



San Francisco
Water Power Sewer
Services of the San Francisco Public Utilities Commission

SF Emergency Firefighting Water System Capital Project Update

to the
Land Use and Transportation Committee

July 28, 2025

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Agenda

- Emergency Firefighting Water System Project Objectives
- Recap January 2024 Briefing and Recommendations
- Project Updates and Budget Status
- Key Changes
- SFFD/SFPUC Collaboration

Recap January 2024 Land Use and Transportation Committee Hearing

- **Funding:** 2010, 2014, and 2020 Earthquake Safety and Emergency Response (ESER) bonds allocated \$308M (21% of total bond funding) for Emergency Firefighting Water System improvements.
 - **Completed Projects:** 30 cisterns, EFWS reservoir and pump station upgrades, EFWS pipeline improvements.
 - **2050 Study:** Estimated >\$4B would be needed for future EFWS build-out to meet post-earthquake fire demands citywide.
- **Priority Projects:** Fireboat Manifold improvements (Fort Mason, Pier 33.5, and Mission Bay Ferry Landing), and new Westside Potable Emergency Firefighting Water System (PEFWS).
- **2024 Status:**
 - Cost increases due to escalation decreased forecasted extend of construction with current ESER 2020 funding.
 - SFPUC increased ratepayer-funded water bond allocation in 10-year Capital Plan from \$55M to \$145M.
 - Project team will design "shovel-ready" pipeline projects through Richmond District that may be funded with future potential ESER 2028 Bond.
- **Supervisors' Recommendations:**
 - Strategic planning and location of future pipeline alignments should consider future housing policies and densities.
 - City should prioritize EFWS for sustained future City funding (e.g. ESER 2028).
 - Supervisors would like to receive periodic updates on projects' status.

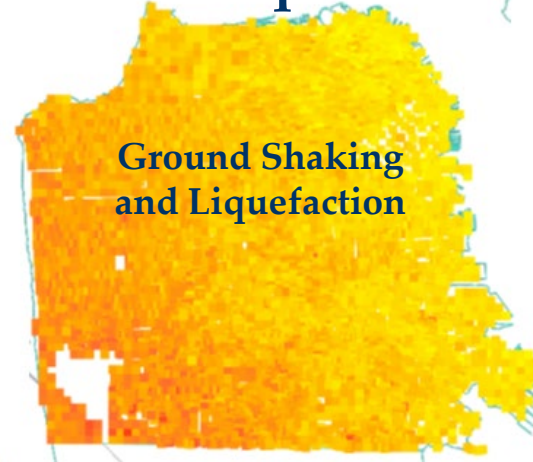
Updates to Post-Earthquake Firefighting Water Demands

Considerations for modeling PEFWS requirements:

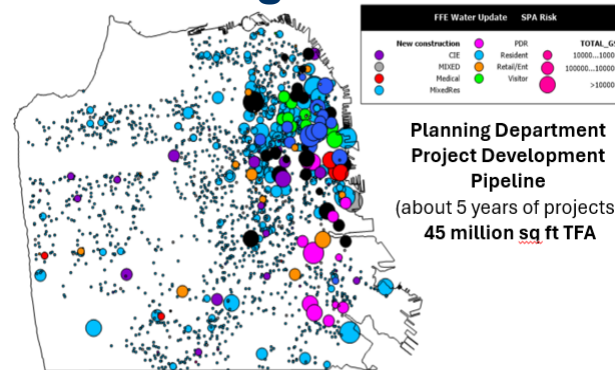
- Ground shaking, liquefaction (1906 San Andreas)
- Future building density, fuel (2050)
- Local and regional housing policies (2050)
- Assumptions for changing energy patterns (Gas ↓ Electricity ↑ ...)
- Future potential Redevelopment Projects

Results: Potential fire ignitions, fire spread, and resulting water demands for firefighting

