

1 [Declaring a State of Urgency - Expanding the City's Emergency Firefighting Water System]

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3 **Resolution declaring a State of Urgency to rapidly expand the City's Emergency**  
4 **Firefighting Water System (EFWS) to protect all neighborhoods in the event of a**  
5 **major earthquake and fire, and calling for a comprehensive EFWS action plan to**  
6 **expand the City's EFWS to cover all unprotected neighborhoods by 2034; to expand**  
7 **the Fire Department's firefighting apparatus such as portable hose tenders to provide**  
8 **interim protection to neighborhoods not currently covered by the EFWS; and to**  
9 **require an annual report to the Board of Supervisors on the state of the City's EFWS**  
10 **preparedness for a major earthquake and fire.**

11  
12 WHEREAS, The United States Geological Survey (USGS) estimates that the  
13 probability an earthquake magnitude 6.0 or larger will occur in the San Francisco region  
14 before 2043 is 98 percent, the probability of at least one earthquake of magnitude 6.7 or  
15 larger is 72 percent, and the probability of at least one earthquake of magnitude 7.0 or larger  
16 is 51 percent; and

17 WHEREAS, In San Francisco, the most densely populated city in California, over 90  
18 percent of buildings are constructed from wood, many of them directly touching their neighbor  
19 buildings, and earthquakes in places with this type of construction have caused the two  
20 largest peacetime urban fires in history: in 1906 in San Francisco and in 1923 in Tokyo, and  
21 San Francisco remains highly vulnerable to fire after an earthquake, as explained in a 2008  
22 article for the *International Association for Fire Safety Science*; and

23 WHEREAS, The San Francisco Fire Department (SFFD), the San Francisco Public  
24 Utilities Commission (SFPUC), and this Board of Supervisors share a common goal of  
25 increasing the firefighting capabilities of all areas of San Francisco; and

1           WHEREAS, The EFWS is a high-pressure and volume fire suppression water system  
2 that can be utilized during large fires and is vital for protection against the loss of life, homes,  
3 and businesses from fire following a major earthquake and non-earthquake multiple-alarm  
4 fires; and

5           WHEREAS, The EFWS does not cover large parts of nor adequately protect  
6 Supervisorial Districts 1, 4, 7, and 11, roughly one-third of the City's developed area, which  
7 also have the fewest cisterns, and each fewer than ten miles of EFWS mains and fewer than  
8 50 EFWS fire hydrants; and

9           WHEREAS, In June 2003, the 2002-2003 Civil Grand Jury recommended that the  
10 EFWS be extended "to serve all parts of the City," and 16 years later many neighborhoods still  
11 do not have new EFWS pipelines; and

12           WHEREAS, The SFPUC is developing a preliminary list of potential projects for various  
13 parts of the City where there is currently limited access to the EFWS, as well as other projects  
14 to reinforce or otherwise improve the existing EFWS; and

15           WHEREAS, The City does not have an agreed-upon timeline to fund and complete  
16 development of EFWS for all areas of the City, including neighborhoods that historically have  
17 not been as well protected as other areas of the City; and

18           WHEREAS, Unless the City increases funding levels, it will be several decades (i.e.,  
19 after the USGS predicts one or more major earthquakes will occur) before some parts of the  
20 City have a high-pressure and volume, multi-sourced, seismically safe emergency firefighting  
21 water supply; and

22           WHEREAS, While the amount of money needed to implement EFWS citywide is  
23 estimated to be in the hundreds of millions of dollars, the potential loss of life and potential  
24 property damage could be far greater if an extremely large earthquake strikes San Francisco;  
25 and

1           WHEREAS, Based on the City's current pace of issuing ESER Bonds, it could take  
2 approximately 35 years or more to build out EFWS pipelines to serve all neighborhoods,  
3 unless the timing of the ESER Bond issuances are expedited or other sources of funding are  
4 identified; and

5           WHEREAS, SFPUC and SFFD are in the process of analyzing the best method for  
6 bringing a robust and resilient high-pressure and volume firefighting water system to the  
7 Western neighborhoods in San Francisco that is capable of providing water to the SFFD  
8 firefighters at the high-pressure needed for firefighters to combat large fires after a seismic  
9 event, and are examining several options for the Westside, including potential development of  
10 a potable EFWS with over 14 miles of new EFWS pipelines and two new pump stations that  
11 could be supplied by four water sources; and

