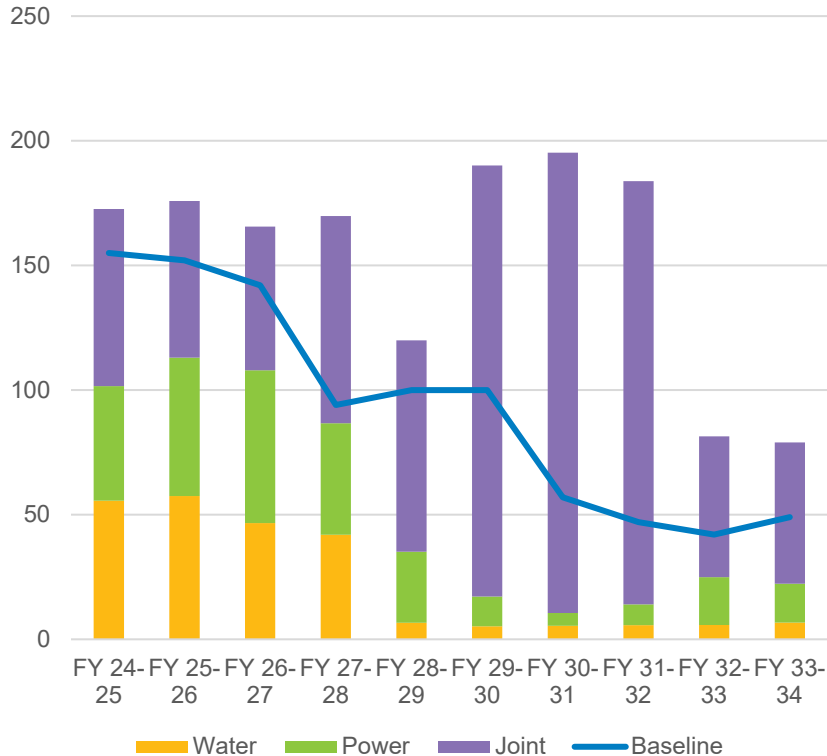
# Local/Regional Water's \$3B Capital Plan



- Water's Capital plan has grown by \$695 M or 32%
- Aging infrastructure is the primary growth driver
- Key growth in projects:

	Total in Plan \$M	Increase \$M
Main Replacement (Local Conveyance)	517	156
Millbrae Campus Improvements	411	187
Alternative Water Supplies	225	142
Palo Alto Pipeline Replacement	88	18
Pilarcitos Dam	56	33
SVWTP Long Term Improvements	35	35

# Hetchy Water's \$1.5B Capital Plan

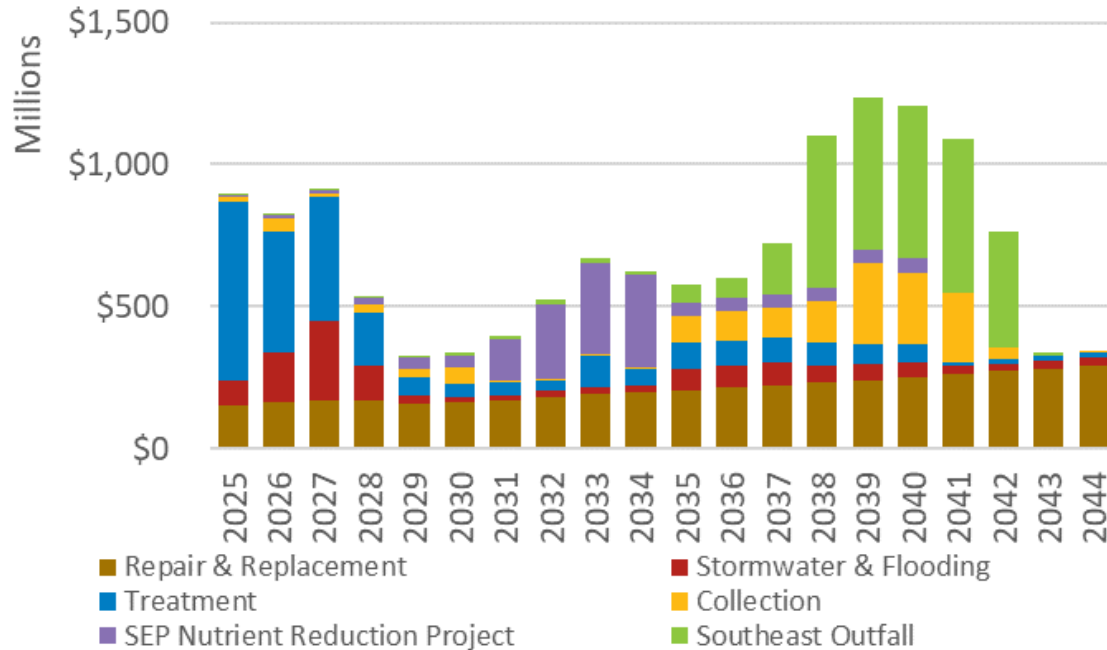


- Hetchy Water's Capital plan has grown by \$557M or 50%
- Aging infrastructure is the primary growth driver
- Key growth in projects:

	Total in Plan \$M	Increase \$M
Moccasin Penstocks	321	285
Moccasin Dam	134	70
SJPL Valve	113	36
Moccasin Buildings	110	50
Transmission Lines		
Clearance	63	23
Eleanor Dam	52	24
Moccasin Powerhouse	44	30

# Wastewater's \$6B Capital Plan

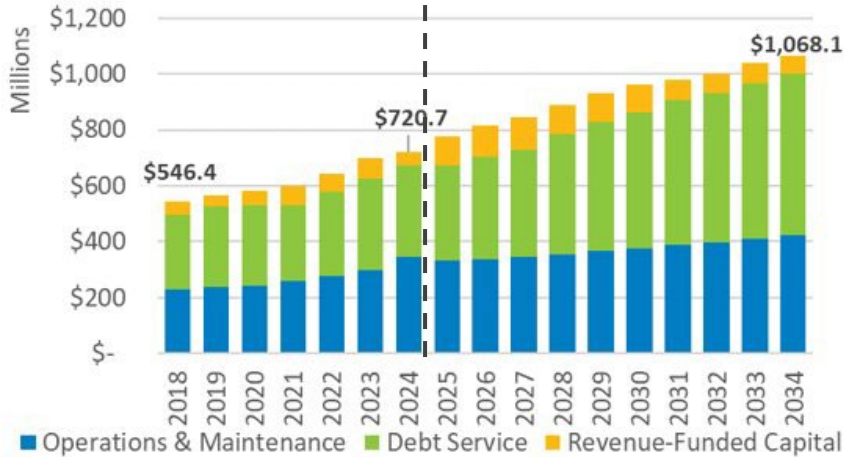
## Projected Capital Appropriations (20-Year Horizon)



- Wastewater's Capital plan has grown by **\$1.160 B or roughly 24%**.
- Regulatory obligations and aging infrastructure are the key growth drivers.
- Key projects beginning in this plan are the **Nutrients Reduction and Southeast Outfall Replacement projects**

