

# San Leandro Bay/Oakland- Alameda Estuary Adaptation Working Group

July 2023

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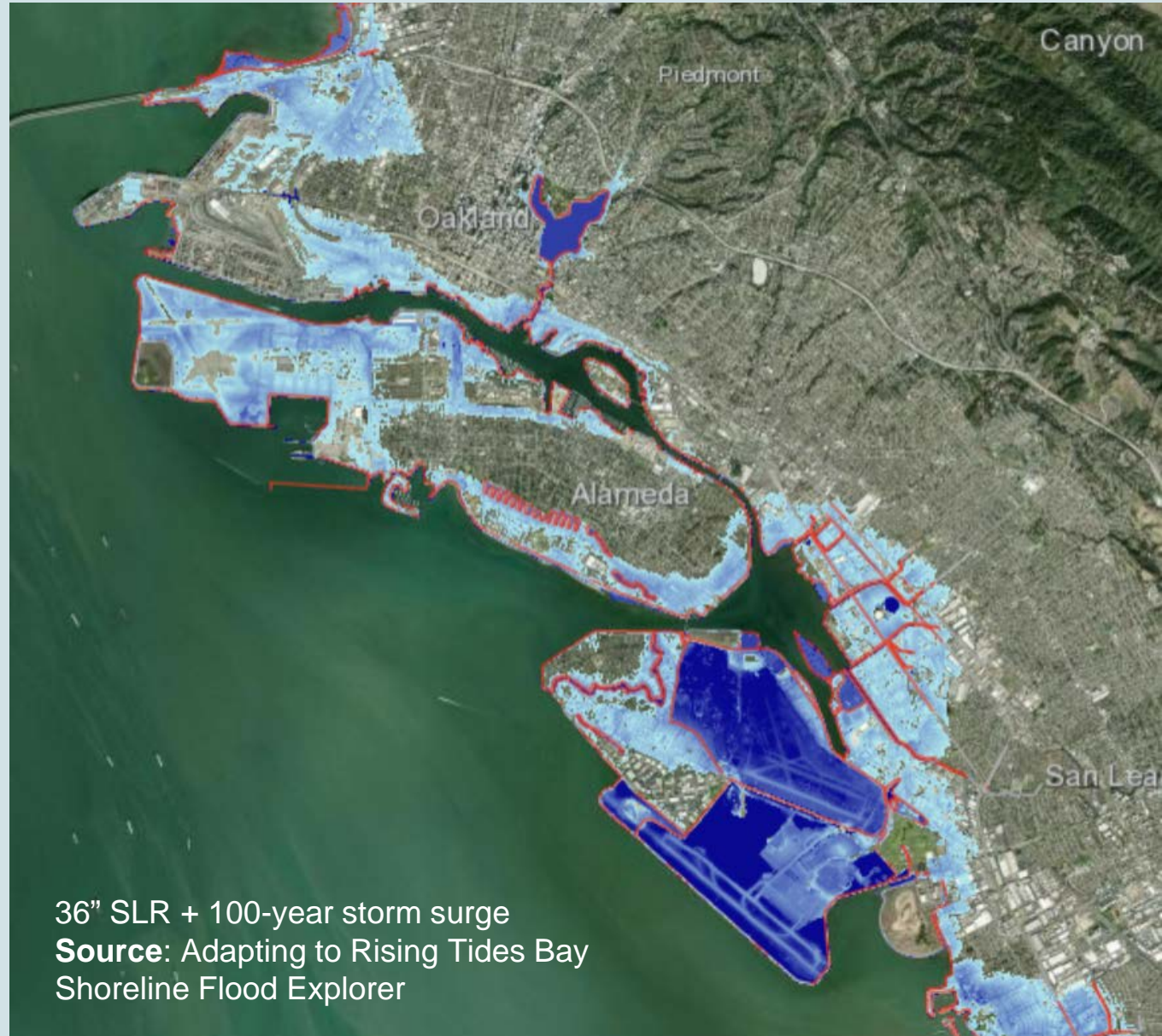


