

# Planning Strategies



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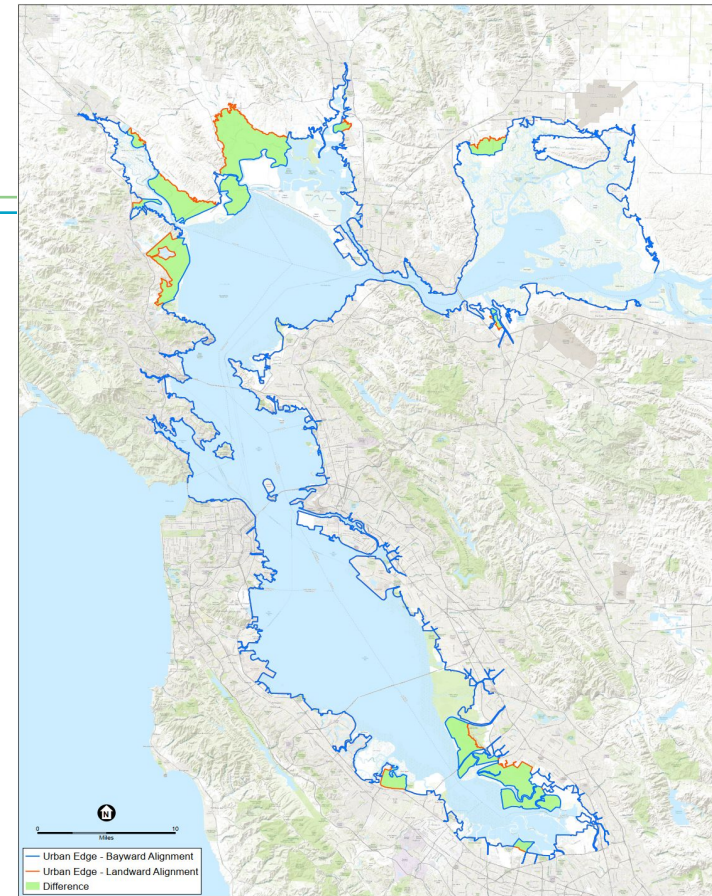
# Challenges and Barriers to SLR Adaptation – View from the Local Flood Agency Perspective



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May 13, 2022

# CHARG - Flood Agencies that Ring the Bay – Technical Experts

- Contra Costa County Flood Control
- Alameda County Flood Control
- Marin County Flood Control
- San Mateo Flood and SLR Resiliency District
- Valley Water
- Sonoma Water
- Napa County Flood Control





# The Real-World Challenges...So many, So little time

- Public safety is not a priority of permitting agencies
- Misunderstanding flood benefits of green approaches – damps waves, doesn't stop SLR flooding (need gray and green)
- Regulatory Issues
  - Permitting requirements and costs
  - Disconnect within agencies between goals and permits
  - CEQA in a changing baseline world
- Impacts and costs for moving fill
- Still building homes in SLR zones



*Thin-lift sediment reuse in Novato Baylands 2016 and 2020*

# One Example – Flooding Up Our Creeks

- Most common flooding concern for many Cities – impacting the most people
- No nature-based solution (except retreat)
- Gates, levees and pumps – difficult to grant fund and permit
- Legacy utility conflicts
- ✓ Need both green and gray approaches





# So ...Are We Really Preparing SF Bay for Sea Level Rise Flooding of the Urban Edge?

- In scattered locations, levees are being built – good? do they consider bay “bathtub” impacts? Are these dams at some point?
- Costs for levee maintenance and pumping- large and larger (no grants)
- Engineering can only protect so much – eventually need to decide when/how to retreat or accomodate
- Not a rational process – *eminent domain, retreat, rebuild*