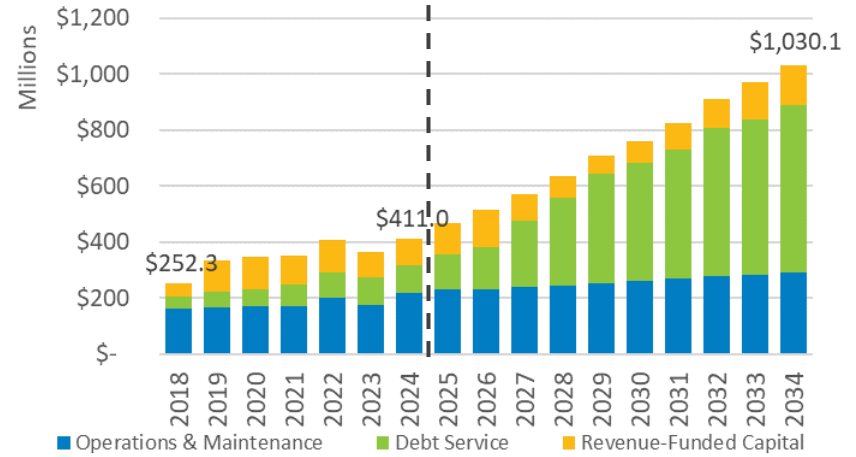
# Water and Wastewater Expenses

## Projected Operating Budget Expenses Water



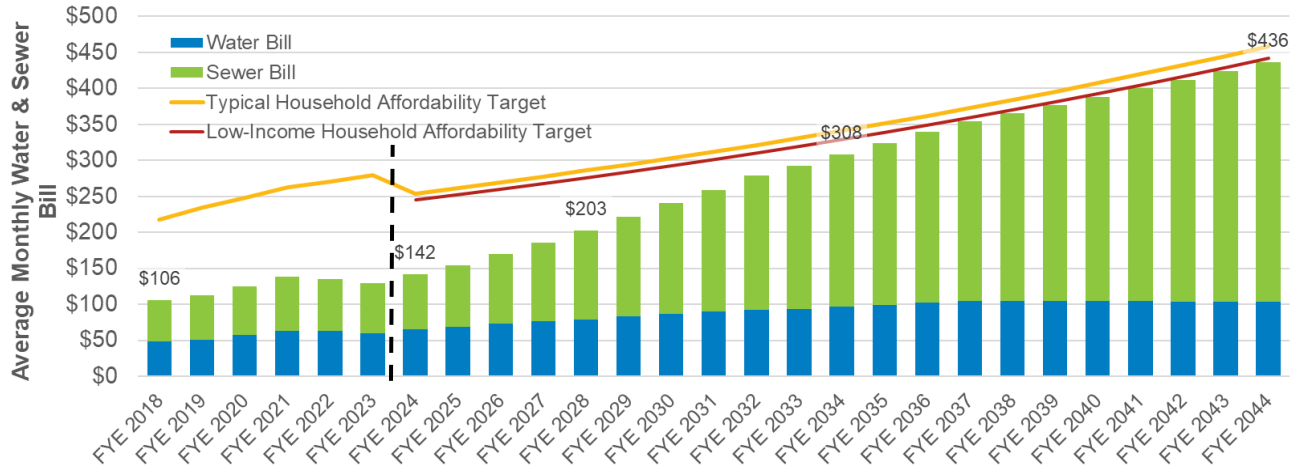
- Continued investment and capital and escalating operating expenses
  - 4.0% compound annual growth in expenses

## Projected Operating Budget Expenses Wastewater



- Capital investment, driven by replacement of aging infrastructure and regulatory requirements
  - Debt service grows from 24% to 58% of total expenses in 10 years

# Water & Sewer Affordability



	FYE 2025*	FYE 2026*	FYE 2027	FYE 2028	FYE 2029	FYE 2030	FYE 2031	FYE 3032	FYE 2033	FYE 2034	10 Year Avg.
Water Rate Increase	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	<b>4.2%</b>
Sewer Rate Increase	9.0%	9.0%	12.0%	12.0%	11.0%	10.0%	10.0%	10.0%	7.0%	7.0%	<b>9.6%</b>
<b>Combined Bill Impact</b>	<b>8.8%</b>	<b>9.6%</b>	<b>9.6%</b>	<b>9.1%</b>	<b>9.4%</b>	<b>8.6%</b>	<b>7.7%</b>	<b>7.4%</b>	<b>4.9%</b>	<b>5.6%</b>	<b>8.1%</b>

- \* Adopted rates
- SFPUC is not required by charter to project rates over a 20-Year horizon, but has done so anyhow for purposes of responsible management and transparency

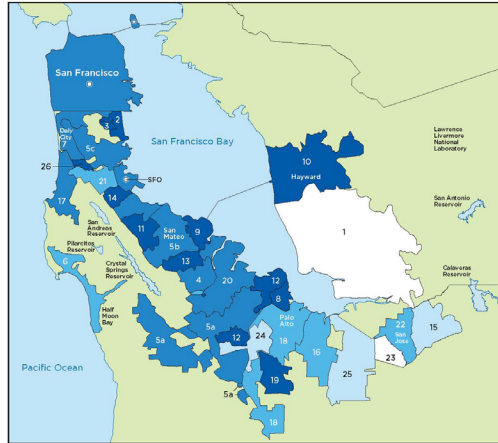
# Water Capital Requests



# Our Water System Customers & Water System Schematic with Faultlines

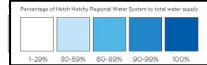
## Bay Area Reliance on Hetch Hetchy Regional Water System

The Hetch Hetchy Regional Water System supplies high-quality drinking water to over 2.7 million residents and businesses throughout the San Francisco Bay Area. Of the 26 wholesale customers, 21 rely on the Regional System for more than 60% of their drinking water supply.



