San Francisco Public Utilities Commission
10 Year Capital Plan
FY 2022-23 Capital Budget
FY 2022-23 Bond Financing Authorization

Capital Planning Committee
March 21, 2022
Charles Perl, Deputy CFO
Steve Ritchie, AGM Water Enterprise
Greg Norby, AGM Wastewater Enterprise
Barbara Hale, AGM Power Enterprise
FY 2022-23 to FY 2031-32
10-Year Capital Plan

- Goals: deliverability and affordability to the ratepayer in the long term.
- Projected expenditures have grown significantly due to cost increases, expanding scope and identified investment needs.
- Deliverability review highlighted a mismatch between project planning and execution capacity.
- Decided to only proposed a one-year capital budget for FY 2022-23 as we continue to work on refining capital plan.
- Capital plan is not balanced beyond FY 2022-23, and has an unfunded portion.
- Over the next year we will work to refine our capital plan, and expect to propose a balanced capital plan and FY 2023-24 capital budget at this point next year.

$9.9 Billion
## FY 2022-23 to FY 2031-32 10-Year Capital Plan

<table>
<thead>
<tr>
<th>10-Year Capital Plan ( Millions)</th>
<th>FYE 2023-2032 Uses</th>
<th>FYE 2023-2032 Sources</th>
<th>Unfunded amount</th>
<th>Unfunded %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater</td>
<td>6,127.2</td>
<td>5,152.3</td>
<td>(974.9)</td>
<td>15.9%</td>
</tr>
<tr>
<td>Water</td>
<td>2,128.0</td>
<td>1,917.8</td>
<td>(210.3)</td>
<td>9.9%</td>
</tr>
<tr>
<td>Hetchy Hetchy Water</td>
<td>974.4</td>
<td>974.4</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>Hetchy Hetchy Power</td>
<td>611.1</td>
<td>506.7</td>
<td>(104.4)</td>
<td>17.1%</td>
</tr>
<tr>
<td>CleanpowerSF</td>
<td>64.5</td>
<td>64.5</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>9,905.2</strong></td>
<td><strong>8,615.7</strong></td>
<td><strong>(1,289.6)</strong></td>
<td><strong>13.0%</strong></td>
</tr>
</tbody>
</table>
FY 2022-23 Capital Budget

• One year budget only
  • FY 2022-23 Supplemental for Water, Wastewater, Hetch Hetchy Water and Power and CleanPowerSF
  • FY 2022-23 Bond Financing Authorization for Water, Wastewater, and Hetch Hetchy Water and Power

• We focused on spending down existing appropriated balances before requesting new funding. Supplemental includes de-appropriations and re-appropriations as a result.

FY 2022-23 Capital Budget

- Wastewater 70%
- Water 11%
- Hetchy Water 12%
- Hetchy Power* 7%
- CleanPowerSF 0.3%

$1,131.4 Million*

* Includes $1.2M Low Carbon Fuel Standard Fund not included in the Power supplemental.
**FY 2022-23 Capital Budget**

<table>
<thead>
<tr>
<th>Enterprise (Millions)</th>
<th>Project Cost</th>
<th>Financing Cost</th>
<th>Total Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater</td>
<td>687.4</td>
<td>105.6</td>
<td>793.0</td>
</tr>
<tr>
<td>Water</td>
<td>111.3</td>
<td>11.2</td>
<td>122.5</td>
</tr>
<tr>
<td>Hetchy Water</td>
<td>114.9</td>
<td>20.2</td>
<td>135.1</td>
</tr>
<tr>
<td>Hetchy Power*</td>
<td>66.2</td>
<td>10.9</td>
<td>77.1</td>
</tr>
<tr>
<td>CleanPowerSF</td>
<td>3.7</td>
<td>-</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>983.5</strong></td>
<td><strong>147.9</strong></td>
<td><strong>1,131.4</strong></td>
</tr>
</tbody>
</table>

* $66.2M Hetchy Power funding includes $1.2M Low Carbon Fuel Standard Fund.
## FY 2022-23 Bond Financing Authorization

<table>
<thead>
<tr>
<th>Enterprise (Millions)</th>
<th>Project Cost</th>
<th>Financing Cost</th>
<th>Total Bond Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Bond</td>
<td>598.6</td>
<td>105.6</td>
<td>704.2</td>
</tr>
<tr>
<td>Water Bond</td>
<td>120.2</td>
<td>21.2</td>
<td>141.4</td>
</tr>
<tr>
<td>Hetchy Power Bond</td>
<td>119.9</td>
<td>21.0</td>
<td>140.9</td>
</tr>
<tr>
<td>Totals</td>
<td>838.7</td>
<td>147.8</td>
<td>986.5</td>
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</table>
Racial Equity in the Capital Program

