2021 Climate Change Risk & Resilience Forums

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<td>April 8</td>
<td>San Mateo, Foster City, Redwood Shores, Belmont, San Carlos</td>
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<td>June 3</td>
<td>Countywide Wildfire Risk and Resilience</td>
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Forums are held on Thursdays, 7:00 PM to 8:30 PM

September 9, 2021

Climate Change Risk and Resilience Forum:
Brisbane through Burlingame

San Mateo County Flood and Sea Level Rise Resiliency District

Len Materman, CEO
Sea Level Rise in San Francisco Bay: History and Future Scenarios

- red: extreme (2.5 meters by 2100)
- orange: high (2 m)
- green: intermediate-high (1.5 m)

2000 baseline for sea level rise projections

2020, 2040, 2060, 2080, 2100
Most vulnerable CA county to 3 feet of sea level rise in terms of:
• population, including underrepresented population
• property value
• number of homes
• number of contaminated sites

One of six counties in U.S. and only one on West Coast with over 100,000 people living in an area impacted by 3 feet of sea level rise.

Key community assets in the county vulnerable to sea level rise: schools, hospitals, beaches, highways, water treatment plants, power plants, wetlands, and major corporations.
A long-standing Flood Control District collected taxes and worked in 10% of the county and Bay shoreline and along none of the Pacific coastline.

A transformative challenge the cities and County were not well-positioned to address.
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Resilience to climate change’s impacts requires an urgent, holistic approach to:

- **THREATS** – more extreme storms and substantial sea level rise
- **GEOGRAPHY** – align and connect protection for neighboring jurisdictions
- **OBJECTIVES** – reduce threats; turn waterways & shorelines from liabilities into assets integrated into communities; utilize green infrastructure and public and private lands
Established January 1, 2020, our FY2021-22 priorities include:

• Complete our first construction project – a long-planned effort to protect five mobile home parks from frequent flooding from the Bayfront Canal

• Advance new multi-jurisdictional projects that connect and align substantial protection for neighboring jurisdictions, and projects in 3 long-standing flood zones

• Work with cities and developers so that private property and public infrastructure is protected against sea level rise and more extreme storms

• Develop a source of long-term, stable funding for climate resilience work, and effectively manage District finances
2021-22 Projects with OneShoreline as a Lead / Partner / Potential Partner connecting to a Project by Others

- Colma Creek
- Navigable Slough
- San Bruno Creek
- SamTrans facility and SSF shoreline
- Beach Blvd.
- Colma
- Creek
- Burlingame
- & Millbrae
- SFO
- Bayfront Canal & Atherton Channel
- With SFCJPA: San Francisquito Creek, SAFER Bay shoreline project
- Foster City
- Redwood Shores
- Countywide Flood Early Warning System
- Pillar Point Harbor
- Princeton Shoreline
- Mavericks & Surfers Beaches
- Burlingame
- Belmont Creek in Twin Pines Park
- Belmont Creek
- Bayfront Canal & Atherton Channel
- 2021-22 Projects with OneShoreline as a Lead / Partner / Potential Partner connecting to a Project by Others
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Brisbane to Burlingame 80 years ago
Brisbane to Burlingame today
San Bruno’s Belle Air Neighborhood
San Bruno’s Belle Air Neighborhood
To remove properties from current and future risks, and avoid the more challenging and costly process to retrofit protection later, our vision is:

- New public/private infrastructure and buildings at yellow elevation.
- New waterfront development includes robust shoreline protection at dark orange as part of regional efforts.
- Marshes are restored to maximize their environmental and flood protection benefits.
- Trails are incorporated into shoreline protection and to allow access to the shoreline.

The path to resilience will be easier and less costly if we embark upon it today.
Option 1. Tie in to adjacent protection

Option 2. Develop westside protection

SFO Shoreline Protection Project
Sea Change Burlingame
Proposed Sea Level Rise Adaptation Strategies
Update to City Council

December 2nd, 2019
The Project Partners would:

- establish common objectives and assumptions
- share technical information
- share environmental mitigations
- share costs
- utilize public and private land rights to meet objectives
Objectives and standards related to climate change and new development

• Cities evaluate development proposals to ensure compliance with various requirements. If the location of a proposed development is in the FEMA 100-year flood zone, most cities require that a first floor and some infrastructure are above the flood elevation.

• Not yet considered are conditions brought by climate change, which is a lost opportunity:
  1) to incorporate protection into the early planning of a new development, and
  2) for the private sector to share in the cost of protecting that property, related infrastructure, and the neighborhood.

• In addition, city updates to a General Plan or Specific Plan present opportunities to incorporate climate considerations into the vision of a city’s future.

• OneShoreline has engaged South San Francisco, Burlingame, and Redwood City so far.
OneShoreline is working with cities to look for opportunities for development to take into account future conditions

- General Plan & Specific Plan Updates
- Zoning Ordinances
- Development Projects
Look for opportunities to turn a long-standing liability...

...into a community asset.
OneShoreline has developed a Future Conditions Dashboard to help city staff, homeowners, developers, etc. visualize and plan for site-specific water depths due to flooding and sea level rise.

Colma Creek Future Conditions Dashboard

This dashboard offers flood and sea level rise information for South San Francisco, aiming to inform new proposed developments along Colma Creek.

- Use the select tool in the top left corner of the map to click the map and display the flood protection objective elevation below.
- Use the layers tool in the top right corner of the map to show/hide map layers.
- Click the arrow on the left to see available map layer filters.

Future 100-Year Event Depth

2.802 ft
Future Flood Conditions with Sea Level Rise
Current **residential** median household income impacted by future flooding conditions

- $125,086
- $98,581
- $106,080
- $86,774
Proposed Residential land use in SSF General Plan Update impacted by future flooding conditions
Residential land use proposed in SSF General Plan impacted by future flooding conditions and existing tree cover.
Residential land use proposed in SSF General Plan impacted by future flooding conditions and existing trails
Land rights and project opportunities
In 2020, in-stream gauges were installed or upgraded on Colma Creek, San Bruno Creek, San Mateo Creek, and Atherton Channel. Potentially Pescadero and Butano Creeks regarding post-wildfire erosion and flood threats.

In FY21-22, we will initiate multi-jurisdictional Emergency Action Plans in four watersheds, beginning with Colma Creek.
Thank you.
Sea Level Rise in South San Francisco
Led by U.S. Army Corps of Engineers

Large Problem Requiring Many Partners

- Use Section 203 of the Water Resources Development Act (WRDA) of 1986
- Feasibility Study of Colma and San Bruno Creek Flood Risk
- Short Range Goal: Devise solid plans to protect against flooding.
- Medium Range Goal: Work with USACE and Congress to gain federal construction $$
- Long Range Goal: Reduce flood risk along San Bruno and Colma Creeks and the South San Francisco shoreline
Vision for Oyster Point: Kilroy Realty
Vision for Oyster Point: Ensemble Hotel
Northern Area Part Two – Public Park & Recreation Lands

- Public Ferry Terminal
- Public Marina
- Public Fishing Pier
- Open Space

Requires Public Dollars, Grants and Donations
Plans to Improve “The Spit” Area – Phase I
Plans to Improve “The Spit” Area – Phase II
“The Spit” Area Final Vision
South San Francisco Guiding Principles

1. START NOW
2. Work with Urgency
3. Build Alliances and Partnerships
4. Focus on Solutions that work for South San Francisco
5. Get it done!
Thank You