

Civil Grand Jury 2018-19 Report:

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

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SFPUC



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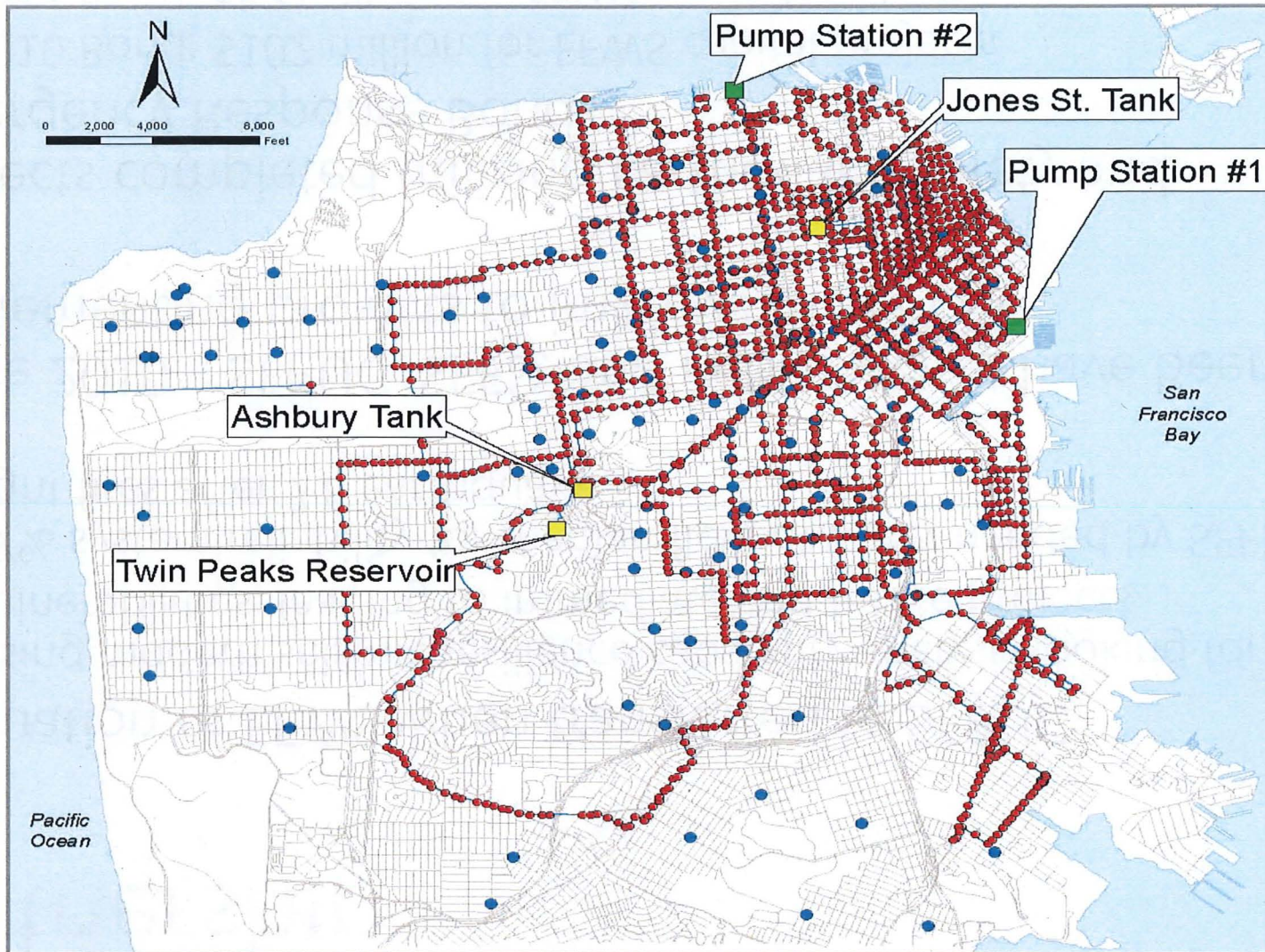
What is the EFWS?

- Emergency Firefighting Water System (EFWS): A high-pressure fire-suppression water system built after 1906 earthquake
- Ownership transferred to SFPUC in 2010
- SFFD is the end user: System improvements and expansion approved by SFFD, SFPUC, and Public Works
- Hydraulic Modeling utilized to guide decision making.



