

1 [Urging Development of Financing Plan by December 31, 2022, for Emergency Firefighting
2 Water System]

3 **Resolution urging the Office of Resilience and Capital Planning to create a financing**
4 **plan by December 31, 2022, for expanding the Emergency Firefighting Water System**
5 **(EFWS) to unprotected areas of the City, with current and potential sources of funding**
6 **for the EFWS, hose tenders and other options to minimize fire damage from a major**
7 **earthquake.**

8
9 WHEREAS, The Emergency Firefighting Water System (EFWS) is a high-pressure fire
10 suppression water system designed to protect communities against the loss of life, homes,
11 and businesses in the event of multiple fires resulting from a major earthquake in the SF Bay
12 Area region, where the U.S. Geological Survey estimates that the probability of an earthquake
13 before 2043 is 72 percent for a magnitude 6.7 or greater quake, 51 percent for a magnitude
14 7.0 or greater quake, and 20 percent for a magnitude 7.5 or greater quake; and

15 WHEREAS, The current EFWS consists of the original high-pressure network,
16 consisting of water reservoirs storing Hetch Hetchy supplies, two pump stations to draw
17 seawater from the San Francisco Bay, high-pressure hydrants and pipelines, fireboats, and
18 cisterns constructed several years after the 1906 earthquake estimated at magnitude 7.9, a
19 system that covers the City's built environment a century ago, prior to the development of the
20 western and southern neighborhoods in the decades since; and

21 WHEREAS, In the event of a major earthquake that damages infrastructure leading to
22 fires, multiple conflagrations would necessitate extending the coverage of the high-pressure
23 EFWS to fight fires throughout the City; and

24 WHEREAS, Districts 1, 4, 7 and 11 have the least amount of EFWS coverage, as
25 measured by miles of EFWS mains, number of cisterns, and notably the number of high-

1 pressure hydrants ranging from 3 to 79 in these districts, as opposed to assets of 110 up to
2 366 hydrants located in each of the other 7 Supervisorial districts with a high concentration in
3 the downtown and South of Market areas, per the Budget and Legislative Analyst’s December
4 2020 report; and

5 WHEREAS, The 2018-19 Civil Grand Jury called upon the City to “Act Now Before It is
6 Too Late: Aggressively Expand and Enhance Our High-Pressure Emergency Firefighting
7 Water System” urging, among other recommendations to the Board of Supervisors, that the
8 Public Utilities Commission (SFPUC) as the lead department work with Fire Department
9 (SFFD) to provide a detailed analysis of firefighting needs, and feasibility study on salt-water
10 pump stations to improve the redundancy of water sources, with reports completed by SFPUC
11 in June 2021 and presented at the Board’s Government Audit & Oversight Committee in
12 November 2021; and

13 WHEREAS, The 2018-19 Civil Grand Jury also recommended that the Mayor, SFPUC,
14 SFFD, and the Office of Resilience and Capital Planning develop and present a detailed plan
15 to ensure that all parts of the City would be protected in the event of a 1906-magnitude
16 earthquake, including financing sources to develop a high-pressure, multi-sourced, and
17 seismically safe EFWS network by June 30, 2034; and

18 WHEREAS, The SFPUC released the Emergency Firefighting Water System 2050
19 Planning Study in December 2021, in response to the detailed plan requested in resolution
20 422-19, with this study providing a comprehensive analysis of the firefighting demands into
21 the future in anticipation of greater housing density in the City, as well as the water resources
22 and engineering options for meeting those demands, presented to the Board’s Public Safety &
23 Neighborhood Services Committee in April 2022; and

24 WHEREAS, Supervisors in Districts 1 and 4 have brought these critical issues to the
25 public’s attention through hearings and resolutions in recent years, going beyond the

1 recommendations in the 2018-19 Civil Grand Jury in Board Resolution 484-19) that requires a
2 consolidated annual report by June 30th of each year to monitor the progress toward a full
3 buildout of EFWS; and

4 WHEREAS, Earthquake Safety and Emergency Safety and Emergency Response
5 (ESER) Bonds have provided funds for EFWS capital projects for expansion as well as
6 upgrades to the current system in the last decade, allocating over \$300 million in total from
7 these bonds in 2010, 2014, and 2020; and

8 WHEREAS, The most recent ESER bond was approved by voters in March 2020 for
9 \$153.5 million of the total \$628.5 million to EFWS, and along with a separate funding source
10 of \$53.8 million in Water Enterprise revenue bonds these sources will cover the entire costs of
11 Phase I construction of the modern EFWS high pressure network, providing state-of-the-art
12 protection to parts of the outer Richmond and Sunset neighborhoods in Districts 1 and 4
13 respectively; and