Earthquake

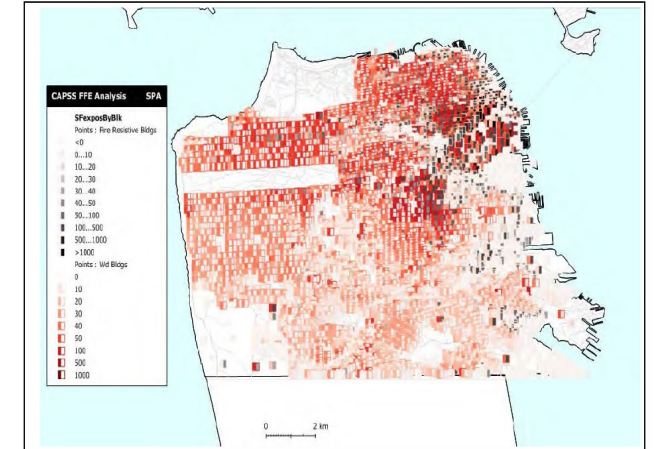


Housing Policies



Year	2020	2030	2040	2050
Population	883,000	960,000	1,035,000	1,112,000
Bldg GSF (mills)	877	970	1,071	1,184
GSF growth	0%	11%	22%	35%

Building density and material (fuel)



Future Developments



Westside Potable Emergency Firefighting System (PEFWS) Update

Westside Potable Emergency Firefighting Water System is a dual-purpose seismically resilient water system that provides:

- High-pressure post-earthquake fire suppression,
- Low-pressure drinking water day-to-day and for post-emergency recovery.

Project Objectives:

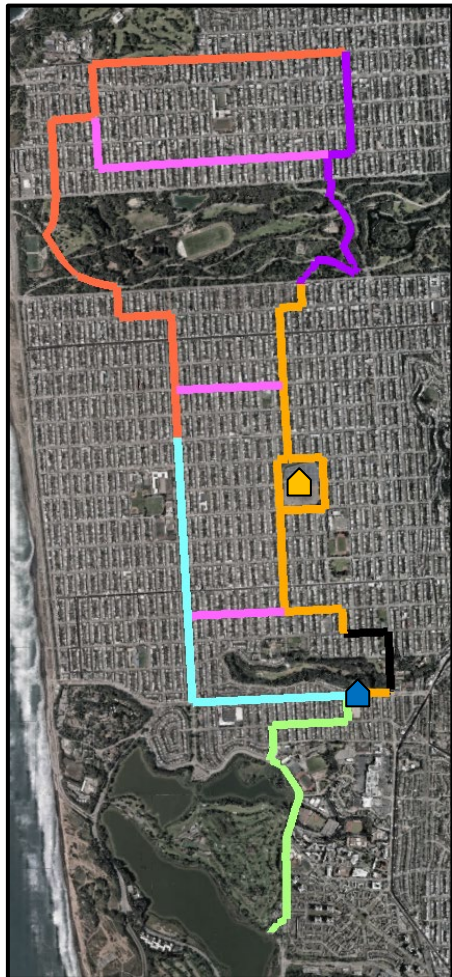
- Increase protection of life/property from individual fires.
- Decrease major fire conflagration by providing reliable "fire breaks."
- Increase drinking water reliability and availability after a large earthquake.
- Expansion to provide immediate benefit with each phase of construction