Original EFWS Map

33
Seismically
Reliable
Valves
Throughout
System



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Partnership

- Evaluation of EFWS when transferred to SFPUC:
 - Using modern seismic resilience capability analysis looking for vulnerabilities, leading to immediate and future projects
 - 47% system reliability for median flow of water needed by SFFD to fight fires after 7.8 earthquake
- Since 2010 - SFPUC, SFFD, and Public Works have been implementing projects to improve the EFWS.
- Projects completed utilizing Earthquake Safety and Emergency Response Bonds:
 - 2010 Bond: \$102 million for EFWS capital projects
 - 2014 Bond: \$54 million for EFWS capital projects



Key ESER Projects Completed

- EFWS 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
- Installation of 30 new cisterns:
 - 15 in the Sunset and Richmond districts
- Electronic Control Improvements
- 6 pipeline and tunnel projects



Key ESER Projects Underway

- Seawater pump station #2
- 19th Ave. Pipeline:
 - Bidding Feb 2020
- Ashbury Bypass Pipeline
- Clarendon Supply Pipeline
- Irving St. Pipeline
- Terry Francois Blvd. Pipeline:
 - Phase 1: completed
 - Phase 2: Bidding 2019



Development Projects

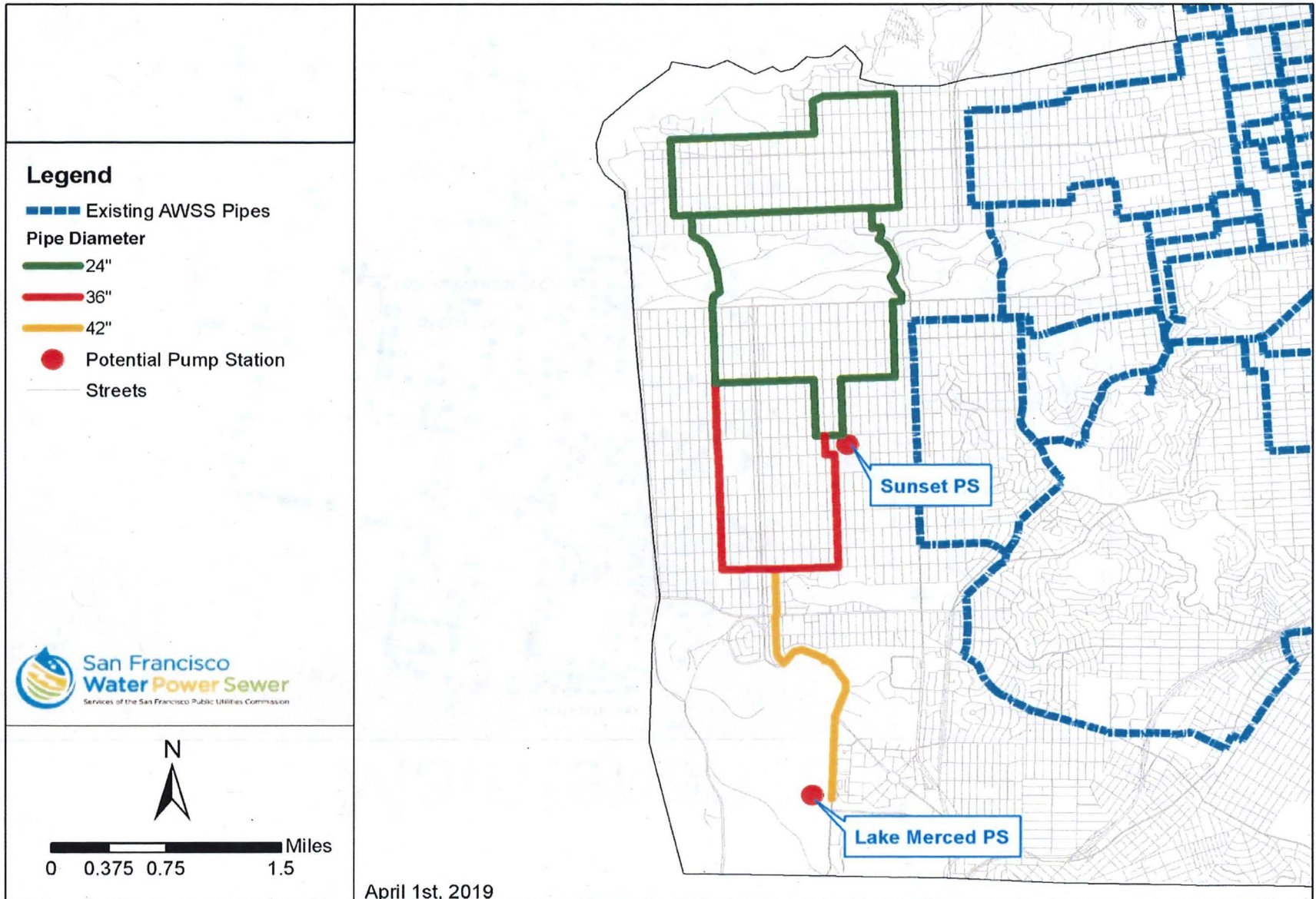
- Large Development Projects install EFWS pipes within their development boundaries.
- SFFD & SFPUC negotiate with Developers for projects outside of the development boundaries.

