

PREPARING FOR SEA LEVEL RISE IN SAN MATEO COUNTY



MIDCOAST COMMUNITY COUNCIL // **APRIL 11, 2018**

OVERVIEW

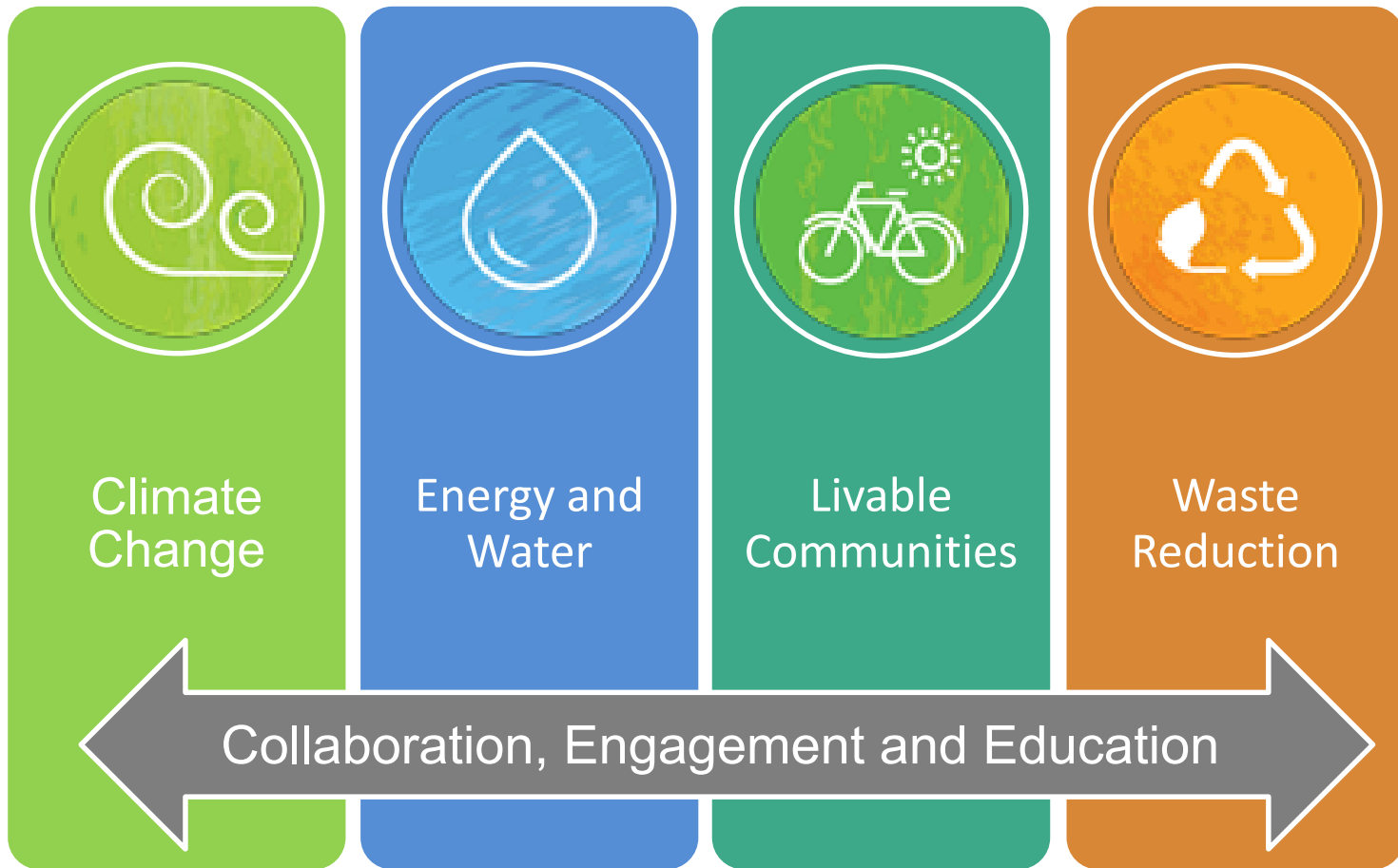
- Sea Change SMC Initiative
- Impacts to People and Places
- Current Projects and Planning Efforts
- Next Steps
- Get Involved

OFFICE OF SUSTAINABILITY

MISSION STATEMENT

The Office of Sustainability helps the County of San Mateo and its communities adapt to our changing environment by providing services and resources that inspire new ideas and solutions. We are committed to building a community that fulfills the needs of everyone today and in the future.

