



# **Civil Grand Jury 2018-19 Report:**

*Act Now Before It Is Too Late: Aggressively  
Expand and Enhance Our High-Pressure  
Emergency Firefighting Water System*

## **Fire Commission Review**

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**FIRE COMMISSION**

**SEPTEMBER 11, 2019**

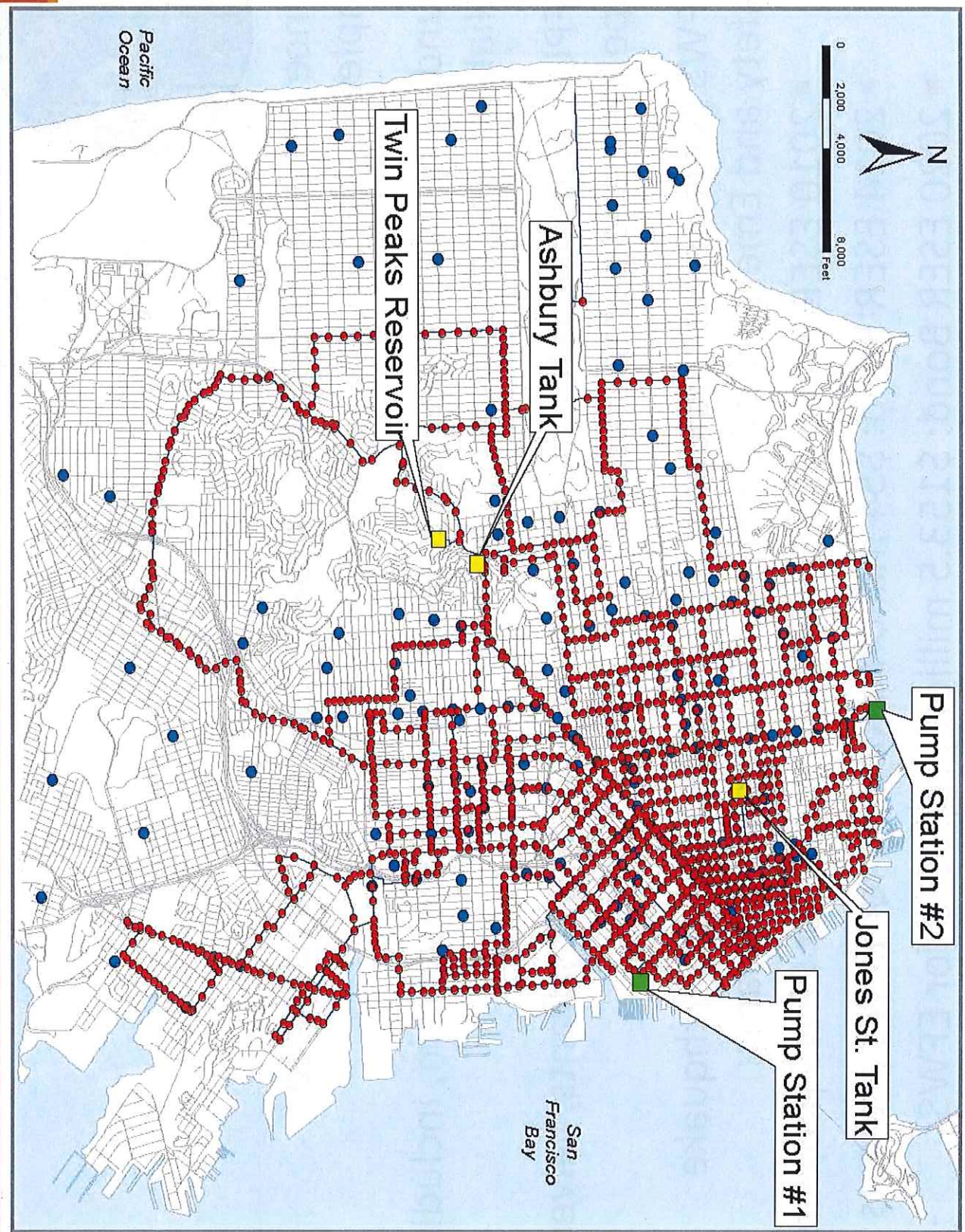


## What is the EFWS?

- Emergency Firefighting Water System (EFWS): A high-pressure fire-suppression water system built after 1906 earthquake
- Transfer of function of the system from the Fire Department to SFPUC in 2010. MOU established between SFFD and SFPUC.
- SFFD is the end user: System improvements and expansion approved jointly by SFFD, SFPUC, and Department of Public Works



