

Civil Grand Jury 2018-19 Report:

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

John Scarpulla
SFPUC



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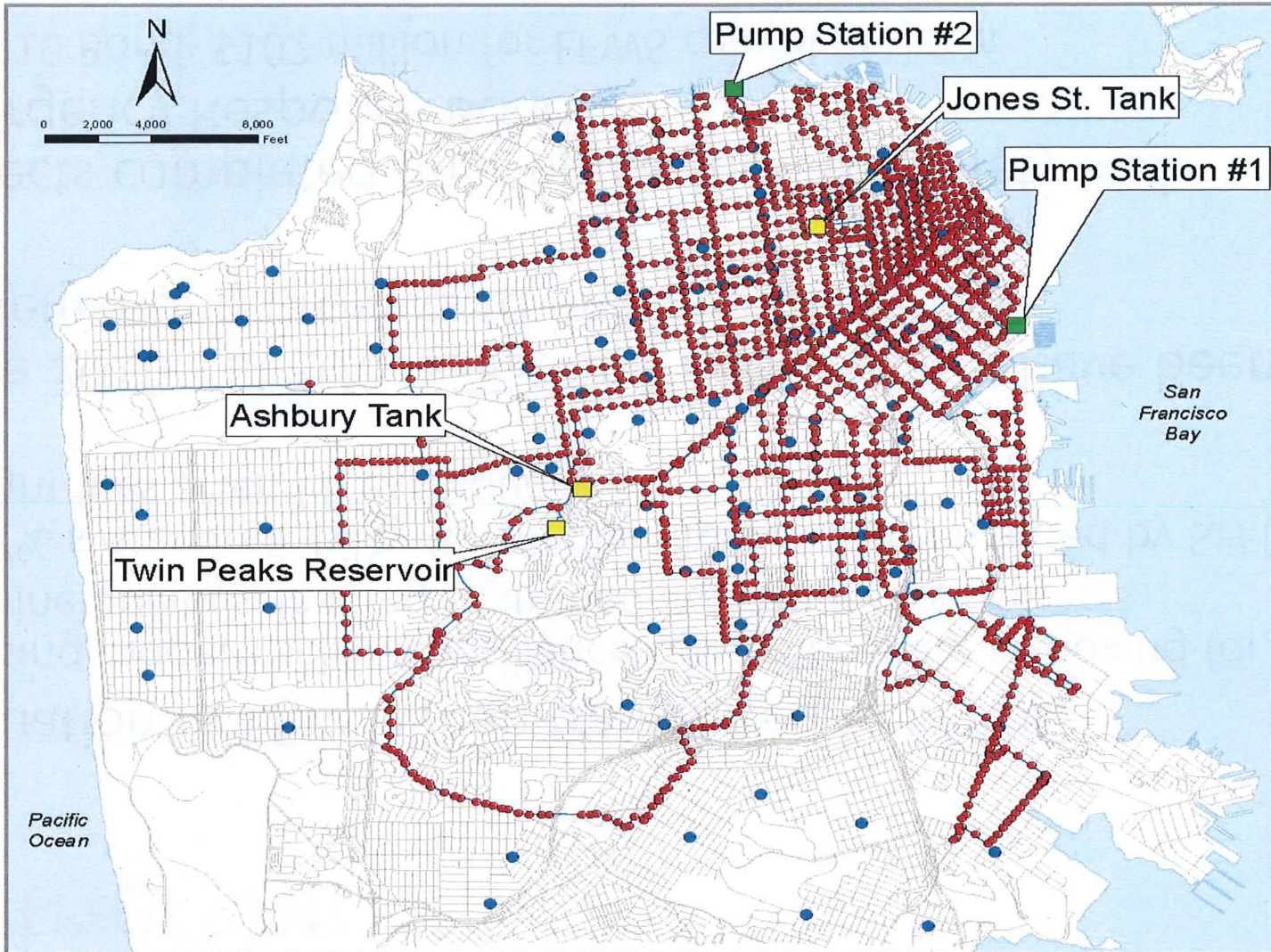
What is the EFWS?

- 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.