SFPUC is committed to Racial Equity

- Commission's Racial Justice Resolution
- Racial Equity Action Plan
- Environmental Justice and Community Benefits policies

Examples:

- Community outreach and engagement
- Social Impact Partnership
- Major infrastructure investments in Bayview/Hunters Points through SSIP, community benefits include the South East Community Center
- Affordability and access programs, customer assistance program
- Workforce development initiatives
- Project Labor Agreement (PLA), Local Hiring
- Affordable Housing Transmission and Distribution Project supporting HOPE SF
- Low-Income Inverter Replacement Program/Low-Income Solar Inverter Replacement Program
- Secondary Land Use program
- Drink Tap program
Water Enterprise Capital Budget
System Schematic with Faultlines

[Map of the San Francisco Water System showing various locations and faultlines]
## FY 2022-23 Water Capital Budget

<table>
<thead>
<tr>
<th>Program/Project (Millions)</th>
<th>FY 2022-23 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Costs</td>
<td>$47.6</td>
</tr>
<tr>
<td>Local Costs</td>
<td>63.7</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>11.2</td>
</tr>
<tr>
<td><strong>Total WTR Budget</strong></td>
<td><strong>$122.5</strong></td>
</tr>
</tbody>
</table>
Regional Water Capital Improvement Program
Key Projects

Water Treatment
  • Sunol Valley Water Treatment Plant projects

Water Transmission
  • Four major pipeline repair, replacement and rehabilitation projects

Buildings and Grounds
  • Millbrae Yard improvement projects

Storage Projects
  • Pilarcitos and San Andreas (not fully funded)
Local Water Capital Improvement Program

Key Projects

Local Water Conveyance

- Water Pipeline Replacement projects
- Lead Component Services Replacement

Buildings and Grounds

- New CDD Headquarters at 2000 Marin

Other projects

- Lake Merced Water Level Restoration (Joint project with Daly City)
## FY 2022-23 Hetchy Water Capital Budget

<table>
<thead>
<tr>
<th>Program/Project (Millions)</th>
<th>FY 2022-23 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hetchy Up-country (Water)</td>
<td>$45.7</td>
</tr>
<tr>
<td>Hetchy Up-country (Power)</td>
<td>44.1</td>
</tr>
<tr>
<td>Hetchy Up-country (Joint)</td>
<td>25.1</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>20.2</td>
</tr>
<tr>
<td><strong>Total HHW Budget</strong></td>
<td><strong>$135.1</strong></td>
</tr>
</tbody>
</table>
Hetch Hetchy Water Capital Improvement Program Key Key Projects

Water
- San Joaquin Pipeline Valve and Safe Entry Improvements
- Mountain Tunnel Improvements Project (Water portion)

Power
- Electric Transmission Lines 7&8 upgrades
- Moccasin Powerhouse and GSU Rehabilitation Project
- Electric Transmission Lines Clearance Mitigations
- Moccasin Powerhouse Bypass Upgrade

Joint
- Mountain Tunnel Improvements Project (Joint portion)
- Bridge Replacement (two bridges)
- Moccasin Old Powerhouse Hazard Mitigation
- Moccasin Dam & Reservoir Long Term Improvements
- O’Shaughnessy Dam Outlet Works Phase 1
San Joaquin Pipeline Valve and Safe Entry Projects – New 66” Butterfly Valve
Mountain Tunnel Improvements Project – New Access Shaft
WASTEWATER ENTERPRISE CAPITAL BUDGET

Greg Norby, Assistant General Manager
Wastewater Enterprise
March 21, 2022
Wastewater Enterprise (WWE) Capital Priorities

In alignment with funding principles:

- **Address legal or regulatory mandate**
  - Clean Water Act, Clean Up and Abatement Order

- **Protect life safety and enhance resilience, including racial equity**
  - Flood resiliency, Port resiliency work

- **Ensure asset preservation and sustainability**
  - Asset management lifecycle
An integral part of the never-ending asset lifecycle

- **Capital Planning & Budgeting**
  - Asset Funding
  - Get the most value out of each investment

- **Project Delivery**
  - Asset Creation
  - Control project outcomes and deliver as planned

- **Startup & Commissioning**
  - Asset Onboarding
  - Set up O&M staff on a path to success

- **Operations & Maintenance**
  - Asset Utilization
  - Maximize asset life while controlling operational risks

*SFPUC Commission adopted Asset Management Policy, December 22, 2020*
Move from one-time large investments to more sustainable strategic capital planning

One-time large investment (previous)

Adaptive Management (moving forward)