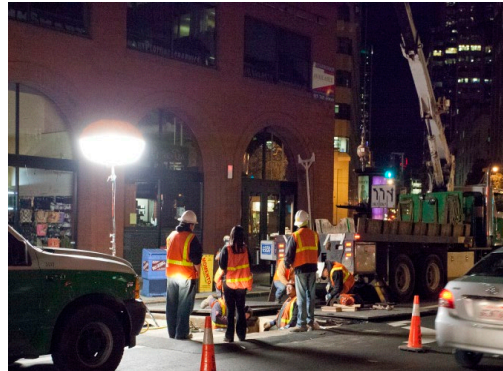
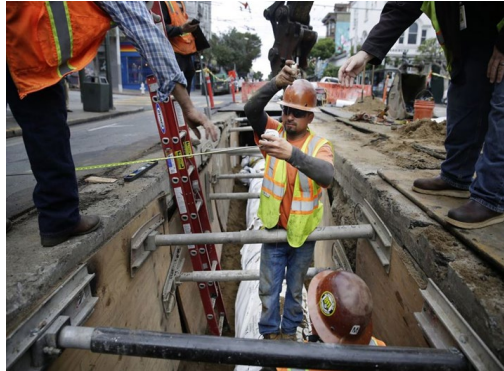
#	Service Population	MGD provided from HPS	% of total supply
1	Alameda County Water District - 356,160	7.78	21%
2	City of Brisbane / Guadalupe Valley Municipal Improvement District - 4,587	0.66	100%
3	City of Burlingame - 31,009	3.42	91.9%
4	Cal Water Service Co. / Bear Gulch		
5a	Cal Water Service Co. / Mid-Peninsula	262,140	27.7%
5b	Cal Water Service Co. / SFP		
6	Coastside County Water District - 16,811	1.12	62.6%
7	City of Daly City - 109,189	5.86	93.9%
8	East Palo Alto - 26,181	1.58	100%
9	Estero Municipal Improvement District - 37,861	4.04	100%
10	City of Hayward - 160,500	13.98	100%
11	Town of Hillsborough - 10,869	2.31	100%
12	City of Menlo Park - 17,248	2.88	100%
13	Mid-Peninsula Water District - 26,924	2.50	100%
14	City of Millbrae - 23,168	1.95	100%
15	City of Milpitas - 74,865	5.30	56.4%
16	City of Mountain View - 79,492	7.21	83.4%
17	North Coast County Water District - 40,000	2.29	97.9%
18	City of Palo Alto - 67,709	9.43	87.2%
19	Purisima Hills Water District - 6,150	1.58	100%
20	City of Redwood City - 87,023	8.08	92.9%
21	City of San Bruno - 44,209	2.49	88.3%
22	San Jose Municipal Water System, North - 16,032	4.37	82.9%
23	City of Santa Clara - 129,604	3.02	15.9%
24	Stanford University - 32,578	1.43	56.7%
25	City of Sunnyvale - 155,567	9.01	53.4%
26	Westborough Water District - 12,703	0.78	100%
■	City and County of San Francisco - 897,806	62.7	96.6%

Source: BAWSCA FY 2018-19 Annual Survey



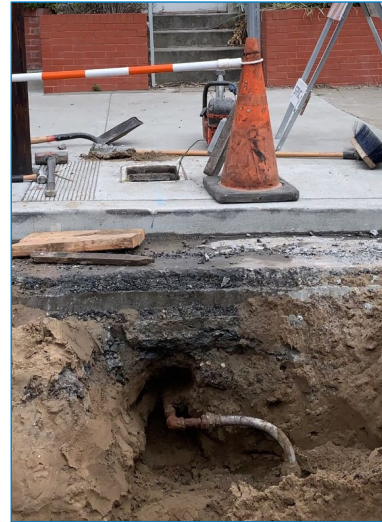
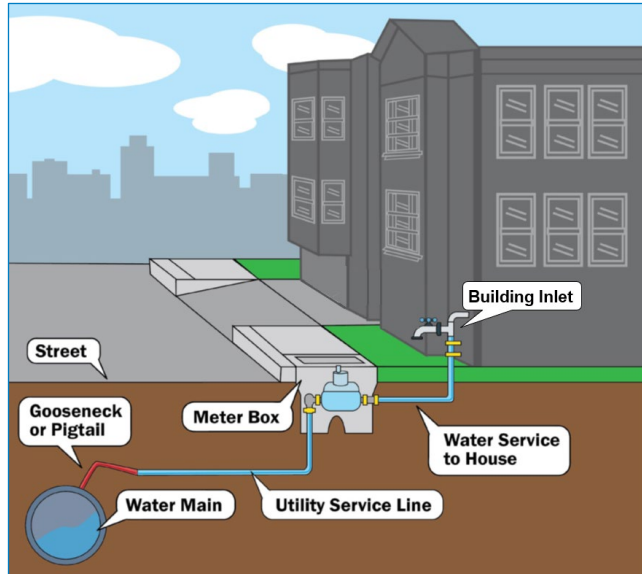
# Local Water Capital Program Highlights