**San Leandro Bay  
Oakland-Alameda Estuary  
Adaptation Working Group**

# Background: Sea Level Rise

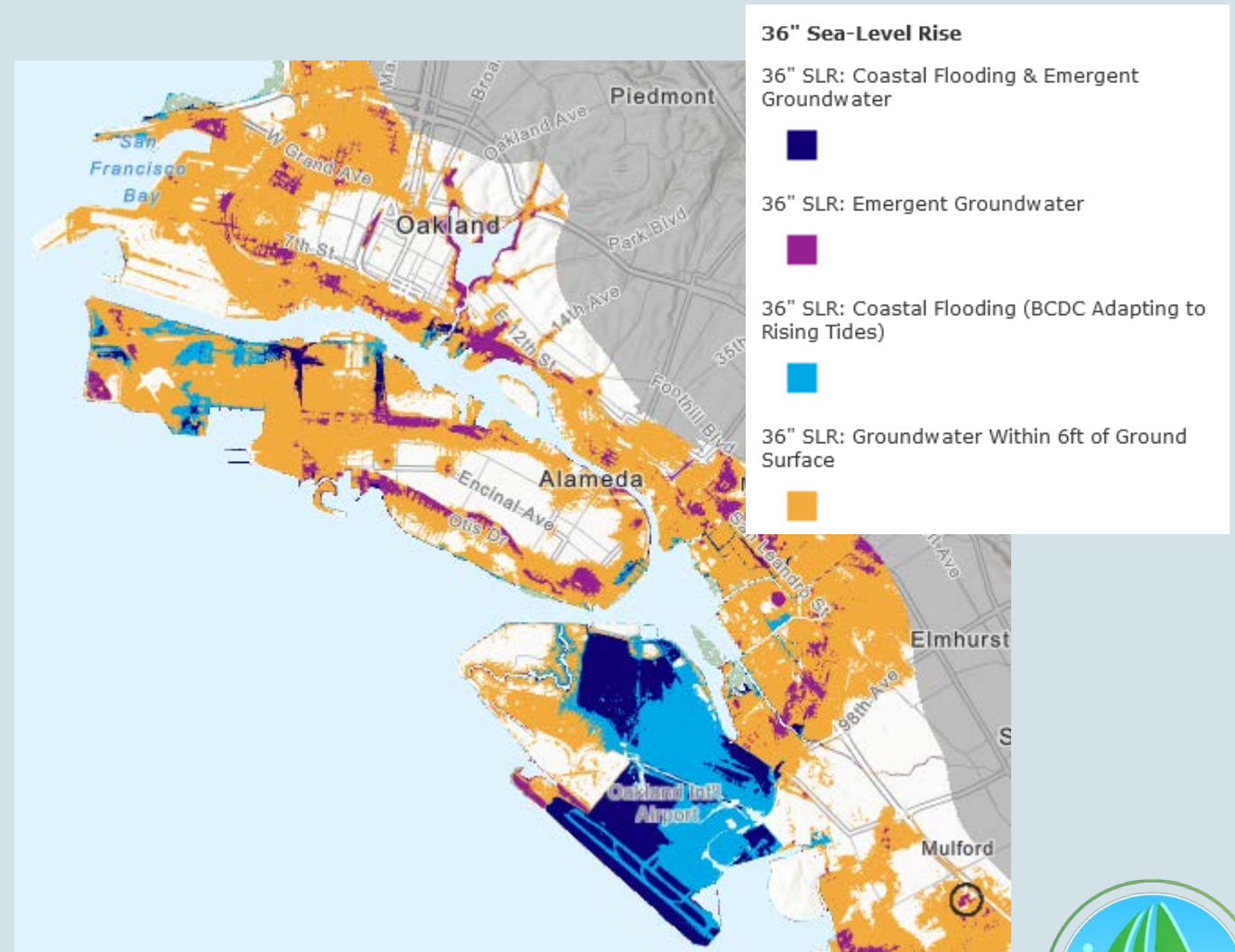
2/3 of California's sea level rise impacts will be felt in the Bay Area

- **Already seen:**  
+8 inches SLR
- **Projected by 2050:**  
+12 to 32 inches
- **End of century:**  
10+ feet?



# Background: Groundwater Rise

- Infiltration & corrosion of underground infrastructure
- Damage to roads and structures
- Flooding from multiple sources including emergent groundwater
- Contaminated sites
- Increased liquefaction risk



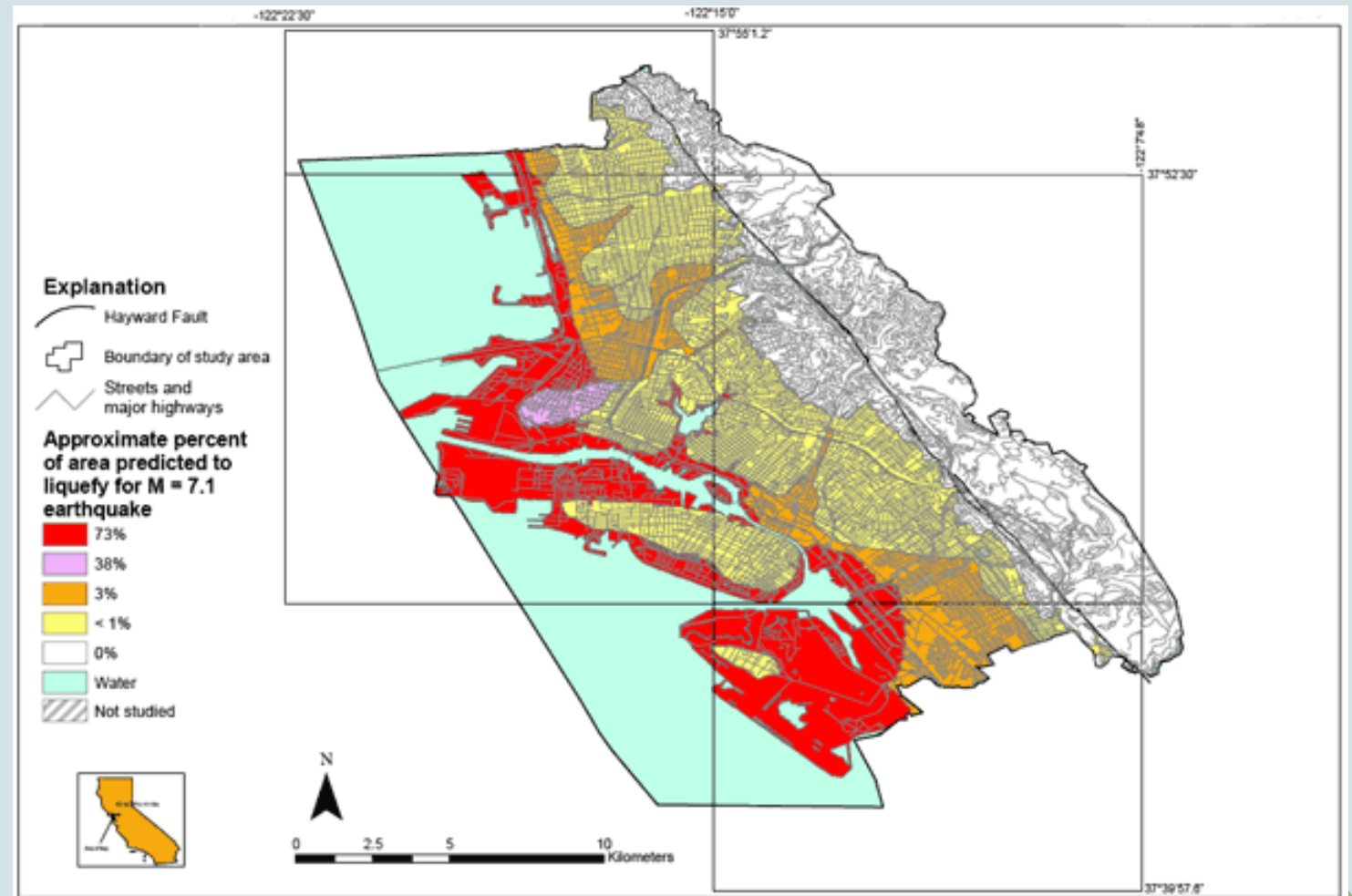
Source: SFEI Shallow groundwater response to sea-level rise