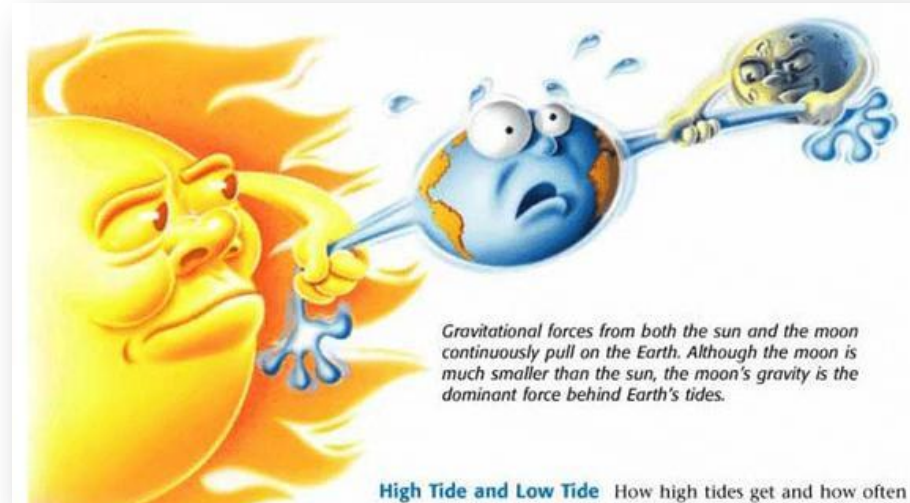
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✓ *The answer is...?*





# The Coming “*Extreme Proxigean Spring Tide*”

- There are many kinds of King Tides- proxigean are bigger than typical perigean
- The extreme King Tide is one every 30 years and the next one is **December 2026**
- Websites say anywhere from a few percent to 25% increase in tide heights (NOAA says low end)
- Astronomical pull only one of many factors impacting tide height and flooding





# Len Materman

Chief Executive Officer, OneShoreline

**May 13, 2022**

***Bay Planning Coalition 2022 Spring Summit***

**San Mateo County Flood and Sea Level Rise Resiliency District**

**Len Materman, CEO**

**info@OneShoreline.org**

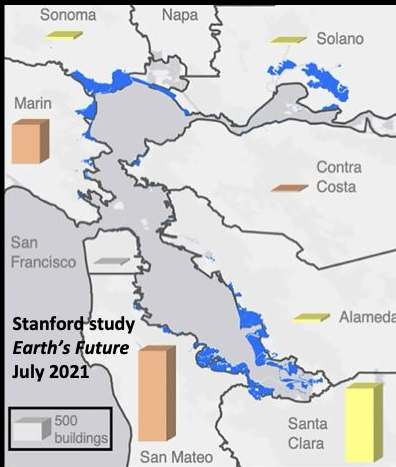
**OneShoreline**  
Building Solutions for a Changing Climate



## Recent studies of local sea level rise risk

### COUNTY OF SAN MATEO SEA LEVEL RISE VULNERABILITY ASSESSMENT

FINAL REPORT  
PUBLISHED MARCH 2018



Stanford study  
*Earth's Future*  
July 2021

### THE DAILY JOURNAL

FRIDAY, AUGUST 13, 2021

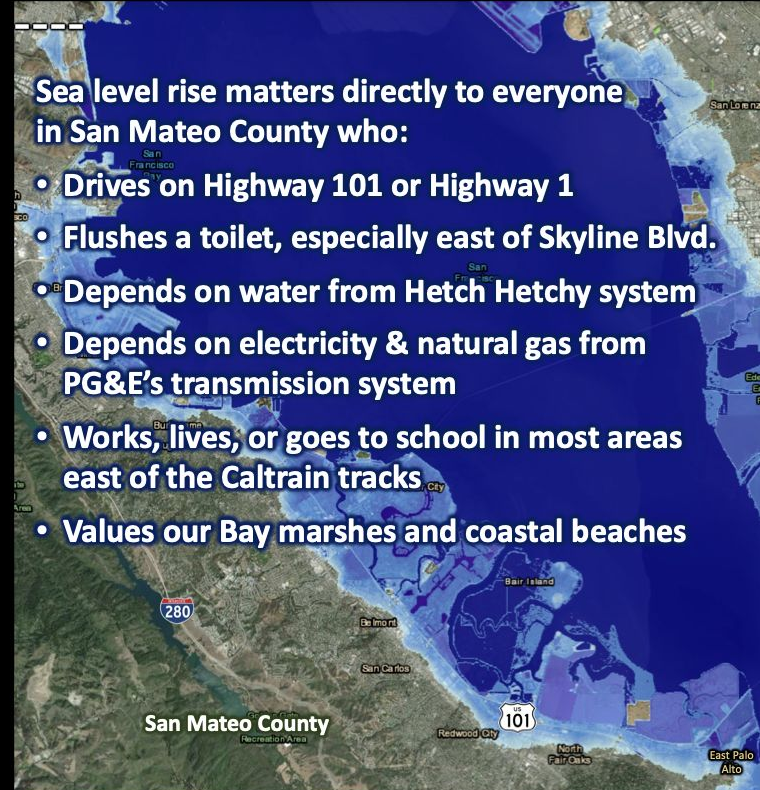
### Report: More people and property at risk in San Mateo County from sea level rise

