

# ESER 2020

## Emergency Firefighting Water System

#safeguardingSF

### What is the Emergency Firefighting Water System?

The Emergency Firefighting Water System, sometimes referred to as the Auxiliary Water Supply System, is an independent high-pressure water supply system dedicated to fire protection. It was installed in 1913 in response to the Great Earthquake and Fire of 1906 and consists of a 135-mile pipeline network, a high-elevation reservoir with two large-capacity tanks, two pumping stations, three fireboats and underground water storage tanks (cisterns).

The system has unique capabilities, including the ability to deliver water at extremely high pressures and to use water from the Bay to battle fire. The Emergency Firefighting Water System is used as the secondary defense against large fires, specifically those that could occur after a large earthquake when the domestic water system may be impacted.

If the City's domestic water system is damaged as a result of an earthquake – as it previously has been – sufficient water from the domestic water system will not be available to suppress fires. The Emergency Firefighting Water System will serve as the alternative water source and will be vital to extinguishing large fires, thus saving lives and protecting against the loss of buildings and homes after a large earthquake or other disaster.

### Are we prepared?

**ONESF**  
Building Our Future

The City and County of San Francisco is proposing a \$628.5 million **Earthquake Safety and Emergency Response (ESER)** bond for the March 2020 ballot. The purpose of this bond is to fund upgrades and much-needed improvements to the City's Emergency Firefighting Water System and capital infrastructure that will allow San Francisco to quickly respond to a major earthquake or other disaster.



### What improvements to the Emergency Firefighting Water System will be made?

ESER 2020 will build upon the work that was funded by the ESER 2010 and ESER 2014 bonds and provide further expansions and seismic upgrades to the vital components of the Emergency Firefighting Water System. Funding will be allocated to replace and extend system components to increase the ability to provide adequate water throughout the City for firefighting following a major earthquake and during multiple-alarm fires. Under this phase of the ESER program, many of the upgrades will focus on improving Emergency Firefighting Water System capabilities in the City's western neighborhoods. The work will include improvements to the core facilities, water sources, pipelines and tunnels.

### ESER: A San Francisco Bond Program

ESER is San Francisco's bond program to strategically address critical needs for San Francisco's public safety. Voters overwhelmingly approved the first ESER bond in 2010, and a second one in 2014. The proposed 2020 ESER bond will allow the City to continue to bolster resiliency and safeguard San Francisco for years to come.

## ESER 2010 and 2014: Progress Made

Since the passage of the first ESER Bond in 2010, the City has implemented projects to increasingly improve the Emergency Firefighting Water System's seismic reliability and range of coverage. The City will continue to implement projects utilizing new and proven technologies that improve upon the original system, designed more than a century ago.

With previous ESER funds, critical reliability upgrades were made at the three primary water sources: Twin Peaks Reservoir, Ashbury Heights Tank and Jones Street Tank.

In addition to completing upgrades at the primary water sources, upgrades also were made to Seawater Pump Station #1, which is one of the secondary sources of water for the system. Structural and seismic upgrades to Seawater Pump Station #2 began in late 2018 and are estimated to be complete in 2020. The previous ESER bonds also funded the construction of 30 new cisterns, 15 of which are located in the Sunset and Richmond districts.

As part of improving the reliability of the water supply for the Emergency Firefighting Water System, ESER funds have been used to improve and expand the water system's pipelines and tunnels. Six pipeline and tunnel projects have been completed to date, with seven more currently in planning, design or construction.

## What are the accountability standards for the project?

- Ongoing needs assessment to determine top priorities
- Reports on a regular basis in regard to budget, schedule and scope aspects, posted to the ESER website: [sfearthquakesafety.org](http://sfearthquakesafety.org)
- Transparency through annual reviews, audits and reports to the Citizens General Obligation Oversight Committee and Capital Planning Committee; and additional transparency through other City reviews, audits and reports

## ESER 2020: What's Proposed

Projects	Budget*
Neighborhood Fire Stations and Support Facilities	\$275 million
District Police Stations and Support Facilities	\$121 million
Emergency Firefighting Water System	\$153.5 million
9-1-1 Call Center Renovation	\$9 million
Disaster Response Facilities	\$70 million
<b>Total</b>	<b>\$628.5 million</b>

## Why now?

### Protecting lives.

The longer we delay making these improvements, the more at risk our public safety facilities – and the first responders and San Franciscans who depend on them – will be during a major earthquake or fire.

### Using tax dollars wisely.

Each year that we delay renovations and needed upgrades to our public safety facilities, the cost escalates. These facilities inevitably must be fixed; by acting now, we can improve safety and save local taxpayer dollars.

## Are we prepared?

The United States Geological Survey (USGS) predicts that there is a 72 percent chance of a 6.7 or greater magnitude earthquake striking the Bay Area in the next 25 years. Due to the high seismic risk in the San Francisco Bay Area and the vulnerability of both the domestic and existing Emergency Firefighting Water Supply systems, there is a strong possibility that insufficient water would be available to combat multi-alarm fires that could erupt as a result of a large earthquake.

By providing an extra resource for fire protection, in addition to the City's domestic water system, the San Francisco Emergency Firefighting Water System is vital for protecting against the loss of life, homes and businesses in the event of a major earthquake.



For more information, visit  
[sfearthquakesafety.org](http://sfearthquakesafety.org)