OFFICE OF SUSTAINABILITY



A THRIVING COMMUNITY



SEA CHANGE
SAN MATEO COUNTY



SEA CHANGE SMC - HISTORY

- **Collaborative:** local governments, stakeholder agencies and community groups
- **2013-2014:** Supervisor Pine held two convenings to begin to proactively address and prepare for sea level rise
- **2015:** Launched Sea Change SMC initiative and began the San Mateo County Sea Level Rise Vulnerability Assessment
- **March 2018:** Completed Vulnerability Assessment and launched Climate Change Preparedness next steps

PARTNERSHIPS & COLLABORATION



- San Mateo County
- Cities
- Special Districts
- State and Federal Agencies
- Business
- Community Groups
- Research Organizations
- Community-Based Organizations
- High Schools and Youth Groups
- Other Bay Area Counties and Cities
- Plus 1000's of Community Members

OUTREACH & EDUCATION

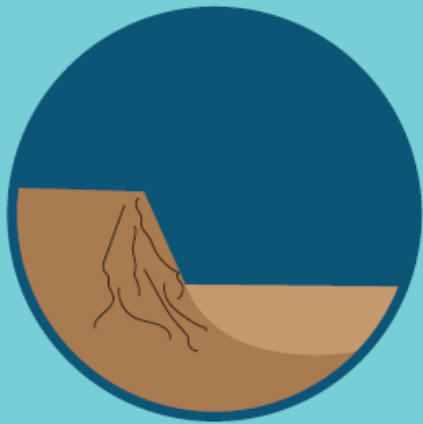


RISING SEAS

Rising Seas in California: An Update on Sea-Level Rise Science Report

Year	Full Range	Likely Range
2030	4 to 10 inches	4 – 6 inches
2050	7 to 23 inches	7 inches – 13 inches
2100	12 to 83 inches	12 – 40 inches
2100 high-end	10 feet	