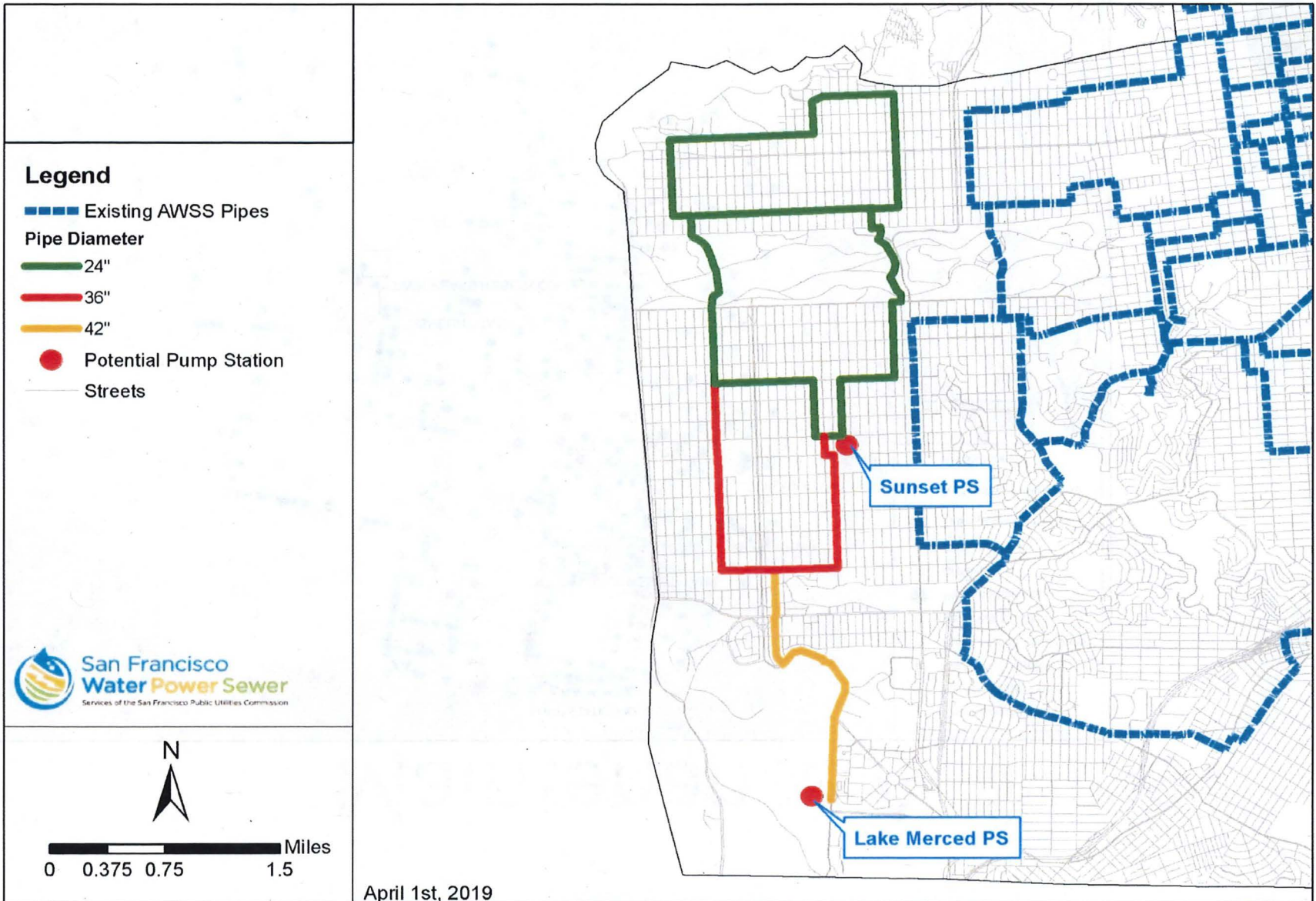
- **Mission Rock**
- **Mission Bay**
- **Pier 70**
- **Potrero Powerplant**
- **Potrero Hope SF**
- **Sunnydale Hope SF**
- **Park Merced**
- **Candlestick**
- **Hunters Point/Shipyard**
- **Executive Park**
- **Visitation Valley**
- **India Basin**