12           WHEREAS, To best utilize the existing EFWS and serve areas where the EFWS is  
13 lacking, it is critical that the SFFD obtain new updated Hose Tenders; and

14           WHEREAS, SFFD hose tenders are specialized apparatus designed for pumping and  
15 transporting large volumes of water from any source, are recognized worldwide for their ability  
16 to successfully move large amounts of water to a fire at high-pressures and volumes for  
17 firefighting, and are the ideal solution for areas with limited access to the EFWS because  
18 these vehicles can be dynamically deployed to any area of the City; and

19           WHEREAS, The SFFD currently has five Hose Tenders, three from 1973, one from  
20 1987, and one from 1992, all of which are two-wheel drive, and do not have the capacity to  
21 draft or pump water; and

22           WHEREAS, In FY2019-2020 SFFD submitted a request for funding to purchase 20  
23 Portable Water Supply System (PWSS) hose tenders, the Board of Supervisors and Mayor  
24 funded four new PWSS hose tenders, and the State of California funded one; and  
25

1 WHEREAS, On October 8, 2019, Supervisor Gordon Mar requested the Budget and  
2 Legislative Analyst to study through an equity lens and issue a report to the Board no later  
3 than December 31, 2020 (a) which areas of the City do not have sufficient water supplies for  
4 the anticipated demand for water to fight fires following a major earthquake similar in  
5 magnitude to the 1906 earthquake, and (b) options to address the issue in both the short term  
6 and the long term; and

7 WHEREAS, On October 1st, 2019, the San Francisco Board of Supervisors adopted a  
8 Resolution responding to the Presiding Judge of the Superior Court on the findings and  
9 recommendations contained in the 2018-2019 Civil Grand Jury Report, entitled "Act Now  
10 Before It Is Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency  
11 Firefighting Water System," on file with the Clerk of the Board of Supervisors in File No.  
12 190786, which is hereby declared to be a part of this Resolution as if set forth fully herein;  
13 now, therefore, be it

14 RESOLVED, That the Board of Supervisors hereby declares a State of Urgency to  
15 rapidly expand the City's EFWS to protect all neighborhoods in the event of a major  
16 earthquake and fire, given that the vulnerability of the City poses a serious and urgent threat  
17 to the well-being of San Francisco and the safety of its inhabitants and environment; and be it

18 FURTHER RESOLVED, That the Board of Supervisors urges the SFPUC, SFFD and  
19 the Office of Resilience and Capital Planning to develop a comprehensive EFWS action plan,  
20 including funding sources, to install a high-pressure and volume, multi-sourced, seismically  
21 safe emergency water system to fight fires in the event of a major earthquake in all the parts  
22 of the City where it is lacking by June 30, 2034, to be submitted to the Board of Supervisors  
23 by December 31, 2021; and, be it

1 FURTHER RESOLVED, That the Board of Supervisors urges the SFPUC and SFFD to  
2 complete a study for adding an EFWS saltwater pump station on the Westside of San  
3 Francisco to be presented to the Board no later than June 30, 2021; and, be it

4 FURTHER RESOLVED, That the Board of Supervisors urges the SFPUC to continue  
5 its efforts to complete more detailed analysis of emergency firefighting water needs by  
6 neighborhood and prepare a completed analysis by June 30, 2021; and, be it

7 FURTHER RESOLVED, That by June 30, 2022, the City should analyze whether to  
8 propose a separate bond for the development and implementation of EFWS projects for areas  
9 of the City with limited EFWS access as part of the City's regular capital planning process;  
10 and, be it

11 FURTHER RESOLVED, That the Board of Supervisors urges the Mayor to prioritize  
12 funding for the purchase of new PWSS hose tenders, apparatus, and equipment to replace  
13 and expand SFFD's currently inadequate inventory within the next three Fiscal Years; and, be  
14 it

15 FURTHER RESOLVED, That the Board of Supervisors urges the Department of  
16 Emergency Management, SFPUC, SFFD, and the Office of Resilience and Capital Planning  
17 to provide a consolidated annual report to the Board of Supervisors on the state of the City's  
18 EFWS preparedness for a major earthquake and fire and planned funding from the ten-year  
19 Capital Plan for EFWS by June 30 of each year, with the first report due June 30, 2020.