FUTURE IMPACTS



Erosion

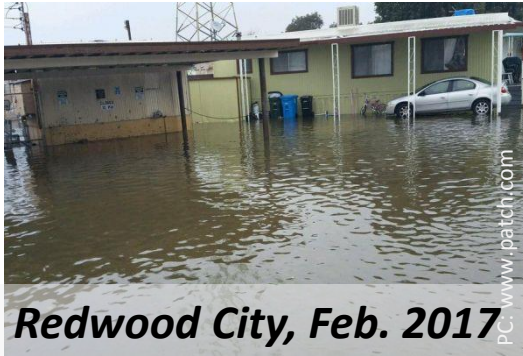


Permanent
inundation



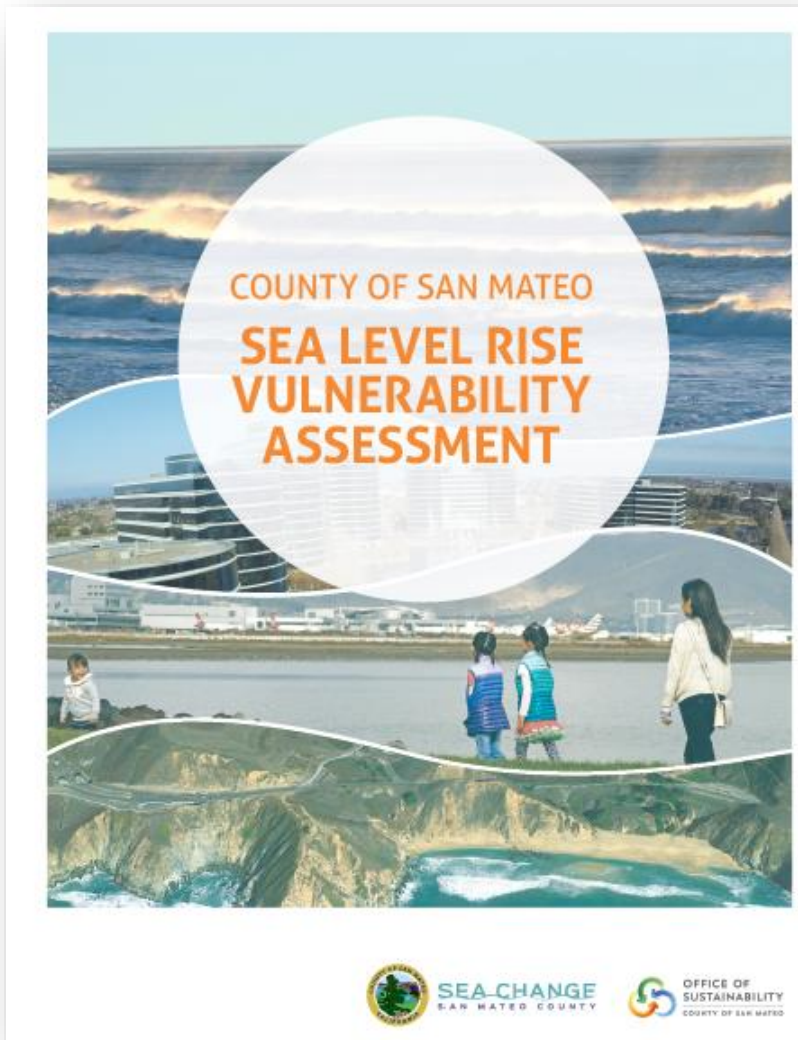
Temporary
flooding

RECENT FLOODING AND EROSION



San Mateo County Declares New Emergency in Wake of Damaging Storms

FINAL VULNERABILITY ASSESSMENT



**ASSESS
VULNERABILITY**



**PROVIDE
ACTIONABLE
RESULTS**



BUILD AWARENESS



**FACILITATE
COLLABORATION**

VULNERABILITY AND IMPACTS



RISK TO PLACES AND ASSETS



ENERGY
INFRASTRUCTURE

FLOOD
PROTECTION
INFRASTRUCTURE

NATURAL
ASSETS



LANDFILLS AND
SOLID WASTE
FACILITIES



TRANSPORTATION
SYSTEMS

WASTEWATER
AND
STORMWATER

COMMUNITY
SERVICES AND
CRITICAL FACILITIES

PARKS AND
BEACHES

30 CASE STUDIES

Sample Case Studies:

- Mirada Rd
- Surfers's Beach
- Marine Reserve
- Mid-Coastside Wastewater Treatment Plant



ASSET VULNERABILITY PROFILE | SAN MATEO COUNTY SEA LEVEL RISE VULNERABILITY ASSESSMENT

3. STATE ROUTE 1 at Surfer's Beach

California Department of Transportation (Caltrans)

VULNERABILITY SUMMARY

State Route 1 (SR1) at Surfer's Beach is **highly vulnerable** to sea level rise. The section of road offers access to residential communities and recreational areas, serving approximately 28,000 vehicles per day. It is currently exposed to erosive sea level rise levels, that will only grow more severe with sea level rise. The highway's level of service is low and any inundation caused by waves. The section of the highway has low adaptive capacity due to the open coast and the lack of nearby alternatives for the level of traffic it supports. The consequences of any or permanent loss of the highway are high.

EXPOSURE	ADAPTIVE CAPACITY	CONSEQUENCES
High	Low	High

CONTEXT

Cabrillo Highway (SR1) | El Granada

Location: State Route 1 (SR1) at Surfer's Beach, primarily used for bicycle travel. The road provides access to the beach, Surfer's Point, and the El Granada area. The road is used by approximately 28,000 cars per day and is a major tourist destination. The road is also used for residential and commercial purposes. The road is a major coastal state park. The road is a major coastal state park. The road is a major coastal state park.



The map shows the location of El Granada in San Mateo County, California. It is situated on the coast, between San Francisco Bay to the north and the Pacific Ocean to the south. The map also shows other nearby locations such as Daly City, San Francisco, San Mateo, Palo Alto, and Mountain View.