- Main Replacement (\$609M)
  - Local Water Conveyance/Distribution (\$517M)
  - Local Water Conveyance Joint Transit (\$33M)
  - Potable Emergency Firefighting Water System (\$54M)
  - Wawona/Pine Lake (\$5M)
- New CDD Headquarters, beginning construction in late 2024:
  - 2000 Marin (\$343M, \$50M previously appropriated)



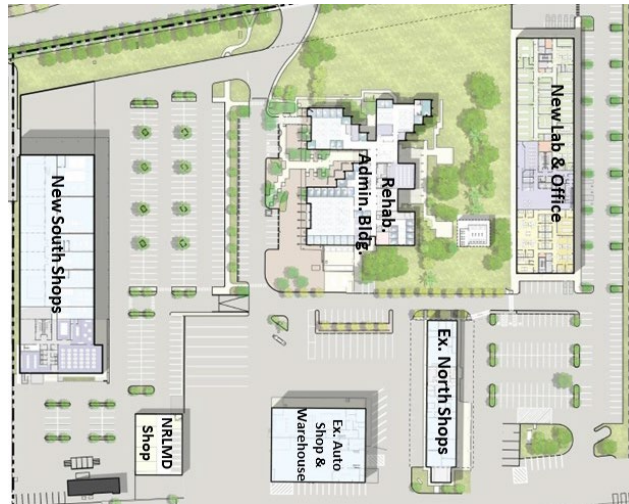
# Local Water Capital Program Highlights

- Eliminating Lead
  - Lead Component Services Program (\$21M, \$28M previously appropriated)



# Regional Water Capital Program Highlights

- Millbrae Yard Campus Improvements (\$411M)
  - Rollins Road building is seismically unsafe
  - Millbrae laboratory is outdated
  - South Shops building is unsafe and unusable
  - Millbrae Yard has numerous “temporary” outbuildings and storage containers



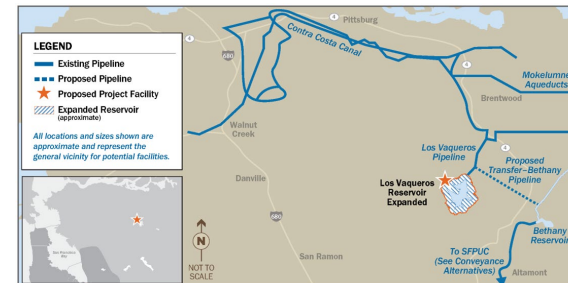
- 3 SVWTP Projects (\$175M, \$190M previously appropriated)
  - Ozone Treatment (\$107M, \$145M previously appropriated)
  - Short Term Improvements (\$33M, \$45M previously appropriated)
  - Long Term Improvements (\$35M)



# Regional Water Capital Program Highlights

- Five major transmission main projects (\$196M) in construction in the next 4 years
  - BDPL1-4 Lining Repair (\$19M)
  - BDPL4 Pre-Stressed Concrete Cylinder Pipe Repair (\$50M)
  - BDPL3&4 UPRR Crossing Upgrade (\$18M)
  - CSPL2 Reaches 2&3 Rehabilitation (\$74M)
  - CSPL2 Reach 5 Lining Replacement (\$35M)

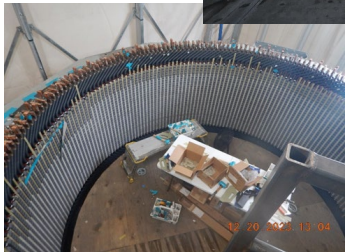
- Regional Water: Alternative Water Supply Projects:
  - Daly City Recycled Water (\$115M)
  - Los Vaqueros Reservoir Expansion (\$42M)
  - Purified Water Projects in development (\$57M)



# Hetch Hetchy Water Capital Program Highlights

- Mountain Tunnel Improvements (\$58M), Moccasin Powerhouse Projects (\$80M), and SJPL Valve and Safe Entry (\$75M) all in construction

- Seven other major projects (\$294M) going into construction in the next 5 years
  - SJPL Valve Remote Control (\$38M)
  - Moccasin Switchyard Rehabilitation (\$18M)
  - Transmission Lines Clearance Mitigation (\$63M)
  - Cherry-Eleanor Pumps (\$38M)
  - Canyon Tunnel - Hetchy Adit (\$27M)
  - Moccasin Engineering and Records Building (\$84M)
  - Moccasin Warehouse Building (\$26M)



# Hetch Hetchy Water Capital Program Highlights

- Moccasin Penstocks Replacement (\$322M) is a very large, critical project.
  - Penstocks are essential for Hetch Hetchy water supply delivery.
  - Penstocks were constructed in 1925.
  - Rehabilitation has been actively considered, but not selected.
  - All replacement options are being considered, but all have similar costs.