# Background: Liquefaction

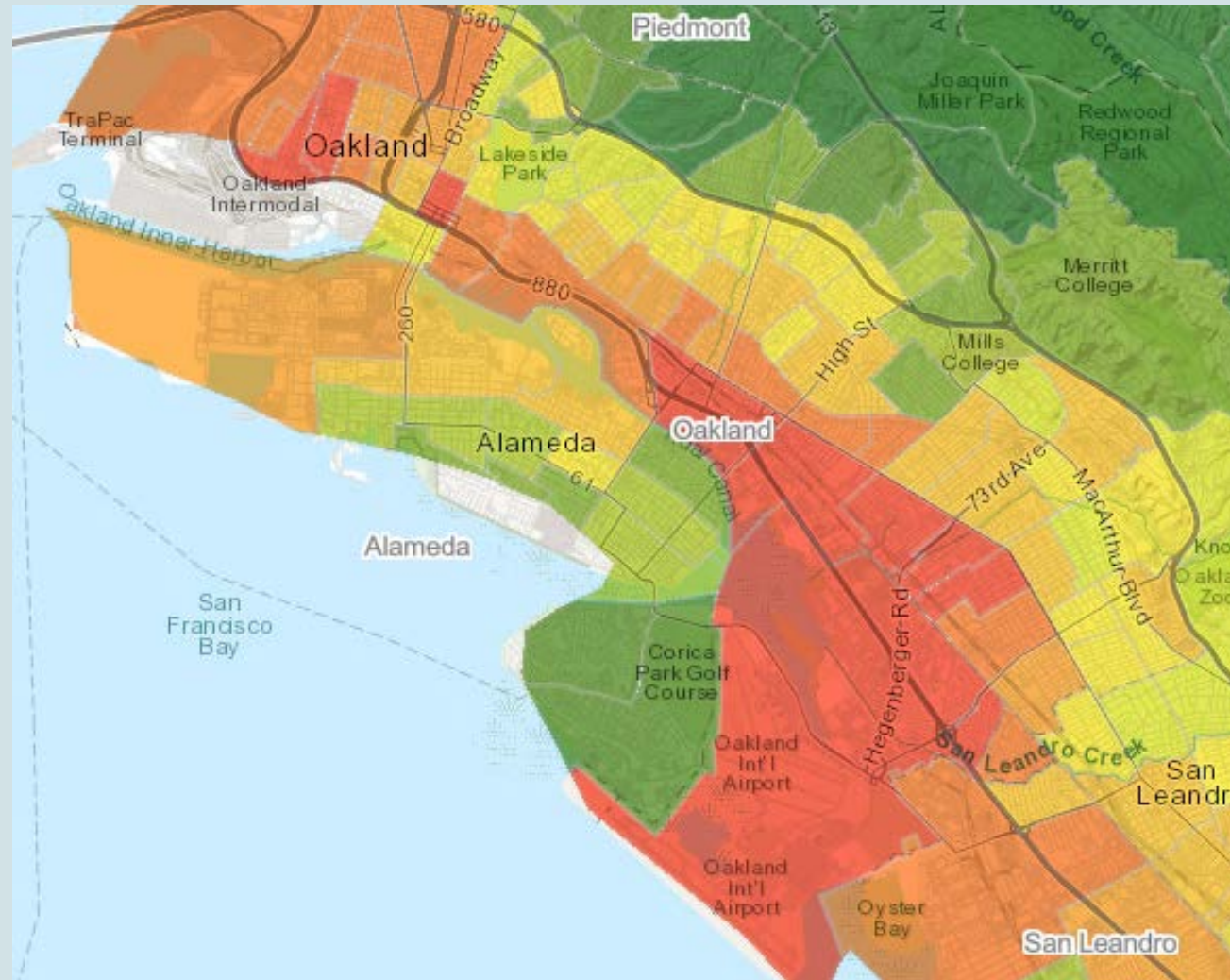
- Areas most at risk of liquefaction are same areas at risk of rising groundwater
- Rising groundwater may increase risk of liquefaction



Shaking Hazard Map for Northwestern Alameda County  
Source: USGS [Open-file Report 02-296](#)