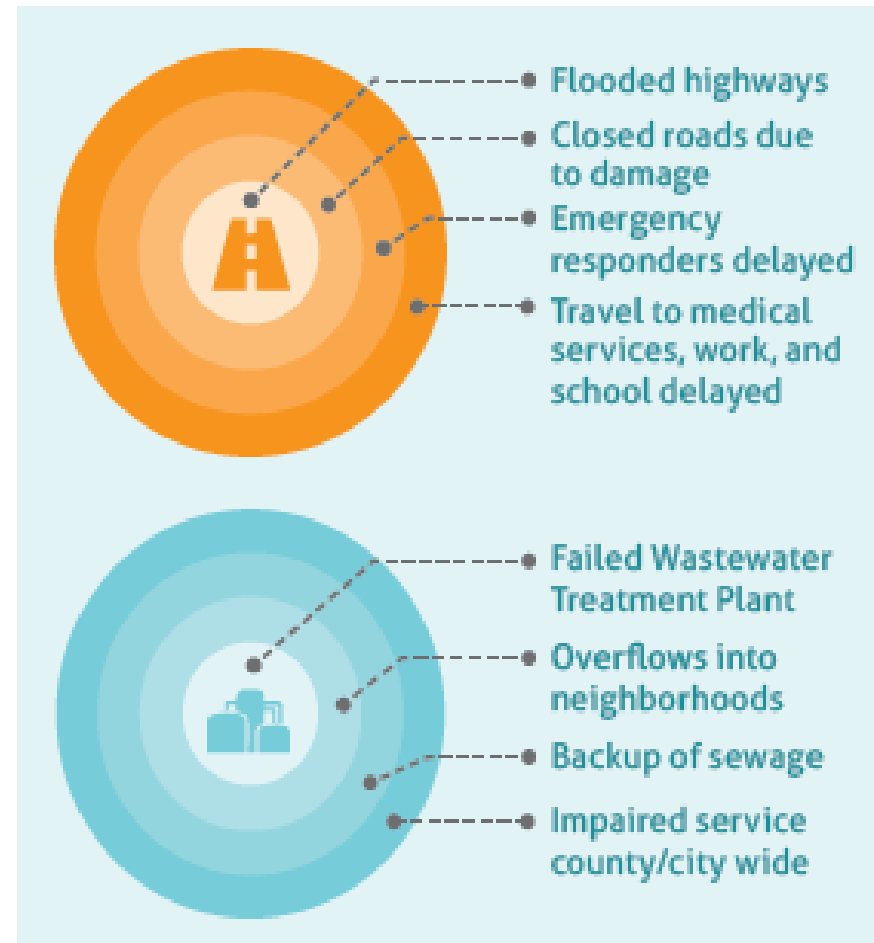
IMPACTS TO MIDCOAST COMMUNITY

- High vulnerability from erosion
- Natural assets could be affected
- People and businesses at risk