- **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**

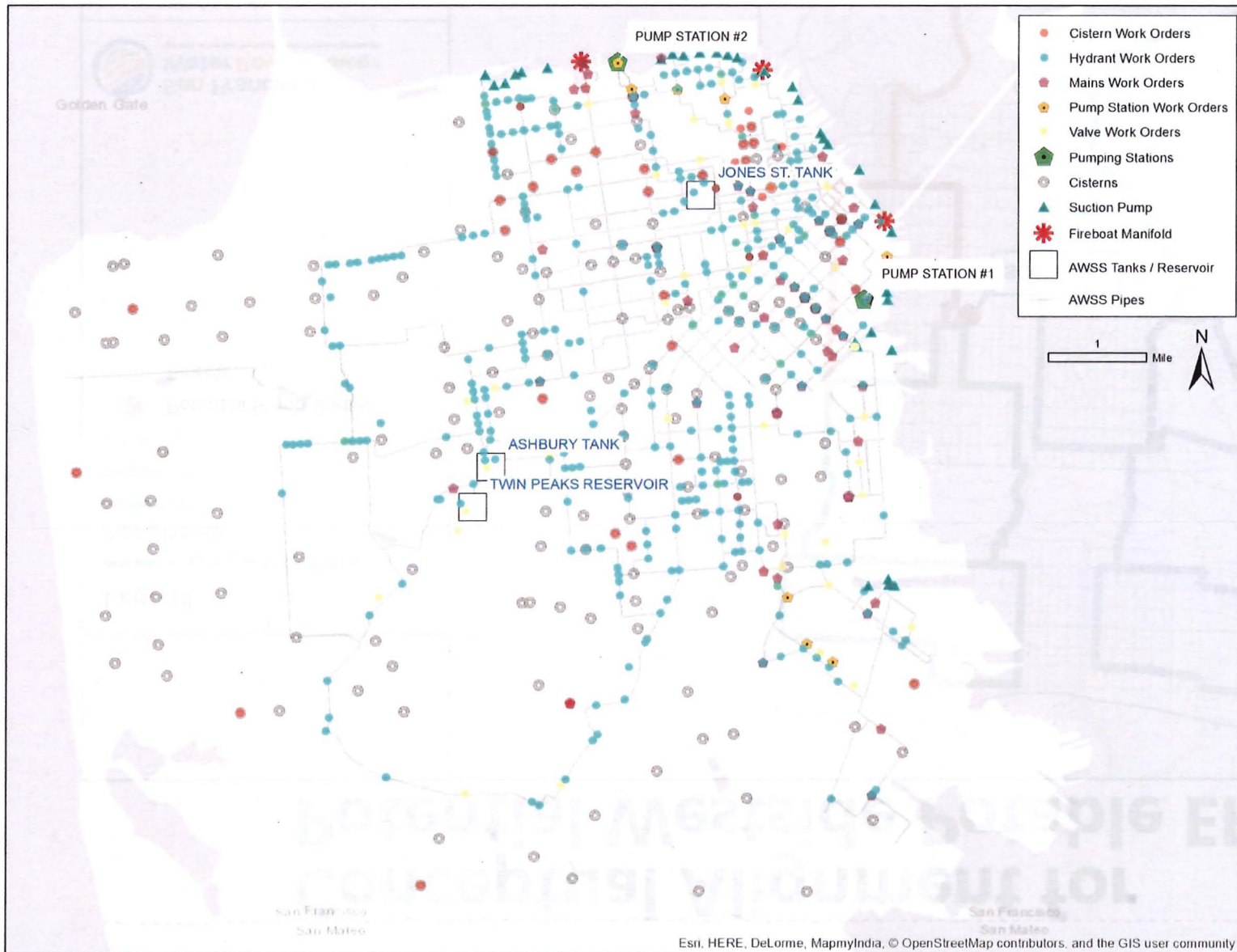
Preliminary List of Potential Projects

- Developed a preliminary list of potential projects that SFPUC and SFFD continue to develop and analyze
- Preliminary projects range in scope:
 - Pipeline projects
 - New water sources
 - Infirm area projects
- Citywide with a focus in areas that have limited access to the EFWS

Conceptual Alignment for Potential Westside Potable EFWS



Maintenance Activities



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Moving Forward

- Continue to implement EFWS projects using remaining 2014 ESER Bonds: ***estimated completion end of 2021***
- Continue to perform routine and high-quality maintenance on the EFWS to ensure it is in good working order: ***ongoing***
- 5 Hose Tenders in FY19-20 Budget (4 in City Budget, 1 from State)
- Continue to conduct regular emergency response trainings with all applicable City agencies, while also working collaboratively to enhance the scope and frequency of trainings: ***ongoing***
- Memorialize a detailed roadmap for annual emergency response exercises in SFFD-SFPUC Memorandum of Understanding: ***6/30/2020***

Moving Forward Cont'd.

- SFPUC and SFFD complete seawater pump station study: **6/30/2021**
- SFPUC to continue efforts to complete more detailed analysis of emergency firefighting water needs within neighborhoods: **6/30/2021**
- Develop a robust and thorough plan to ensure the City is well prepared to fight fires in all parts of San Francisco in the event of a 7.8 earthquake: **12/31/2021**
- Quarterly presentations to SFPUC Citizen Advisory Committee and increased community meetings: **ongoing**



EFWS in the Capital Plan

- Recent Funding
 - ESER 2010: \$102.4 million
 - ESER 2014: \$54.1 million
- FY2020-29 Capital Plan
 - ESER 2020: \$153.5 million
 - SFPUC Funds
 - Future ESER Funds



Thank you



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