# Wastewater Capital Requests



# Wastewater Enterprise (WWE)

WWE operates and maintains **3** wastewater treatment plants, **1** wet-weather facility, **27** pump stations, **1,900** miles of sewer mains and laterals, over **216** green infrastructure assets, and **25,000** catch basins to protect public health and the environment. WWE facilities process **60 million gallons per day (mgd)** of dry weather flows and have **565 mgd** of wet weather treatment capacity.

- Administration
  - Administration
  - Planning and Regulatory Compliance Division
  - Southeast Community Center
- Maintenance
- Operations
- Collection System
- Engineering
- Wastewater Labs

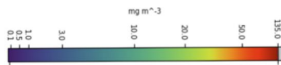


# Southeast Plant Mainstream Nutrient Reduction

Impact to 10-year Plan: \$ 1,185 M increase

Proposed Project Budget: \$ 1,470 M

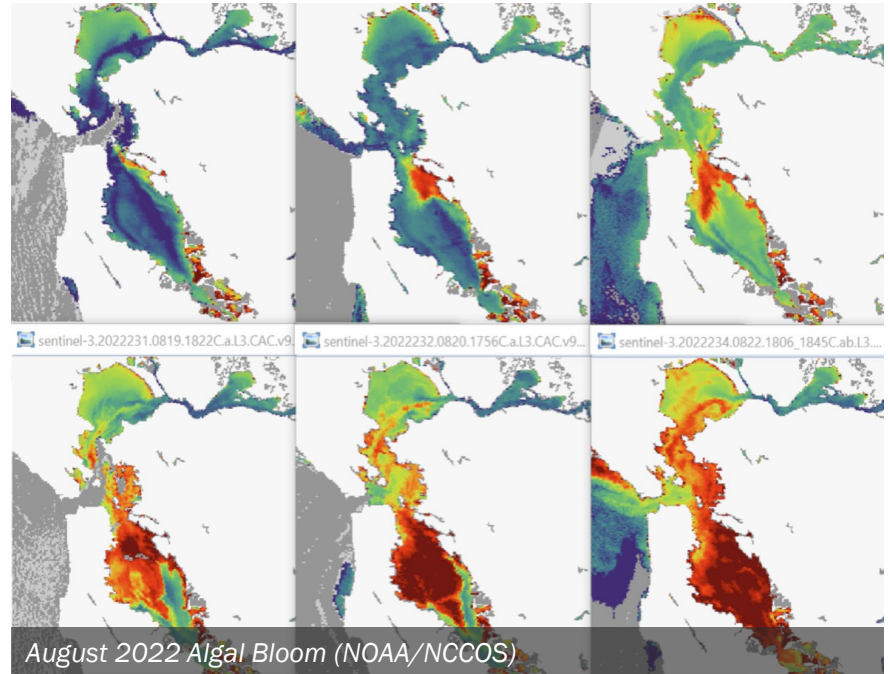
- Reducing nutrient loading into San Francisco Bay is one of the most pressing water quality issues facing our region.
- SF Bay experienced a harmful algal bloom and fish kills in 2022, and a second bloom in 2023.
- A project is needed to meet expected regulatory requirements.



Chlorophyll derived from Sentinel-3,  
processed by NOAA/NCCOS

Planning start: FY24/25

Anticipated Construction start: FY30/31





# Southeast Bay Outfall & SEP Booster Station Replacement

Impact to 10-year Plan: \$ 80 M increase

Proposed Project Budget: \$ 2,968 M

- Southeast Bay Outfall is a critical asset that conveys final effluent from Southeast Treatment Plant to the Bay.
- A current CIP project is underway (Southeast Outfall Condition Assessment and Rehab) to complete comprehensive condition assessment of the outfall and perform any needed rehab.
- This long-term project is needed to replace the outfall to ensure reliable operations, protect water quality in San Francisco Bay, and align with the City's long-term waterfront adaptation plans for sea level rise.