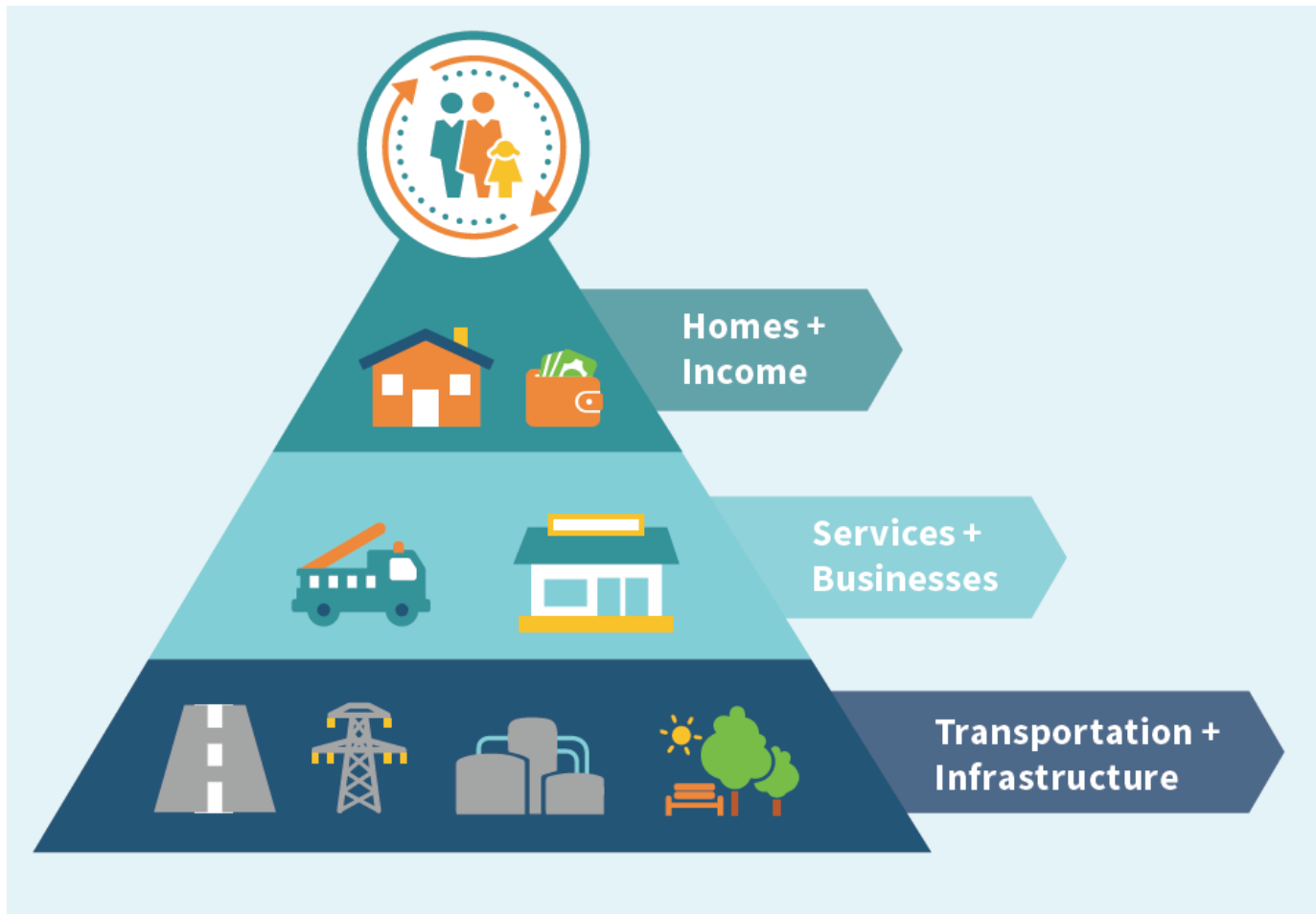


RISING SEAS AFFECTS US ALL

- Regional and community wide dependency on networked infrastructure
- Community-level risks and impacts



