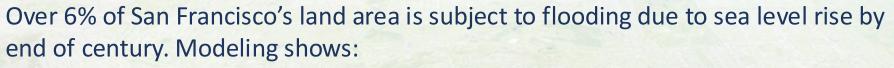


## The Dual Risks of Earthquake and Sea Level Rise Cannot be Ignored

Potential Sea Level Rise by 2100

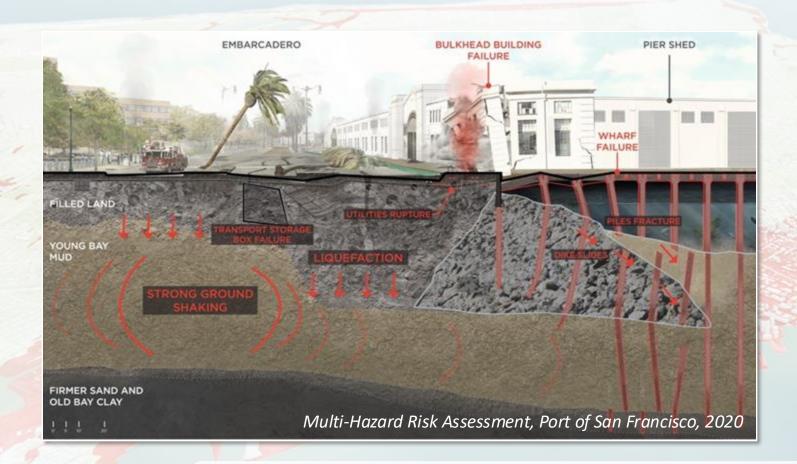


- By 2050, 100 to 500 structures and assets will be vulnerable to flooding
- By <u>2140</u>, damages could amount up to *\$23 billion*, including 23,000 residents in more than 500 buildings and 3,400 jobs impacted



## The Dual Risks of Earthquake and Sea Level Rise Cannot be Ignored

The 150-year-old historic seawall must be replaced with safe and resilient infrastructure







Up to **40,000** people could be at risk on Port property if an earthquake occurs during the day



## San Francisco's Unique Role and Opportunity

First USACE Coastal Flood Study and Project with a Focus on Sea Level Rise in the Nation

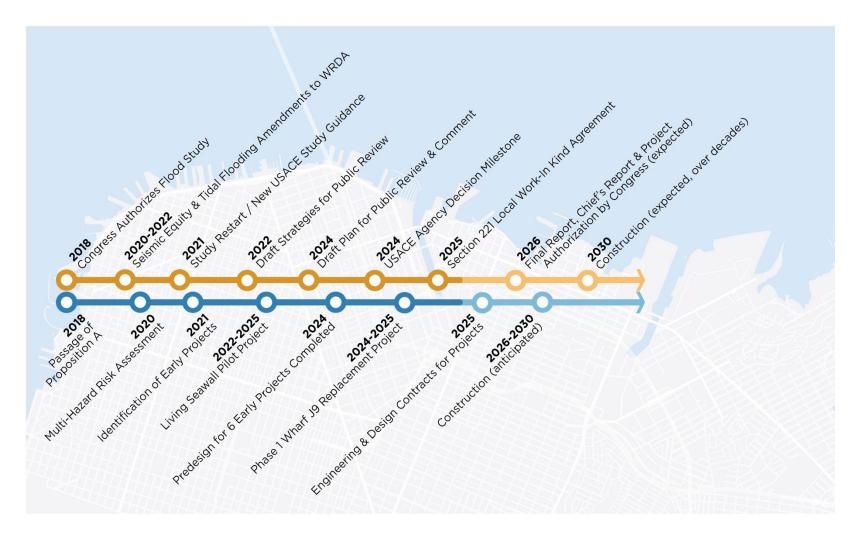
First of its kind USACE
Comprehensive Cost Benefit Analysis



#### THE RECOMMENDED PLAN Waterfront-wide stormwater **Floodproof piers** management adaptations related and select buildings to coastal flood defenses FISHERMAN'S WHARF (REACH 1) Adapt historic waterfront buildings and wharves Raise the shoreline with seismically resilient structures **EMBARCADERO** (REACH 2) **Incorporate nature** based features, such as creek enhancements SOUTH BEACH/MISSION BAY (REACH 3) Approximately 10% design for coastal flood defenses. Further City design work needed to develop infrastructure program and ISLAIS CREEK/BAYVIEW public realm design. **US Army Corps** (REACH 4) of Engineers

### **USACE Study Strategy**

- USACE & Port have spent approximately \$16 million to date and 6 years to develop the USACE Plan
- Based on the USACE Agency
   Decision Milestone and
   existing USACE guidance, the
   current Study is on a path to
   a federal interest finding by
   the Chief of Engineers
- Key outstanding issue: design maturity vs. 35% level design







# **THANK YOU**