PEFWS Schedule

Present Day

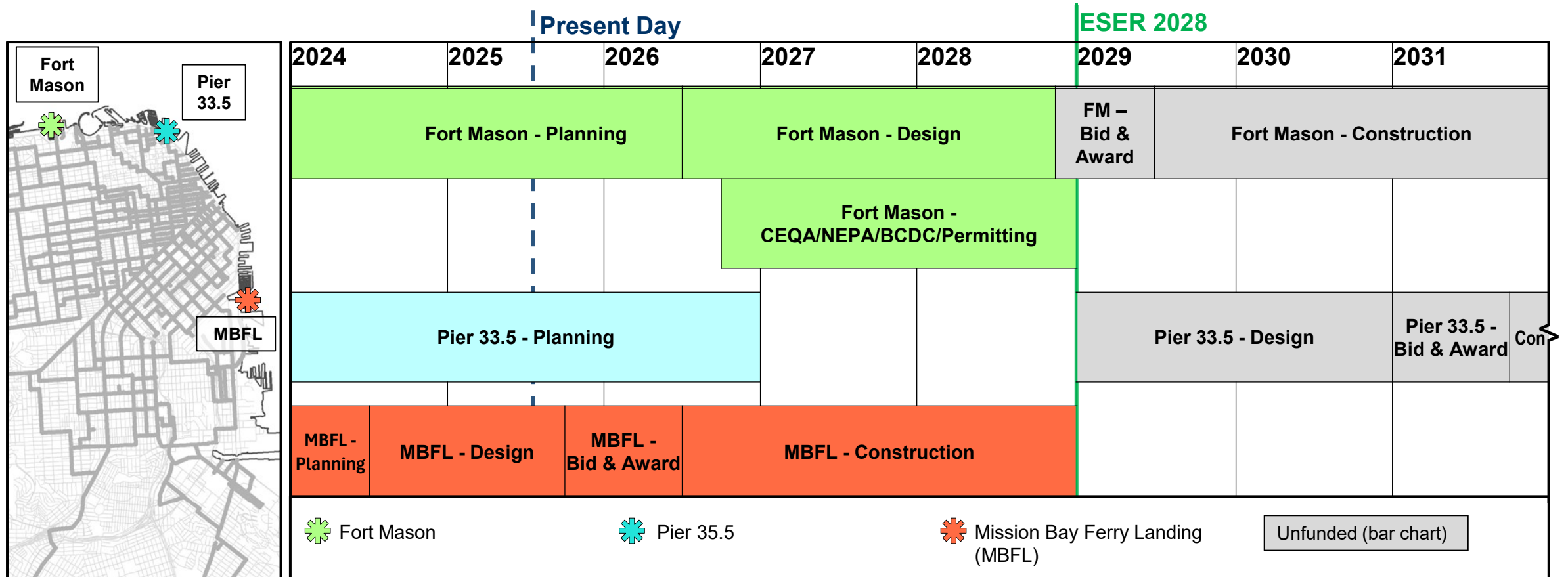
ESER 2028



2024	2025	2026	2027	2028	2029	2030	2031
Contract A - Design			Bid & Award	Contract A - Construction			
	Contract B - Study	Contract B - Design		Bid & Award	Contract B - Construction		
Contracts C/D/E - Planning		Contracts C/D - Design			C/D - Bid & Award	Contract C - Construction	
Central PS - Planning / CER					Central PS - Design		
<div><div></div>A – Lake Merced</div>	<div><div></div>B – Sunset West</div>		<div><div></div>E – Richmond-GG</div>	<div><div></div>F – Sunset East</div>	<div><div></div>Central Pump Station</div>	<div><div></div>Sunset Pump Station</div>	
<div><div></div>Constructed</div>			<div><div></div>G – Loops/Connectors</div>		<div>Unfunded (bar chart)</div>		
<div><div></div>C/D - Richmond-GG</div>							