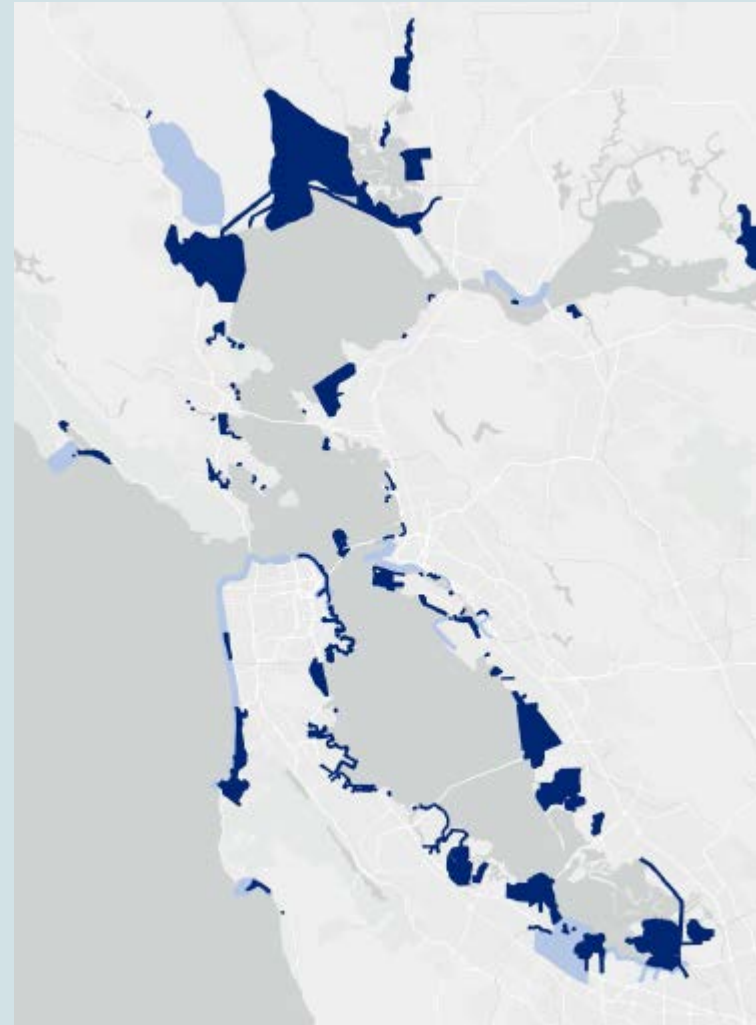
# Background: Vulnerable Communities



# Background: Regional Problem & Solutions

- Flooding knows no boundaries
- Communities: Most impacted and fewest resources
- Patchwork of actions
- Inconsistent science
- Competition not collaboration for funding
- Loss of wetlands
- Difficult to measure collective progress

Source: BCDC Sea Level Rise Adaptation Funding and Investment Framework

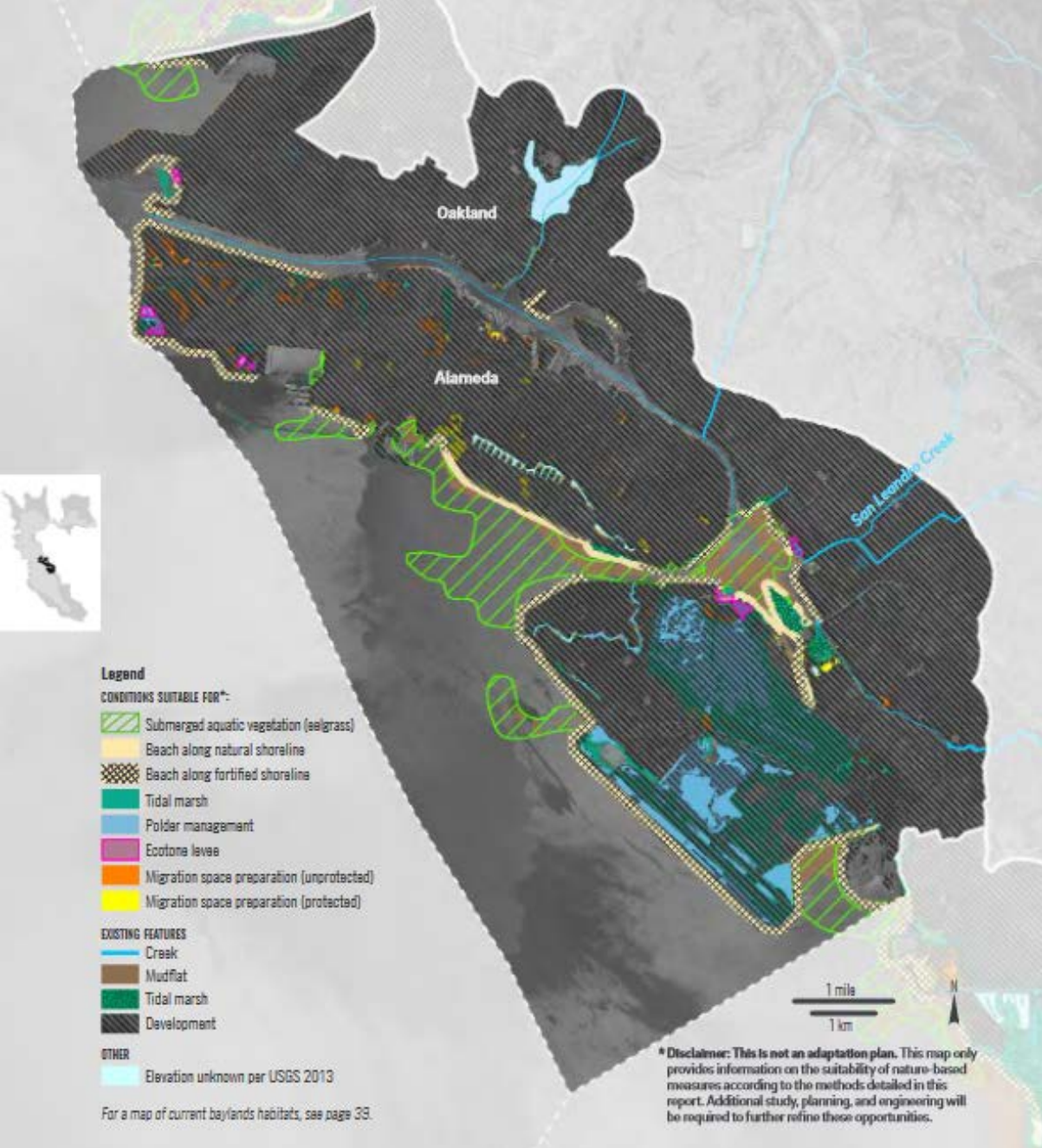


## Local Adaptation Projects and Study Areas

- Local Adaptation Projects
- Local Study Areas







**Working Group** coordinates San Leandro Bay/Oakland-Alameda Estuary flood and adaptation projects to protect and restore water quality, habitat, recreation and community resilience.