# 2010 EFWS Map (Prior to ESER work)





## System Upgrades

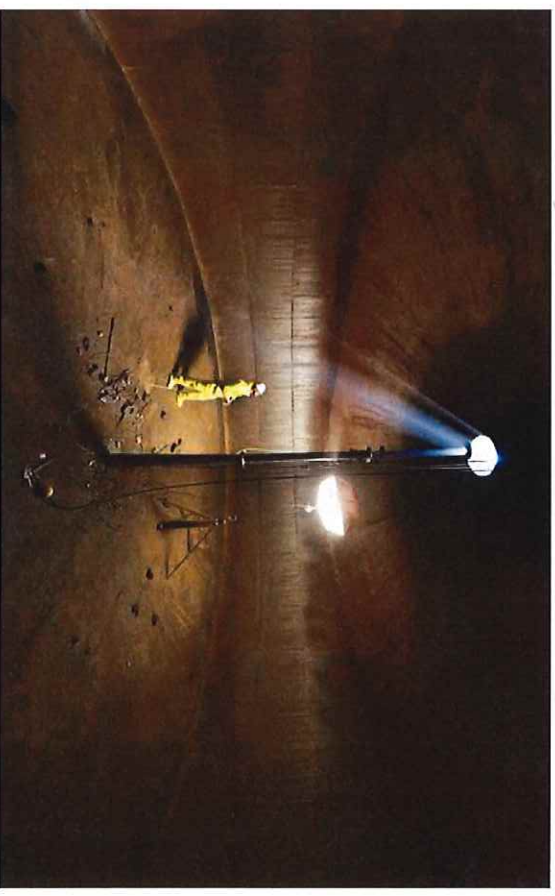
- Since 2010, SFFD, SFPUC and DPW have been working to implement projects to improve the EFWS.
- Funding needed to address needed work on the system, including reliability and overall performance
- SFPUC responsible for maintenance on cisterns, hydrants, valves, pipelines, and pump stations.
- EFWS projects were folded into the previous two Earthquake Safety and Emergency Response (ESER) bond programs:
  - 2010 ESER Bond: \$102 million allocated for EFWS projects
  - 2014 ESER Bond: \$54 million allocated for EFWS projects
  - 2020 ESER Bond: \$153.5 million proposed for EFWS



## ESER Bond – Completed Projects

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- Installation of 30 new cisterns:
  - 15 in the Sunset and Richmond districts
- Reliability upgrades at three primary source supplies:
  - Twin Peaks Reservoir, Ashbury Heights Tank, and Jones Street Tank
- Replaced engines and installed remote control capabilities for Seawater Pump Station #1
- 6 pipeline and tunnel projects





## ESER Bond – Projects Under Construction

- 19<sup>th</sup> Ave. Pipeline
- Ashbury Bypass Pipeline
- Clarendon Supply Pipeline
- Irving St. Pipeline
- Seawater Pump Station #2
- Terry Francois Blvd. Pipeline





## Development Projects

- Large Development Projects install EFWS pipes within their development boundaries.
- SFFD & SFPUC negotiate with Developers for projects outside of the development boundaries.
  - Mission Rock
  - Mission Bay
  - Pier 70
  - Potrero Powerplant
  - Potrero Hope SF
  - Sunnydale Hope SF
  - Park Merced
  - Candlestick
  - Hunters Point/Shipyard
  - Executive Park
  - Visitation Valley
  - India Basin



## Future Project Development

- The SFFD, SFPUC, and DPW work together to compile a list of potential projects that continue to be analyzed
- Preliminary projects range in scope from pipeline projects to new water sources to infirm area projects
- Scope is City-wide with a focus in areas that have limited access to the EFWS







## Civil Grand Jury Recommendation #1

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- By no later than December 31, 2020, the Mayor, the SFPUC, the SFFD, and the Office of Resilience and Capital Planning should jointly present to the Board of Supervisors a detailed plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 1906-magnitude (7.8) earthquake.