Planning start: FY24/25

Anticipated Construction start: FY37/38



# Southeast Plant Biosolids Digester Project

Impact to 10-year Plan: \$ 300 M increase

Proposed Project Budget: \$ 2,673 M

- Cost increase is due current market conditions, single-bidder outcomes, and higher material costs.
- Construction of digester tanks, solid pretreatment building, and dewatering building are underway. Construction is ~45% complete.
- All major Trade Bid Packages have been procured and buyout of major facilities completed.



## Project Schedule:

2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
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■ Planning through Bid & Award
 ■ Construction
 ■ Close Out

# Folsom Area Stormwater Improvements

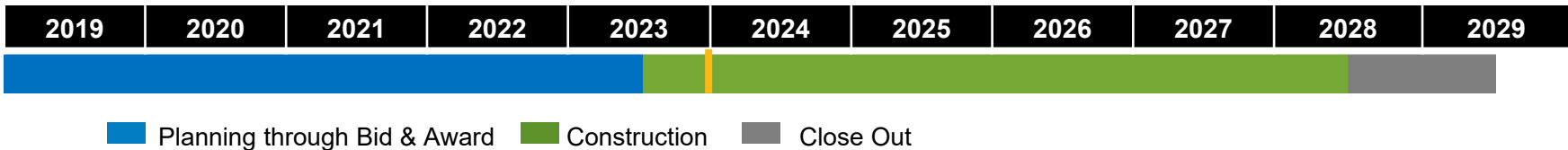
Impact to 10-year Plan: \$ 110 M increase

Proposed Project Budget: \$ 430 M

- Cost increase reflects the latest design estimates due to higher costs and additional time needed to address the complexity of the upcoming construction of the tunnel and large sewer boxes in congested city streets.
- Scope of work has been divided into four separate construction contracts. The first contract (upstream sewers) is in construction and the three remaining contracts (tunnel, sewer box, and other sewers) are in design.
- Project helps meet the San Francisco Bay Regional Water Quality Control Board Clean-Up and Abatement Order.



## Project Schedule:





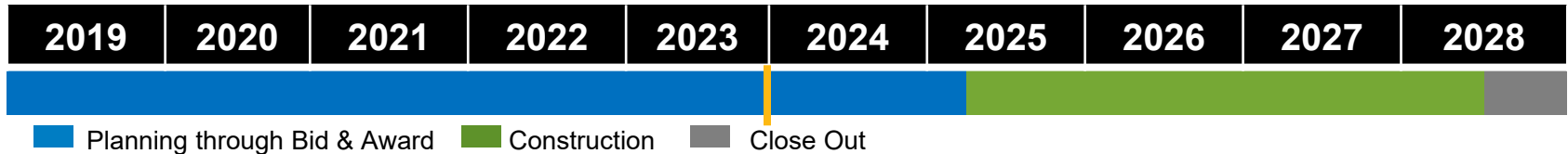
# Lower Alemany Area Stormwater Improvements

Impact to 10-year CIP: no change  
Approved Project Budget: \$ 300 M

- Design and Environmental Review are underway.
- Scope includes construction of a sewer tunnel and other sewer improvements to provide stormwater storage and conveyance.
- Project helps meet the San Francisco Bay Regional Water Quality Control Board Clean-Up and Abatement Order.



## Project Schedule:





# Citywide Green Infrastructure Implementation

Impact to 10-year Budget: no change

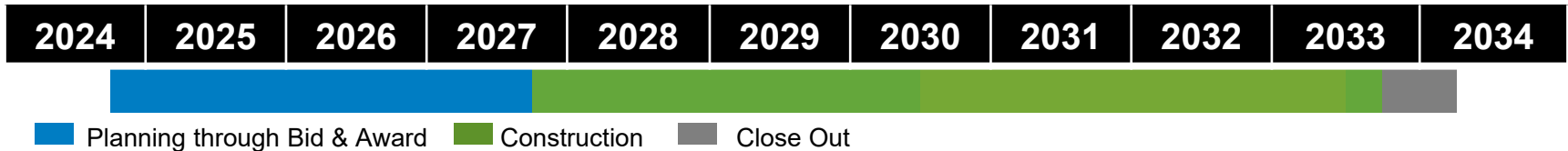
Proposed Project Budget: \$ 100 M

- This project is a repackaging of green infrastructure projects currently approved in the FY24-33 10-year CIP. This project funds conceptual engineering, design, and construction of “implementation-ready” green infrastructure projects citywide.
- Starting in FY 24/25, the 10-year WVE green infrastructure CIP will be scoped by overall performance through establishment of a total drainage management area goal.
- Together with the Green Infrastructure Planning project, this project aims to deliver 65 acres of drainage management area managed by green infrastructure over the next 10 years.