**San Leandro Bay  
Oakland-Alameda Estuary  
Adaptation Working Group**

San Leandro operational landscape unit  
(one of 30 OLUs in Bay Area)

# Working Group: Objectives

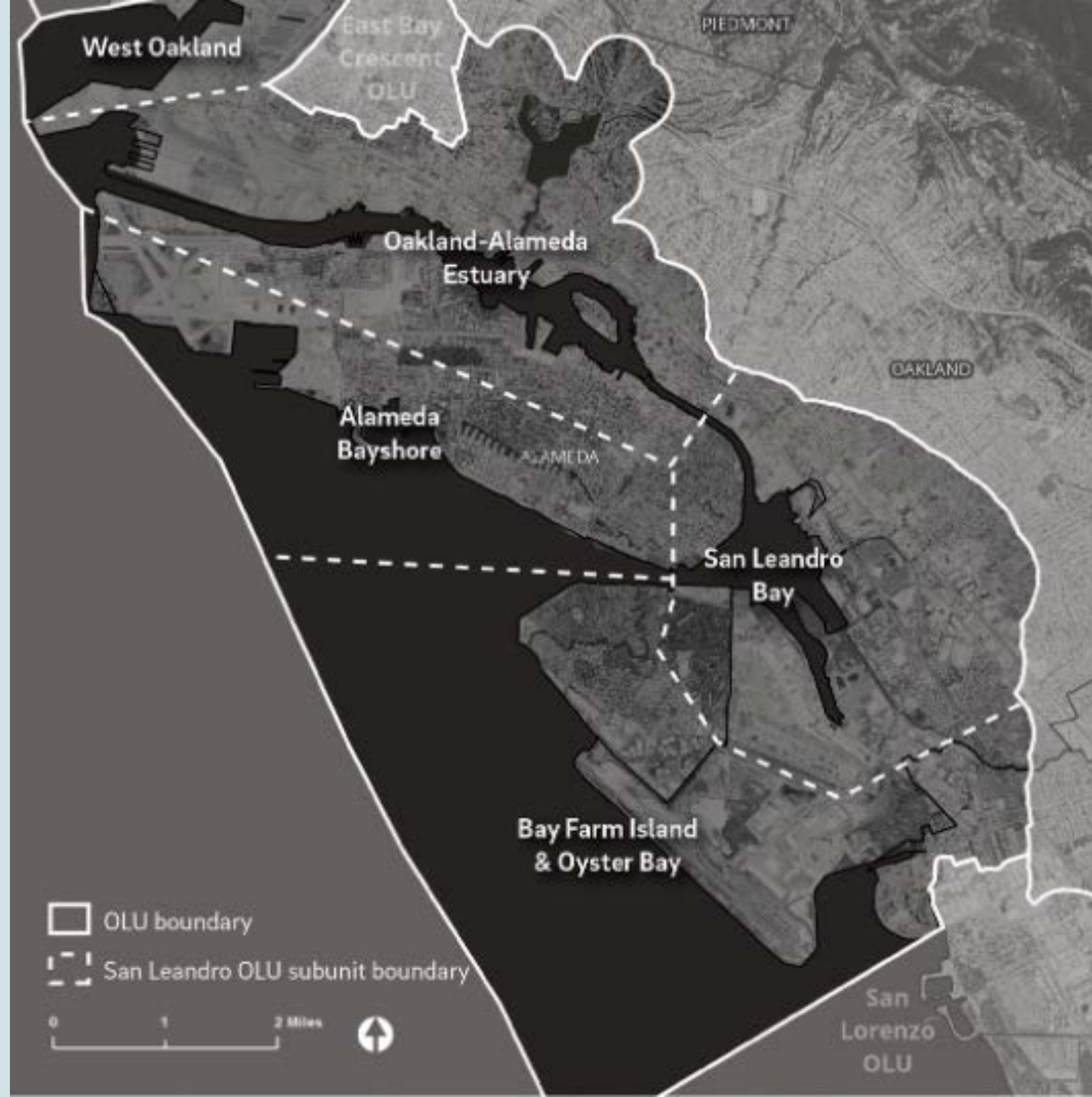
- **Prepare** for flooding, sea level and groundwater rise
- **Prioritize** habitat, nature-based solutions and green infrastructure
- **Consider** sediment management
- **Improve** recreational access and air quality
- **Provide** benefit to residents and vulnerable communities
- **Contribute** to economic opportunities
- **Advocate** for training and skill development for underserved communities
- **Serve** as example on sub-regional adaptation