## Most vulnerable CA county to 3 feet of sea level rise in terms of:

- population, including underrepresented population
- number of homes and contaminated sites
- property value

### Sea level rise matters directly to everyone in San Mateo County who:

- Drives on Highway 101 or Highway 1
- Flushes a toilet, especially east of Skyline Blvd.
- Depends on water from Hetch Hetchy system
- Depends on electricity & natural gas from PG&E's transmission system
- Works, lives, or goes to school in most areas east of the Caltrain tracks
- Values our Bay marshes and coastal beaches



Caltrans  
Adaptation Priorities Report  
Dec. 2020

### SOUTH COAST SEA LEVEL RISE RISK AND SOLUTIONS STUDY

#### Sea Level Rise Will Impact Our South Coast Communities

The San Mateo County South Coast is known for its iconic beaches, agricultural areas, and small coastal communities. Many of these areas, including coastside beaches and bluffs, roads, agricultural land, businesses and



Together we can prepare for sea level rise.

State legislation established OneShoreline on January 1, 2020 as the first independent government agency in CA to build resilience to the water-related impacts of climate change. OneShoreline takes a holistic approach to:

• THREATS • OBJECTIVES • GEOGRAPHY



Resilience projects should be:

- Large enough to address a connected problem for decades
- Small enough to be manageable by one lead agency

OneShoreline focuses on:

- Building long-term value
- Multi-jurisdictional & multi-benefit
- Locally supported with clear roles

OneShoreline's priority – unlock keys to building long-term resilience:

- funding and financing
- land use, land rights, land values
- permits reflect a changing climate