14 WHEREAS, The most recent Capital Plan for FY2022-31 notes that future work on
15 expanding EFWS is expected to be funded through the ESER 2027 General Obligation Bond,
16 and this would likely go toward Phase II work based on the EFWS design as an
17 interconnected system of pipes and water sources, with Phase II costs estimated at \$180
18 million; and

19 WHEREAS, This EFWS 2050 Planning Study provided cost estimates for citywide
20 expansion of EFWS, with pipeline additions and upgrades, pump stations, and facility
21 improvements totaling \$1.9 billion in 2021 figures, with costs escalating to \$2.9 billion if
22 completed by 2034, and \$4 billion if EFWS citywide expansion were completed by 2046, with
23 these cost estimates excluding the funded Phase I portion of EFWS from the 2020 ESER
24 bond; and

25 WHEREAS, Future phases of EFWS expansion require refining plans presented in the

1 2050 Planning Study, and the gap in funding remains significant, up to several billion dollars;
2 and

3 WHEREAS, An infrastructure project of this magnitude would be challenging to fund
4 from a single category of revenue sources, with General Obligation Bonds including ESER
5 bonds being a predominant source of funding for the City's capital planning needs and
6 process, requiring voter approval and scheduled out in successive Capital Plans with
7 considerations for bonding capacity, and the Office of Resilience and Capital Planning has
8 noted that the total General Obligation bonding capacity available for the next ten years is
9 \$1.2 billion; and

10 WHEREAS, The 2018-19 Civil Grand Jury recommendations for EFWS included
11 adding 20 hose tenders to this small, aging fleet of specialized fire trucks, as an interim
12 measure to cover the unprotected areas of the City, and Fire Department is limited in
13 acquiring the full number as recommended due to budget and storage limitations, with each
14 hose tender costing approximately \$1 million; and

15 WHEREAS, The urgency to address the fire dangers from a major earthquake could be
16 intensified with projections for greater building density in residential areas of the City, as
17 shaped by housing construction goals as part of current and forthcoming Regional Housing
18 Needs Allocation (RHNA) allocations and demand in the private housing market; now,
19 therefore, be it

20 RESOLVED, That the Board of Supervisors hereby declares a vital need to identify
21 funding sources that can be used to expand the Emergency Firefighting Water System
22 (EFWS) per aforementioned Board resolutions urging action by 2034, in concert with other
23 strategies such as gas pipeline shutoffs at scale, in order to protect all neighborhoods in the
24 event of a major earthquake and fire posing a serious and urgent threat to the City, and the
25 safety of its inhabitants and environment; and, be it

1 FURTHER RESOLVED, That the Board of Supervisors requests the Office of
2 Resilience and Capital Planning to create a financing plan by December 31, 2022, submitted
3 to the Capital Planning Committee for building out the EFWS to ensure coverage of all areas
4 of the City that are not adequately protected from multiple fires including those following a
5 major earthquake; and be it

6 FURTHER RESOLVED, That the Board of Supervisors urges the City Administrator
7 through the Office of Resilience and Capital Planning to identify and evaluate federal and
8 state sources for funding the Emergency Firefighting Water System expansion, including grant
9 programs that require Benefit-Cost Analysis (BCA) for EFWS projects, and to recommend to
10 the Board actions necessary to secure this government funding; and, be it

11 FURTHER RESOLVED, That the Board of Supervisors urges the Capital Planning
12 Committee to consider designating the “Emergency Firefighting Water System” separately
13 from the eight public safety departments that request project funds through the Earthquake
14 Safety and Emergency Response (ESER) general obligation bonds in order to enhance
15 achieving diversified funding support; and, be it

16 FURTHER RESOLVED, That the Board of Supervisor urges the Capital Planning
17 Committee to consider using increased general obligation bond capacity for financing the
18 Emergency Firefighting Water System expansion projects; and, be it

19 FURTHER RESOLVED, That the Board of Supervisors requests that the Office of
20 Resilience and Capital Planning assess as part of the EFWS financing plan the contribution of
21 fees from Negotiated Development Agreements for Emergency Firefighting Water System
22 infrastructure; and, be it

23 FURTHER RESOLVED, That the Board of Supervisors urges the SFFD to work with
24 the Real Estate Department to identify surplus property owned by the City that can be used by
25 the SFFD to store additional hose tender fire trucks.