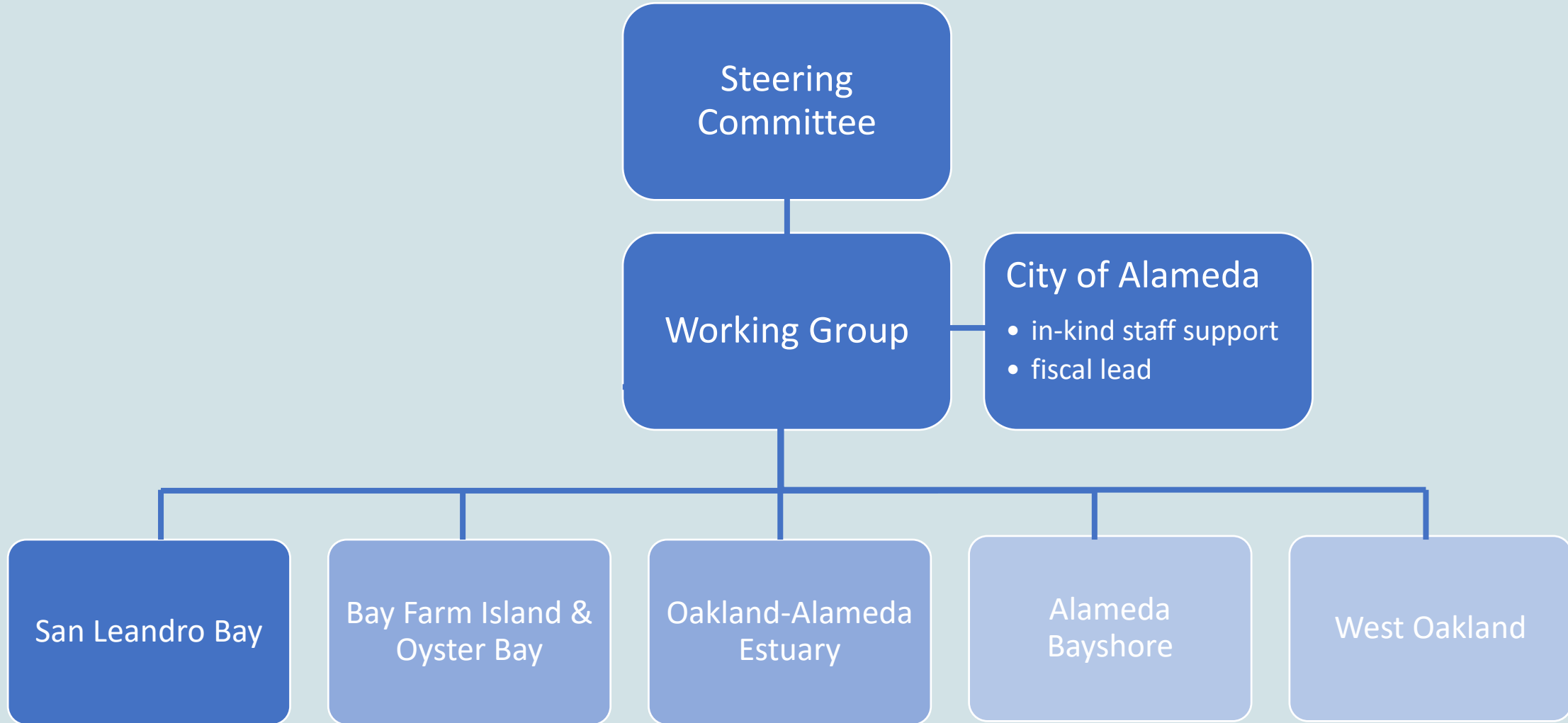


# Working Group: Focus Areas

- **West Oakland** – wave exposed with seawalls, quays and subtidal habitat
- **Oakland-Alameda Estuary** – highly urbanized dominated by seawalls
- **San Leandro Bay** – small embayment protected from wave action, patches of marsh habitat and wide mudflats
- **Alameda Bayshore** – wave-exposed with beaches
- **Bay Farm Island & Oyster Bay** – high wave action surrounded by deep subtidal habitat



# Working Group: Organizational Structure



# Working Group: Steering Committee

- Caltrans
- City of Alameda
- City of Oakland
- Community Action for a Sustainable Alameda
- East Bay Regional Park District
- Greenbelt Alliance
- Hood Planner/East Oakland Neighborhood Initiative
- Port of Oakland/Oakland International Airport
- San Francisco Bay Regional Water Quality Control Board
- Sogorea Te' Land Trust
- West Oakland Environmental Indicators Project