Preliminary List of Potential Projects

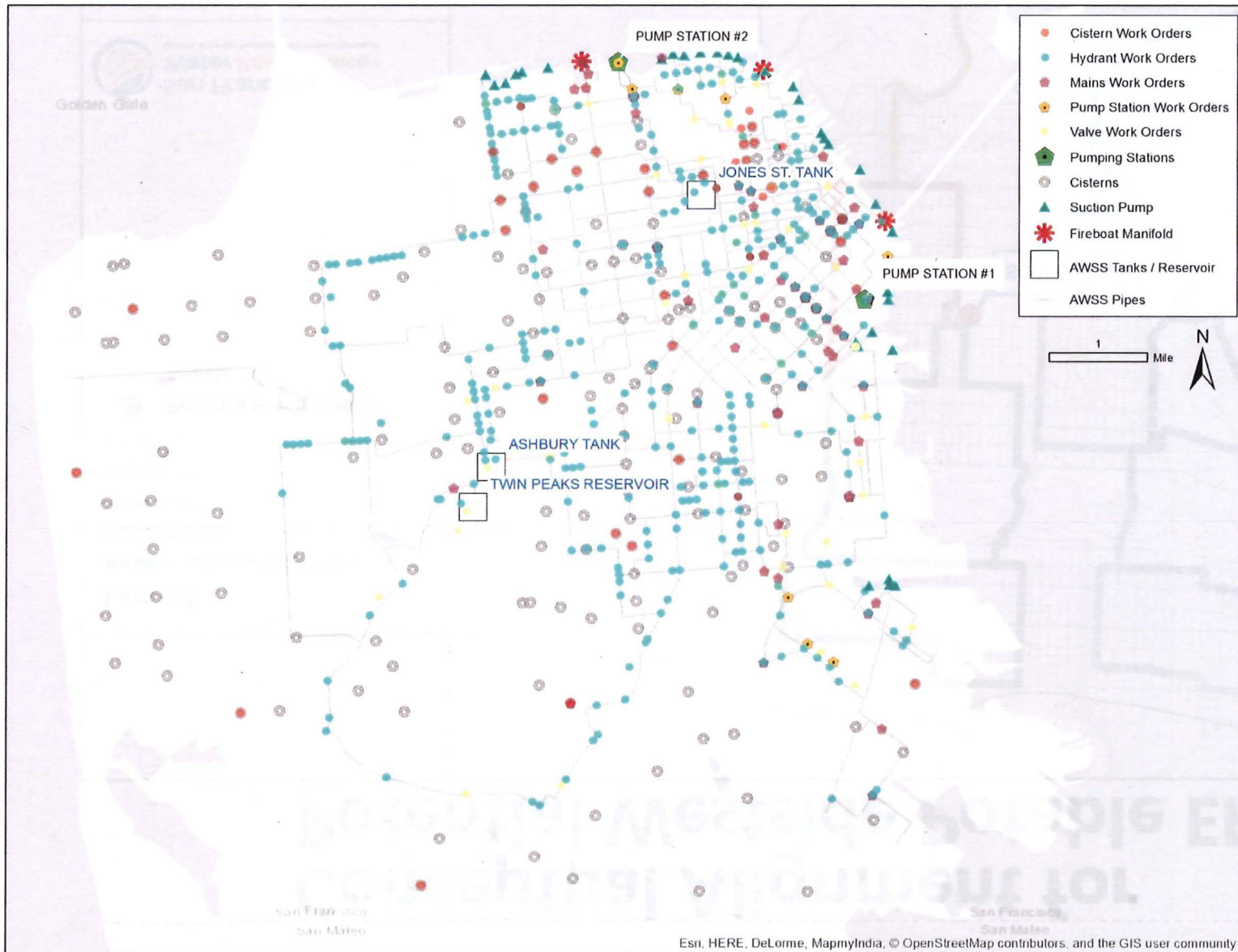
- Developed a preliminary list of potential projects that SFPUC and SFFD continue to develop and analyze
- Preliminary projects range in scope:
 - Pipeline projects
 - New water sources
 - Infirm area projects
- Citywide with a focus in areas that have limited access to the EFWS



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



Over
the
years



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TO THE BOARD OF SUPERVISORS
FROM JAMES DALESSANDRO -
September 19, 2019: File # #190786

AUTHOR OF "1906" and FILM MAKER OF "THE DAMNEDEST, FINEST RUINS"

DEAR SUPERVISORS: At five o'clock on the afternoon of April 19, 1906 - 36 hours after the catastrophic San Andreas fault rupture - 5 ships of the U.S. Navy's Pacific Squadron arrived at the Golden Gate to face a mountain of flames 1,500 feet high.