Sewer System Improvement Program (SSIP)  Facilities & Infrastructure (F&I)  Renewal and Replacement (R&R)
<table>
<thead>
<tr>
<th>Program/Project</th>
<th>FY 2022-23 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer System Improvement Program</td>
<td>$583.1</td>
</tr>
<tr>
<td>Renewal and Replacement</td>
<td>103.1</td>
</tr>
<tr>
<td>Treasure Island</td>
<td>0.2</td>
</tr>
<tr>
<td>WW Facilities &amp; Infrastructure</td>
<td>1.0</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>105.6</td>
</tr>
<tr>
<td><strong>Total WWE Budget</strong></td>
<td><strong>$793.0</strong></td>
</tr>
</tbody>
</table>
**Project Cost:** Increased from $1,681M to $2,373M

- Significant impact to proposed WW CIP total and annual appropriation.
- The forecasted Project Cost now encompasses an independent cost-to-complete estimate, considering anticipated market conditions and schedule impacts.
- Schedule extended by 23 months due to suspension of bidding activities in 2021, site logistics/ construction sequencing and competitive bid procurement process.

**Project Schedule:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Planning through Bid &amp; Award</th>
<th>Construction</th>
<th>Close Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
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<td></td>
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<td>2021</td>
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<td>2026</td>
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<td>2027</td>
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<td>2028</td>
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<td></td>
<td></td>
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<tr>
<td>2029</td>
<td></td>
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</tbody>
</table>
10yr CIP Budget:
Reduced in early years for affordability and expanding from $1,657M to $2,840M for efficiency

- Includes small diameter, large diameter and transport/storage boxes
- Increasing condition assessment
- Transition to trenchless technologies
- Restructuring to balance various program objectives and track outcomes to align with the [WWE] asset management program
Power Enterprise Capital Budget
Capital Priorities

Acquisition Analysis

- Funding financial, technical, regulatory, and legal analysis and City staff time needed to further the project

Redevelopment

- Additional capital funds requested to extend service to Mission Rock, Pier 70, Phase 2 of Alice Griffith/Candlestick Point, and various Affordable Housing projects

Core Customers

- Additional capital funds requested for Grid connections, Pedestrian Lighting, Holiday and Festival Pole Use, and various Streetlight projects

Local Generation

- Distributed Energy Resources for Hetch Hetchy customers and a Local Renewable Energy Program for CleanPowerSF
Key Challenges: WDT3 Costs – Hetchy

- Wholesale Distribution Tariff #3 ("WDT3") proposed doubling annual distribution charges from $10 million annually to at least $20 million
- Elimination of service to unmetered loads (i.e. streetlights & traffic signals)
- Elimination of service to secondary loads

**FY2020 Loads and Revenues**

- **NO PG&E RELIANCE: 36%**
  - $51M
  - $3M

- **FULL PG&E RELIANCE: 64%**
  - $30M
  - $10M
  - $36M

2020 Revenues
- $129 M/yr total
- $78 M/yr WDT-reliant

Secondary Interconnections to PG&E: 28%

Primary Interconnections to PG&E, Redevelopment and Other Loads: 6%

Primary Interconnections to PG&E, City Services: 29%
## Strategic Grid Investment

### Functionally Relevant
- Reduces reliance on PG&E for distribution service
- Avoids duplication of existing PG&E facilities
- Improves electrical system reliability + resilience

### Economically Justifiable
- Favorable expectations for load growth and timing of new revenues
- Can serve customers threatened by costs and terms of PG&E’s WDT

### Technically Viable
- Includes grid modernization to facilitate electrification, DG, and storage
- Reasonable timeline for completion

### Socially Responsible
- Compatible with SF economic growth, equity, and sustainability goals
- Serves a City Department or Agency
- Benefits are shared across communities
## FY 2022-23 Hetchy Power and CleanPowerSF Capital Budget

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<tr>
<th>Program/Project</th>
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<td>Hetchy Power*</td>
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<td>CleanPowerSF</td>
<td>3.7</td>
</tr>
<tr>
<td>Financing Cost</td>
<td>10.9</td>
</tr>
<tr>
<td><strong>Total HHP and CLSP Budget</strong></td>
<td><strong>$80.8</strong></td>
</tr>
</tbody>
</table>

* $66.2M Hetchy Power funding includes $1.2M Low Carbon Fuel Standard Fund.
Featured Projects

**Grid Connections** – connect customers to SFPUC owned and operated distribution and transmission infrastructure

**Local Renewable Energy Program** – development of new renewable energy and storage projects on select City sites by CleanPowerSF

**SFO Substation Improvements** – needed to continue to serve SFO and anticipated load increases from 55 MW to 110MW

**Streetlights** – various projects to repair, replace, install, and enhance the SFPUC’s 30,000 streetlights
Questions?