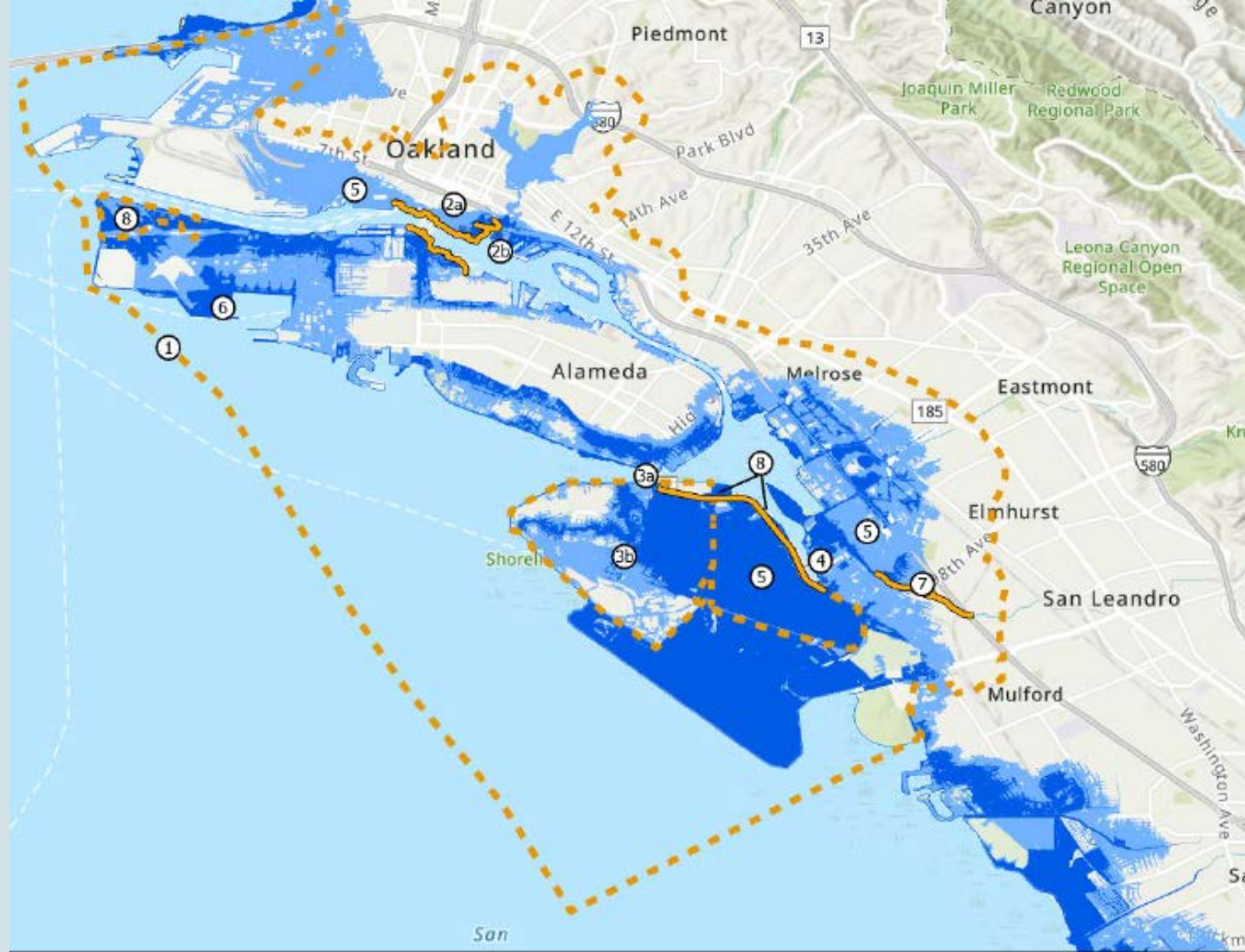


# Working Group: Activities To Date

- **Met** quarterly since 2021 (with 27-47 participants)
- **Formed** steering committee and San Leandro Bay group
- **Adopted** charter and objectives
- **Participated** in fieldtrips: MLK Jr. park and airport
- **Created** logo by Alameda High School students







## Sea Level Rise Adaptation Projects

- |  |  |
|--|--|
| ① Sub-regional Long-term Adaptation Plan           | ④ Caltrans Doolittle Drive/SR-61 Sea Level Rise Adaptation |
| ②a Oakland-Alameda Estuary Adaptation Project      | ⑤ Port of Oakland Vulnerability Assessment and Plan        |
| ②b Estuary Park Renovation and Expansion Project   | ⑥ De-Pave Park Master Plan                                 |
| ③a Bay Farm Island Adaptation Project (short-term) | ⑦ San Leandro Creek Trail Restoration Project              |
| ③b Bay Farm Island Adaptation Project (long-term)  | ⑧ East Bay Regional Park District SF Bay Trail Gap Closure |



# Working Group: Funded Projects (2023-2025)

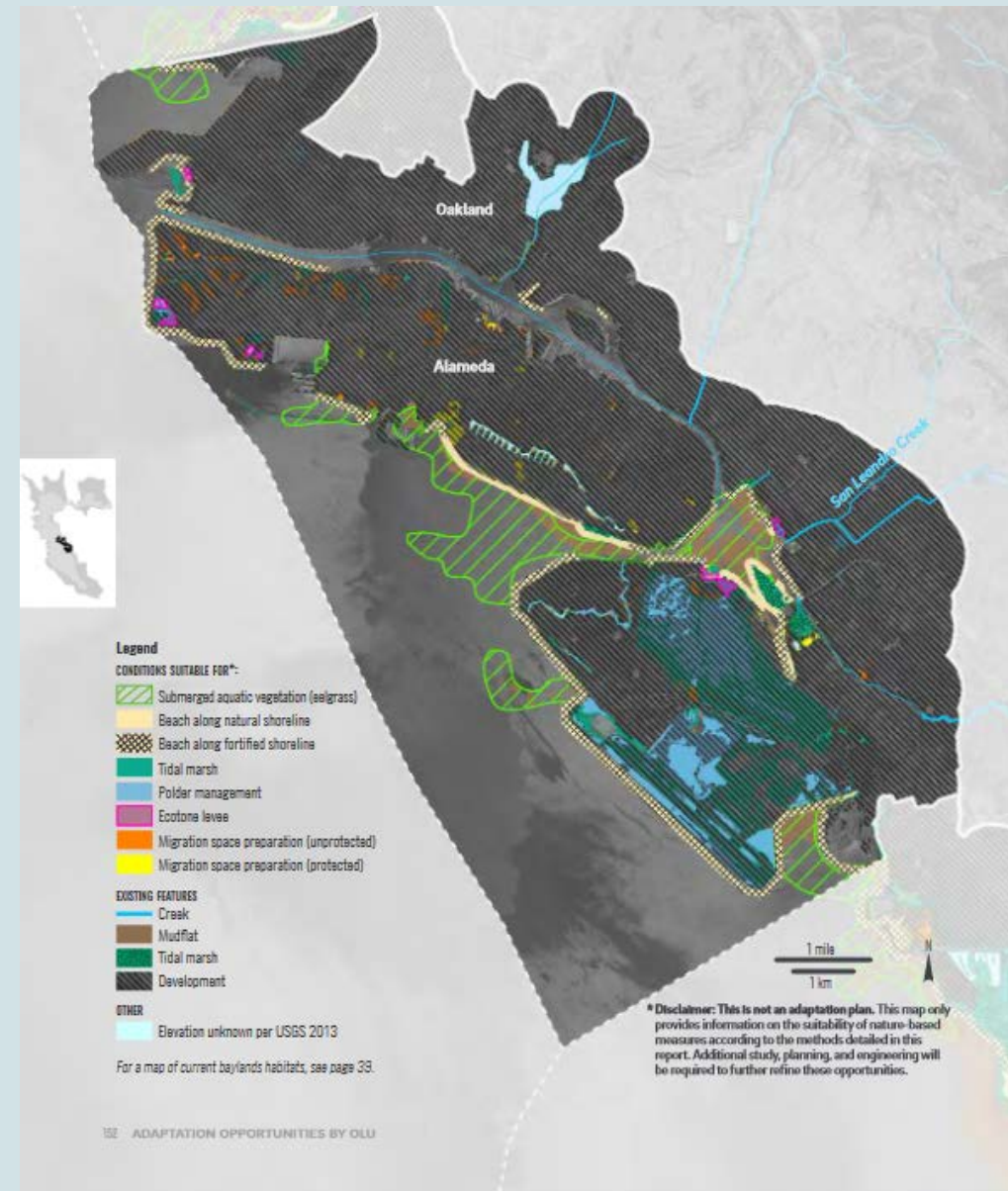
Project Description	Funding	Area
<b>1. Long-term Adaptation Plan</b> – Webpage: <a href="http://www.alamedaca.gov/AdaptationLongTermPlan">www.alamedaca.gov/AdaptationLongTermPlan</a> (Terminates: October 31, 2025)	\$300,000 SFEP \$540,000 NFWF = \$840,000 (federal)	Entire operational landscape unit (Bay Bridge to Oyster Bay in San Leandro)
<b>2a. Oakland-Alameda Estuary Adaptation Project</b> – Webpage: <a href="http://www.alamedaca.gov/AdaptationEstuary">www.alamedaca.gov/AdaptationEstuary</a> (Terminates: February 28, 2025)	\$425,000 Caltrans \$75,000 Alameda = \$500,000 (state)	Oakland-Alameda Estuary
<b>3. Bay Farm Island Adaptation Project</b> – Webpage: <a href="http://www.alamedaca.gov/AdaptationBayFarmIsland">www.alamedaca.gov/AdaptationBayFarmIsland</a> (Terminates: September 29, 2025)	\$1.5 million FEMA \$530,000 Alameda = \$2,030,000 (federal)	Bay Farm Island & Oyster Bay
<b>Total Funding</b>	<b>\$3.37 million</b>	