Yosemite Green Infrastructure

## Project Schedule:

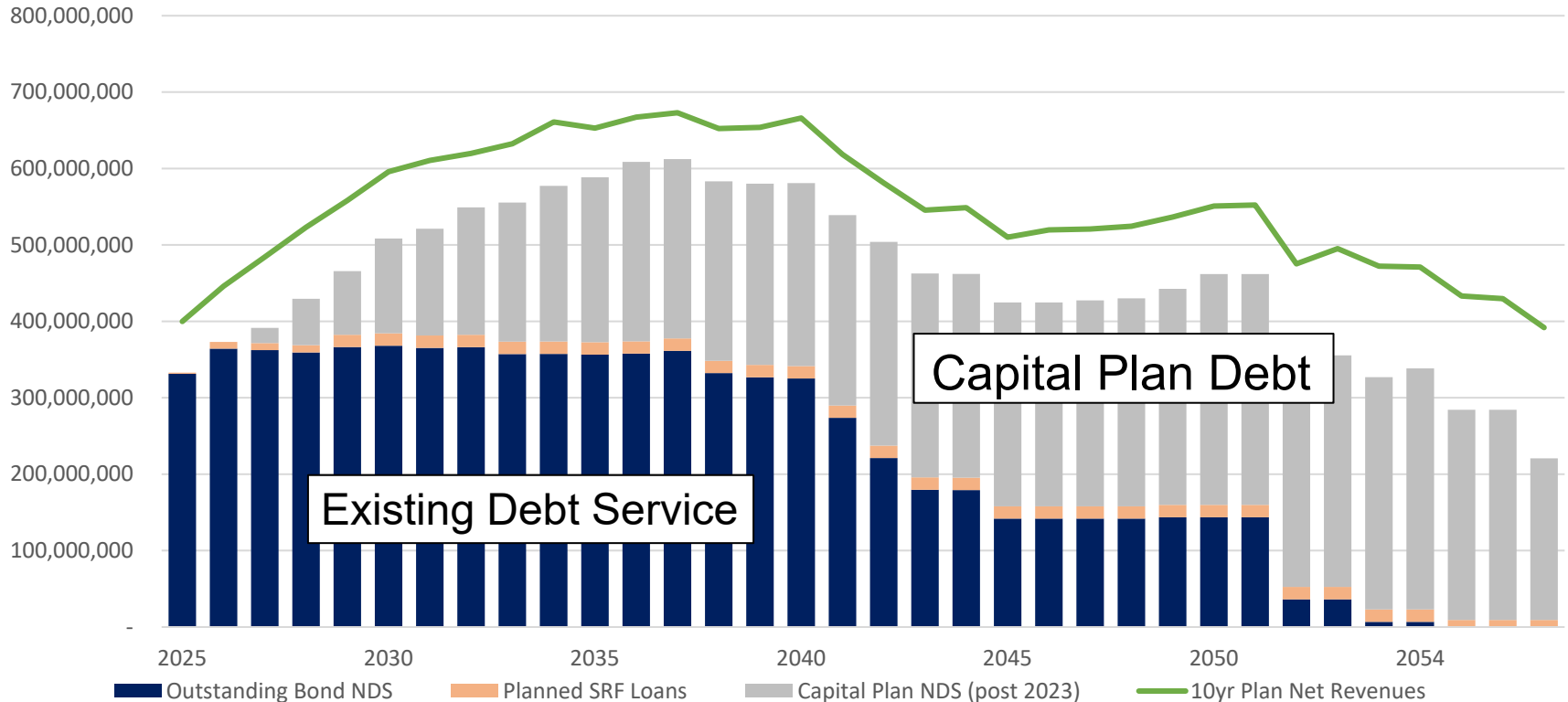


# FY 2024-25 and FY2025-26 Budget Resources

- 10-Year Capital Plan
  - Project by project breakdown over the next 10 years
- Capital Plan Report
  - Breakdown of SFPUC's budget process, priorities, budget benefits, and key projects.
- Financial Plan Report
  - Breakdown of SFPUC's financial strategy to fund 10-Year Capital Improvement Plan.
- PUC Budget entered in BFM, will be a part of the AAO process.



# Water Existing and Projected Debt Service (10-Year Plan Assumptions)





# Wastewater Existing & Projected Debt Service (10-Year Plan Assumptions)