Utilizing their ships' massive steam pumps and an unlimited supply of saltwater, they stopped the fire along the entire Embarcadero - crucial to our rebuilding. They stopped the flames from leaping Van Ness Avenue, sparing the scant housing stock of Pacific Heights, the Fillmore, Sunset and Richmond Districts. They evacuated 100,000 desperate people on the waterfront. Over 38 hours, they pumped several hundred MILLION gallons of saltwater to check the fire's spread and save untold numbers of lives.

On October 17, 1989, following the Loma Prieta Earthquake, another naval vessel - our Fireboat Phoenix - pumped salt water onto the Marina fire for 14 hours, delivering 5 ½ MILLION gallons of salt water. It almost certainly prevented a repeat of 1906. Think of that for a moment, please - 5 ½ MILLION GALLONS OF SALT WATER to stop a single fire of only ¼ of a city block. If they had not stopped it there - where and how would they have stopped it?

So where are we today?

Despite 10's of millions of dollars from bond issues, provided overwhelmingly by San Francisco voters over the previous decades, 15 neighborhoods - 400,000 citizens - have no auxiliary, high-pressure water system to save homes, business, or lives. Why? Because the Public Utility Commission, which now controls the Auxiliary Water Supply System, has proposed one preposterous alternative after another to avoid expanding the AWSS. To further exacerbate our jeopardy, they have failed to maintain the EXISTING AWSS to where one seriously doubts its ability to function in an emergency.

Instead of expanding the AWSS, the PUC first proposed to buy 15 miles of cumbersome 12-inch hose. That was to be rolled out by the 24 on duty firefighters in the Sunset and Richmond Districts BEFORE they started fighting fires or rescuing citizens. Supervisor Peskin and others stopped that absurdity.

So now the PUC - instead of expanding the High Pressure SALTWATER SYSTEM with 3 pumping stations along the Bay and Pacific Ocean - is proposing that we commingle the POTABLE DRINKING WATER of the Sunset Reservoir with the brackish, POLLUTED WATER OF LAKE MERCED. The minute the Lake Merced Water enters

the MUNICIPAL WATER SUPPLY SYSTEM at least 400,000 people will be candidates for a wide variety of water born diseases.

Perhaps members of the PUC could drink unfiltered Lake Merced water for a week or two and let us all know how they fare? Or tell us how they plan to defend the massive lawsuits by our neighbors in the South Bay – who own 2/3rds of Sunset Reservoir's drinking water.

As you sit here today, the massive diesel pumping stations that supply the EXISTING AWSS – one station at Fort Mason, the other directly beneath the office of the Fire Chief on Townsend Street – are without an attendant capable of activating the system to supply salt water to the downtown's EXISTING high pressure hydrants.

The other parts of the EXISTING system, the levers and gates inside Jones Street on Nob Hill, which control nearly 12 million gallons of water from the Twin Peaks and Ashbury Heights Tanks – has not had an attendant on site in more than 20 years.

The PUC allegedly has someone somewhere who will control those massive Jones Street gates and valves and high-pressure water flow by means of a laptop computer. It is unclear what he or she knows about fire fighting, or how he or she would receive information on where that water is needed. It is also unclear if that system can deliver water, since some firefighters have stated the lack of regular flushing and maintenance has left hydrants clogged with sediment.

And now, our Mayor, a former Fire Commissioner, has cut \$100,000 from the NERT budget – Neighborhood Emergency Response Team - curtailing the training of volunteers willing to risk their lives to rescue their neighbors.

I urge the Board of Supervisors to immediately appoint a Blue Ribbon Commission comprised of people who understand the science of fire suppression, and care about what happens to this city and its citizens. A Commission who will challenge the Public Utilities Commission and over ride the unconscionable support from some, but not all senior members of the Fire Department, past and present. The neglect and delays have pushed this city, its citizens and visitors to the brink of catastrophe.

The recent findings of the 2019 Civil Grand Jury, crying ACT NOW, come with an ominous footnote. Their findings echo those of the 2003 Civil Grand Jury. And of bond issues dating back to 1986 and 1908. The neglect of our current system by the PUC, and their preposterous ideas to further endanger us all, must be stopped.

It appears, dear Board, that the task is yours as the last vestige of hope and sanity.

James Dalessandro