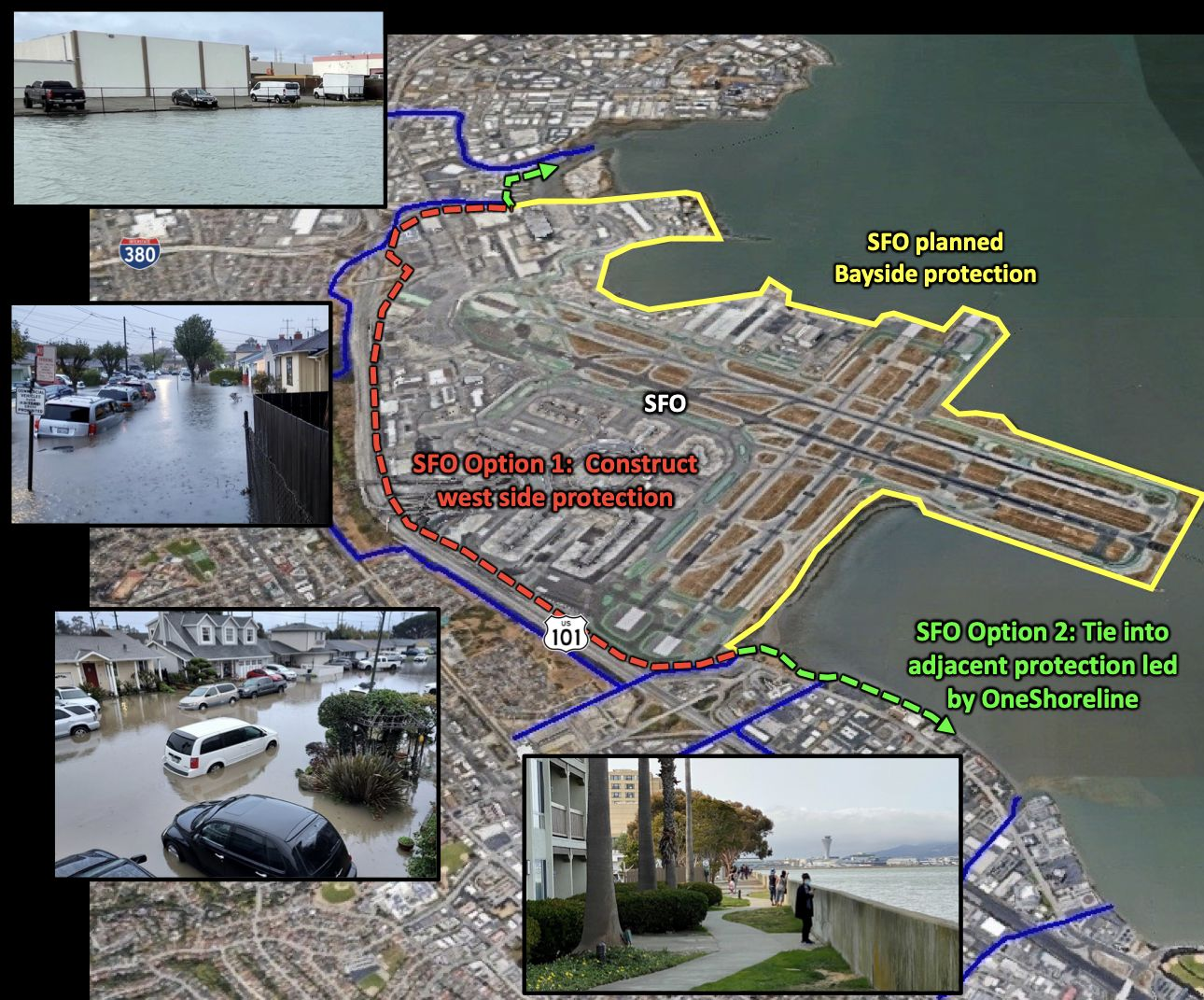


## The Big Picture around SFO

### OneShoreline, cities, and SFO:

- establish common objectives & assumptions
- share technical information
- share environmental mitigations
- share costs
- utilize public & private lands to meet common objectives

OneShoreline's protection objective:  
FEMA 100-year + 6' SLR which equals  
10' above today's high tide

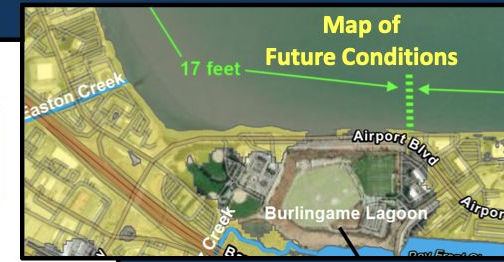
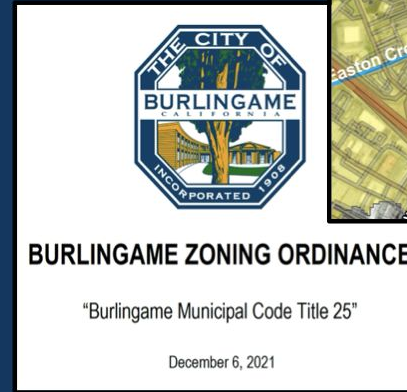




# What building long-term resilience looks like

The shoreline of Burlingame brought together three key ingredients to enable progress:

- City leadership eager to maximize opportunities for long-term adaptation planning
- Opportunities for major new developments along the water to contribute to adaptation solutions
- A regional project to analyze and guide those solutions





# Virginia Calkins

Development, DivcoWest