RISING SEAS AFFECTS US ALL



MENTAL AND PHYSICAL HEALTH AND WELL BEING

PREPARE FOR SEA LEVEL RISE



PREPARE FOR SEA LEVEL RISE

- Action at multiple geographic scales



Assess Risks

Elevate or adapt structures

Emergency preparedness

New standards and ordinances

Nature-based solutions and habitat restoration

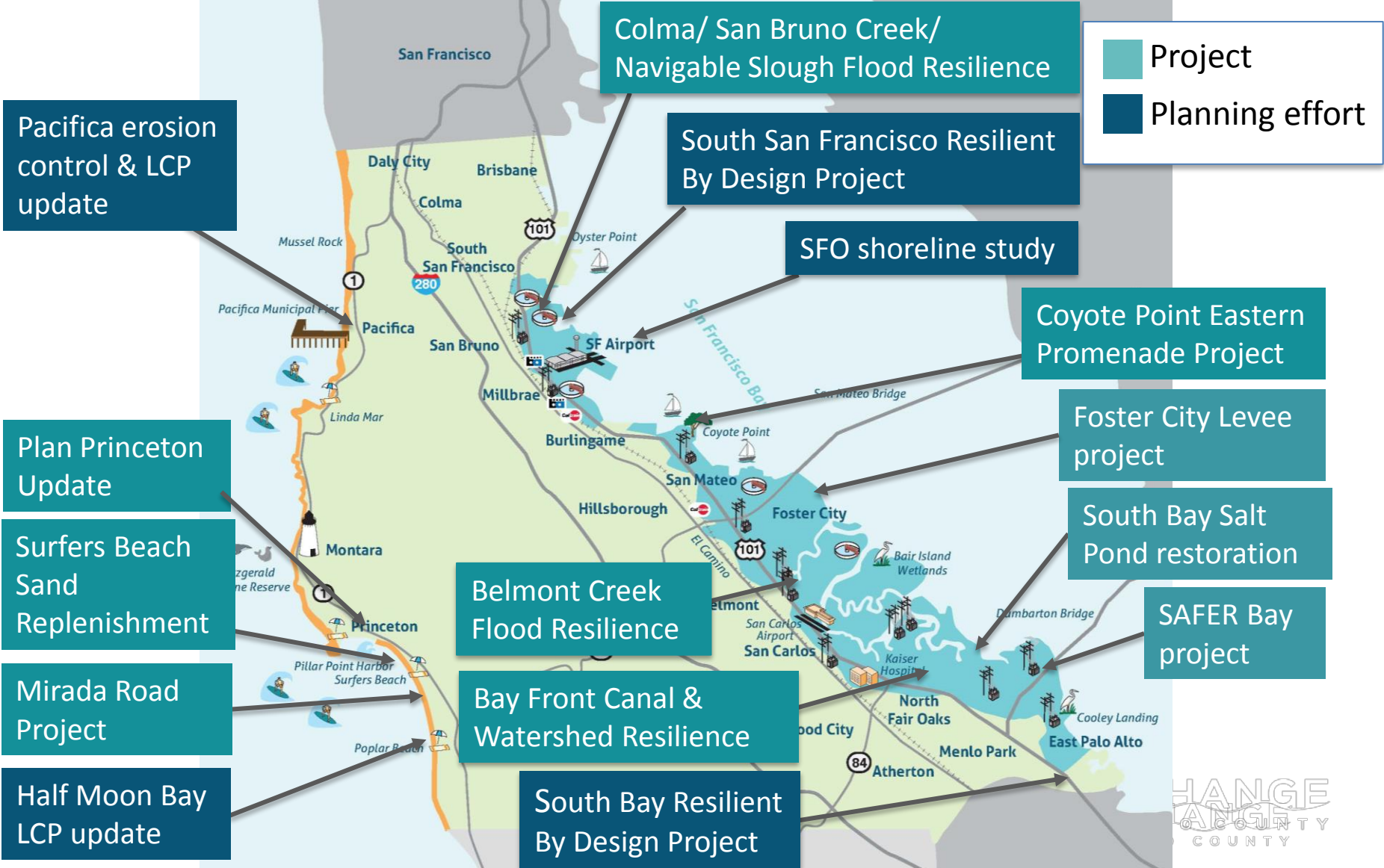
New design standards and codes

Relocate assets inland

Menu of regional adaptation strategies

Wetland or regional shoreline protection projects

CURRENT EFFORTS



PREPARING FOR THE FUTURE

Assess

- South Coast and key County Facilities vulnerability
- Wetlands assessment
- Other Climate Change Impacts
- Assistance with City/County efforts

Plan

- Framework for local action on preparedness and adaptation
- Menu of adaptation strategies and Tradeoffs
- Policy Template and Toolkit

Implement/Engage

- Update plans and policies
- Youth Exploring Sea Level Rise Science
- Presentations and outreach events
- Pilot Project concepts and funding strategies

GET INVOLVED



- Residents



- Non-profits and
Businesses



- Public Agencies



- Elected Officials

GET INVOLVED - RESIDENTS

- **Opt up** to 100% renewable energy with Peninsula Clean Energy
<https://www.peninsulacleanenergy.com/>
- **Take public transit** or ride a bike at least once a week



GET INVOLVED - RESIDENTS

- **Attend future Sea Change** public engagement events – Shrinking Shores (www.seachangesmc.com)
- **Help organize** presentations or events to raise awareness in your community



GET INVOLVED - RESIDENTS

- **Take photos** of areas that are flooded and post to CA King Tides Flickr page or send to Sea Change SMC

www.seachangesmc.com/current-efforts/san-mateo-county-king-tides/



GET INVOLVED - RESIDENTS

- Participate in your city's community emergency response team.
 - <https://smccacert.samariteam.com/>
- Share information about flooding and sea level rise preparedness with your neighbors



GET INVOLVED - RESIDENTS

- Participate in planning and adaptation efforts in your community
 - Local Coastal Program Updates
 - General Plan Updates
 - Climate Action Plan Updates



GET INVOLVED – PUBLIC AGENCY

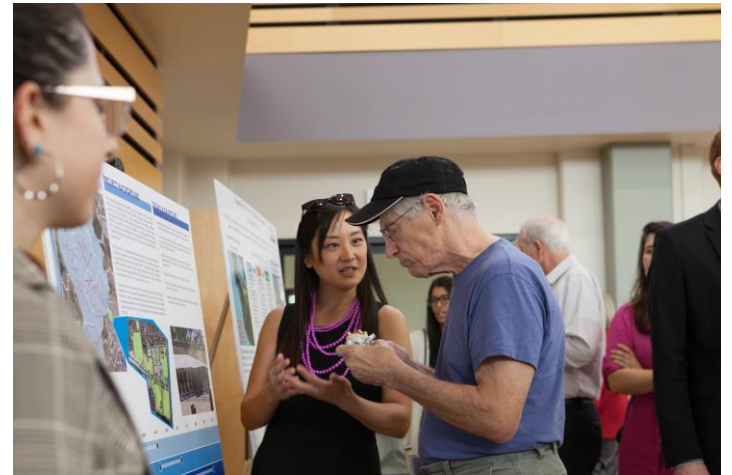
- Complete local vulnerability assessments
- Develop plans to adapt facilities