## Response to Recommendation #1

- Ensuring that San Francisco has the infrastructure and resources to be well prepared to fight fires in all parts of San Francisco is something that will be a focus of the next 10-Year Capital Plan.
- The requested presentation would be delivered as part of that Plan's submission to enable holistic planning across San Francisco's resilience challenges.
- The City will sync this recommendation with the Capital Plan, and push back the timeline to December 31, 2021.



## Civil Grand Jury Recommendation #2

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- The plan discussed in Recommendation R1 should include a detailed proposal, including financing sources, for the installation within 15 years of a high-pressure, multi-sourced, seismically safe emergency water system for those parts of the City that don't currently have one, i.e., by no later than June 30, 2034.



## Response to Recommendation #2

- The commitment of sources for specific uses on specific timelines for San Francisco's public infrastructure is the work of the 10-Year Capital Plan.
- The Capital Plan has longstanding funding principles to guide the prioritization of public infrastructure investments.
- In the next 10-Year Capital Plan and those that follow, the City will continue to analyze priority projects and programs and identify sources to advance those priorities.



## Civil Grand Jury Recommendation #4

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- As interim measure, by no later than June 30, 2021, the City should purchase the 20 new PWSS hose tenders being requested by the SFFD, to replace and expand its currently inadequate inventory.



## Response to Recommendation #4

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- The Fire Department has been allocated funds in FY19-20 to purchase five hose tenders.
- Department will be working with OCA on developing a multi-year contract for hose tenders, simplifying procurement if additional funding is available.
- Funding for additional units to be weighed and prioritized with other budget requests



## Civil Grand Jury Recommendation #5

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- The SFFD should strategically locate the majority of the PWSS hose tenders in areas that at present only have low-pressure hydrants and/or cisterns.



## Response to Recommendation #5

- The Department is currently finalizing specifications for these units, after which they will go out to bid through the City's procurement processes before construction.
- These hose tenders are a heavy-duty apparatus designed to be able to be deployed and moved throughout the City depending on need, giving the Department needed operational flexibility in its response.





## Civil Grand Jury Recommendation #6

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- The SFPUC, the SFFD and the SF Department of the Environment should study adding salt-water pump stations to improve the redundancy of water sources, especially on the west side. Findings and recommendations from this study should be presented to the Board of Supervisors by no later than June 30, 2021.



## Response to Recommendation #6

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- SFPUC and SFFD will complete this study by June 30, 2021.



## Civil Grand Jury Recommendation #9

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- By no later than December 31, 2020, the SFPUC, with the advice and subject to the approval of the SFFD, should (a) implement “best practices” for the maintenance of AWSS assets, and (b) redefine which AWSS valves in the system are “critical,” and, therefore, require more attention and priority in the SFPUC’s maintenance plans.



## Response to Recommendation #9

- This recommendation has already been implemented.
- SFPUC implements “best practices” for the maintenance of AWSS assets in collaboration with SFFD, and consistent with the terms of the Memorandum of Understanding Regarding Operation and Maintenance of San Francisco Water Supply Systems Related to Fire Suppression (MOU), SFPUC will seek SFFD’s written approval for “any modifications that could compromise” the system’s function as a high pressure firefighting system (MOU, page 2).



## Civil Grand Jury Recommendation #10

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- By no later than June 30, 2020, the 2015 MOU between the SFPUC and the SFFD should be amended to include a detailed roadmap for annual emergency response exercises, including simulated disaster and earthquake drills involving the AWSS and the PWSS.



## Response to Recommendation #10

- The Fire Department conducts weekly hose/hose tender drills that it rotates through companies throughout the City. The Fire Department will work with the SFPUC to have them in attendance and participate in these drills. SFFD will also commit to working with the SFPUC to enhance the scope and frequency of trainings in the future for improved collaboration.
- SFFD and SFPUC will work together to amend the MOU by June 30, 2020.



# Questions?