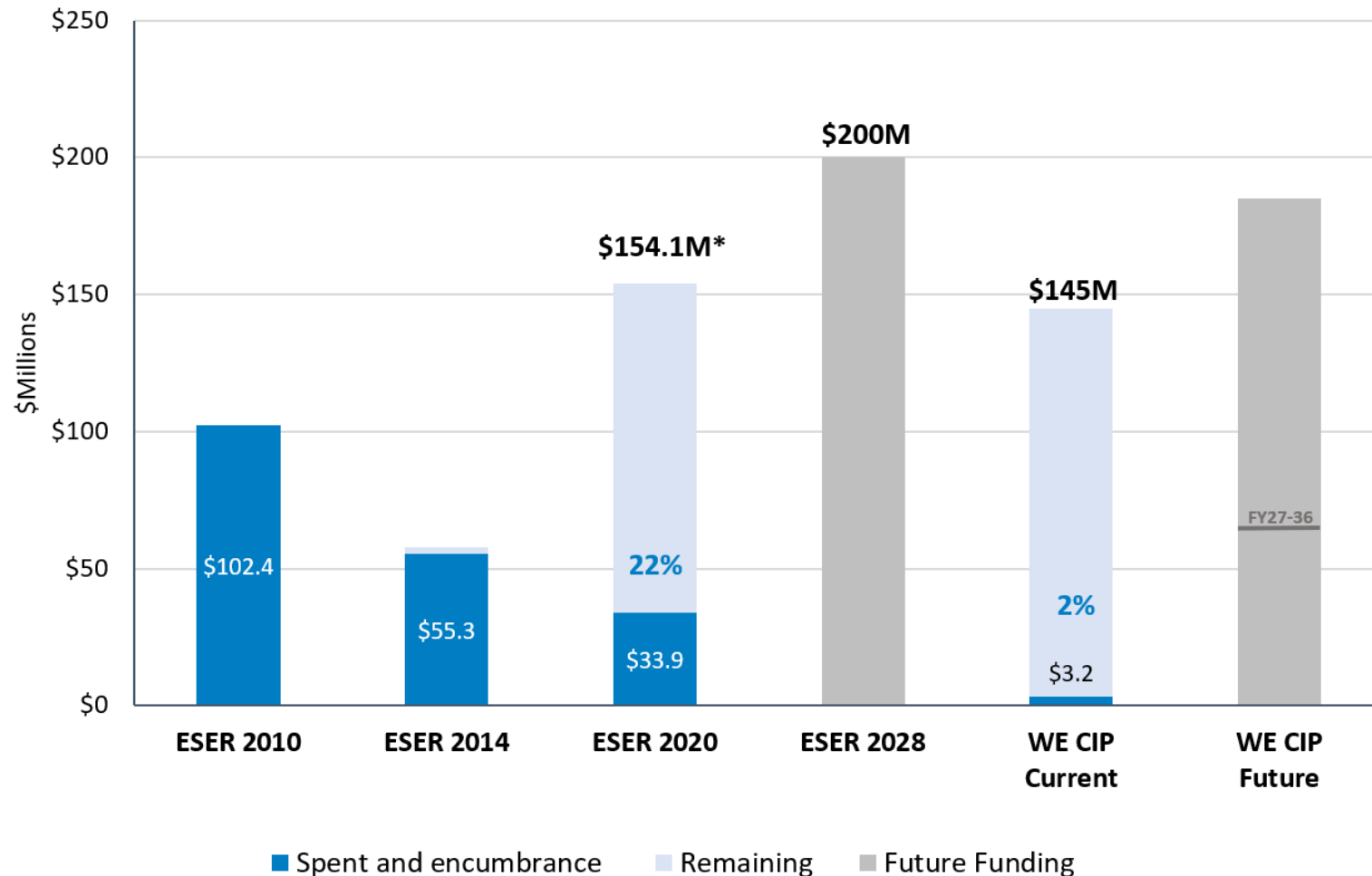


EFWS Fireboat Manifolds Schedule





Budget/Funding Status







- \$308M 2010, 2014, 2020 ESER Bonds
- \$145M SFPUC Water Bonds (WE CIP)
- Future Funding: \$200M ESER 2028 and proportional Water Bonds funds:
 - Contracts C/D construction through Richmond District
 - Fort Mason Fireboat Manifold construction
 - Central Pump Station and Pier 35.5 Fireboat Manifold design
 - Sunset Pump Station and Sunset East pipelines design

Key Program Changes (since January 2024)

- Updating firefighting water demands considering latest housing projections, policies and development projects.
- Initiated two professional services contracts for expertise and oversight.
- Increasing public engagement opportunities:
 - September 2025 – Outreach for publication of Preliminary Mitigated Negative Declaration
 - October 17, 2025 – Media Event at Pump Station No. 2
 - Updates and improvements to SFPUC project website
- Increased SFFD/SFPUC collaboration.
- Changed PEFWS pipeline alignment to provide more reliable SFFD access and firebreak that can help prevent widespread fire conflagration.



PEFWS Pipeline Alignments

-  A – Lake Merced
-  B – Updated Firebreak Alignment
-  B – Previous Alignment
-  Fire Station



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Golden Gate Park Testing





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QUESTIONS?