Adaptive Management Cycle

GET INVOLVED – PUBLIC AGENCY

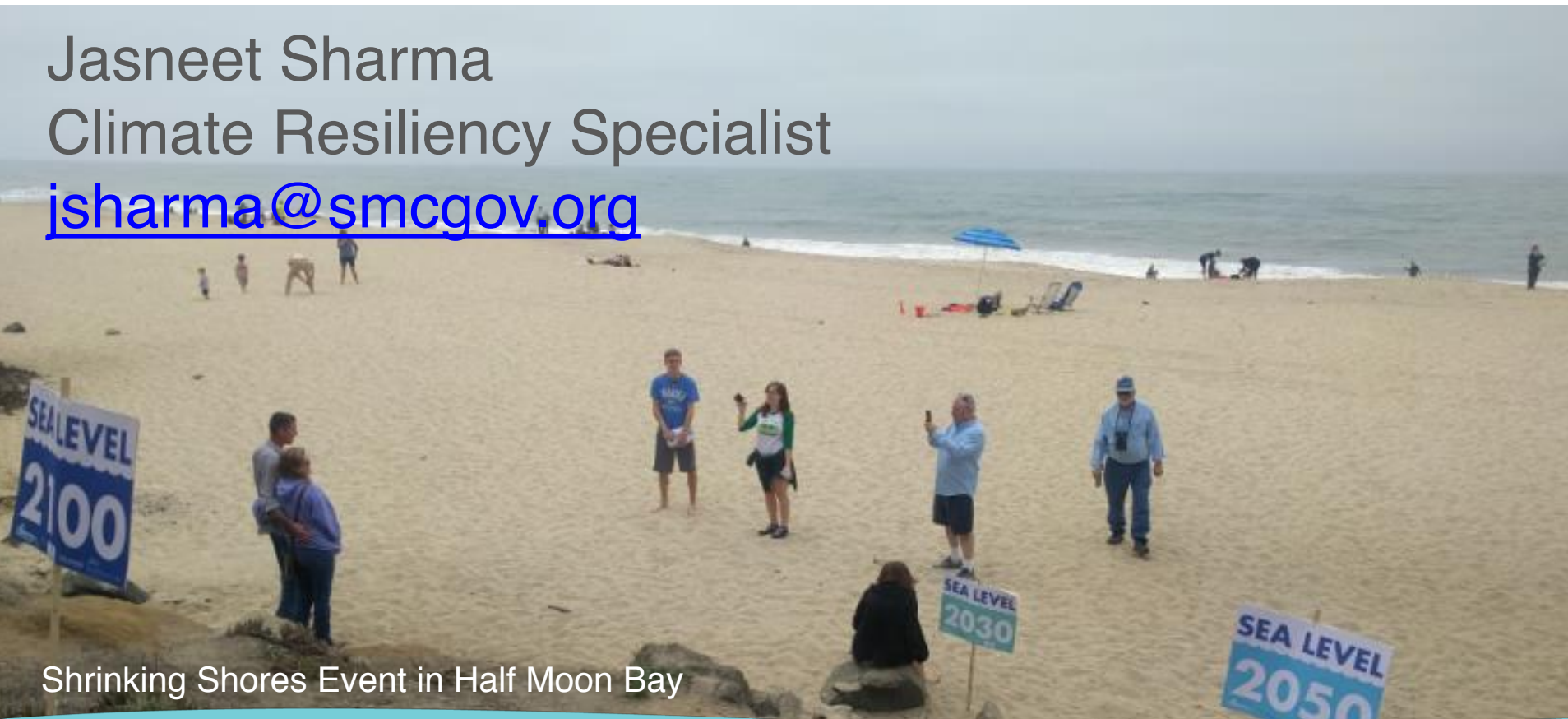
- Integrate adaptation into plans, policies and operations
- Collaborate on shoreline scale protection measures
- Participate in countywide climate collaborative efforts



THANK YOU!

Visit www.seachangesmc.com to learn more!

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Shrinking Shores Event in Half Moon Bay