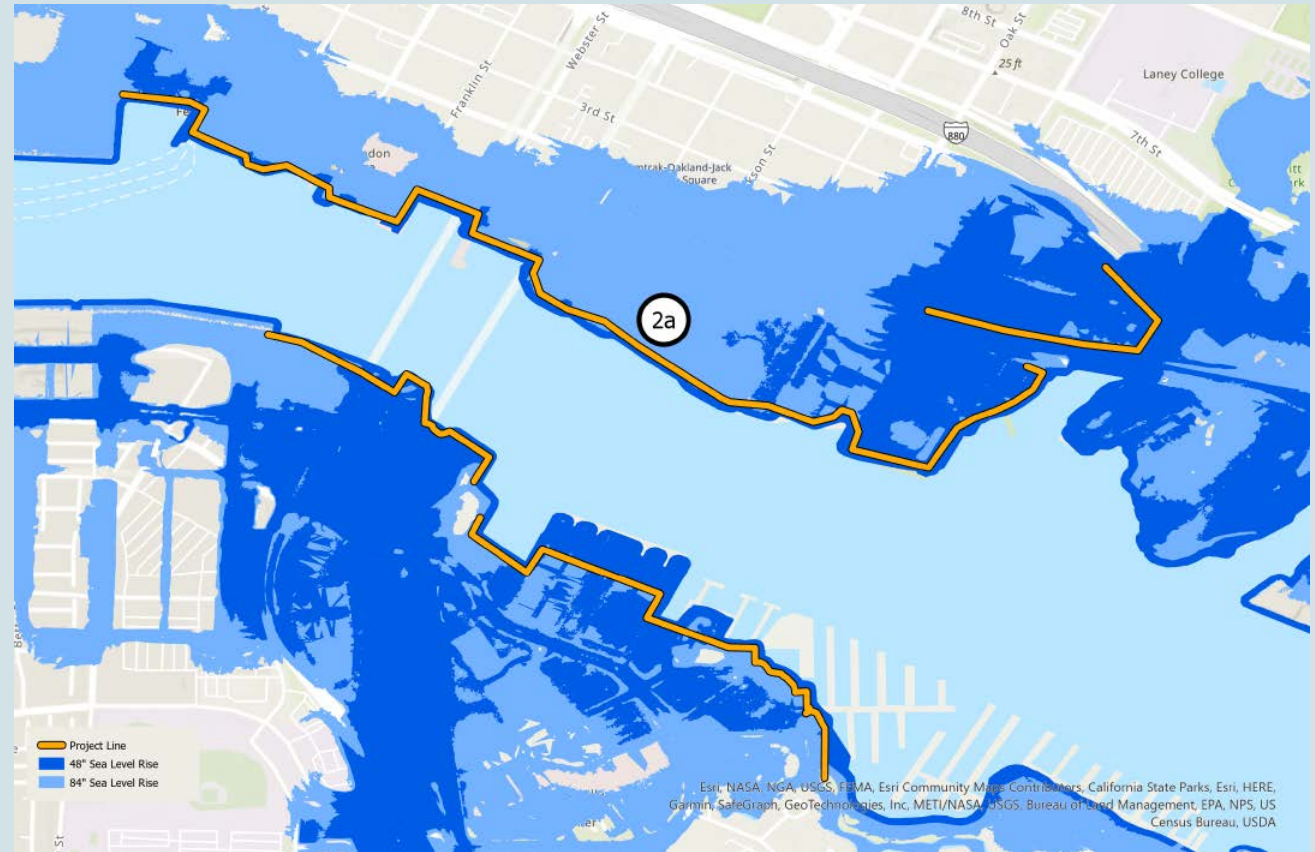
# Long-term Adaptation Plan

- **Purpose:** Identify actions needed over time as the shoreline changes to protect communities
- **Tasks:**
  - Agency coordination
    - Sub-regional agencies
    - BCDC's Regional Shoreline Adaptation Plan
  - Governance structure analysis and community engagement
  - Draft and final long-term plan
- **Budget:** \$840,000 (\$300,000 SFEP & \$540,000 NFWF)



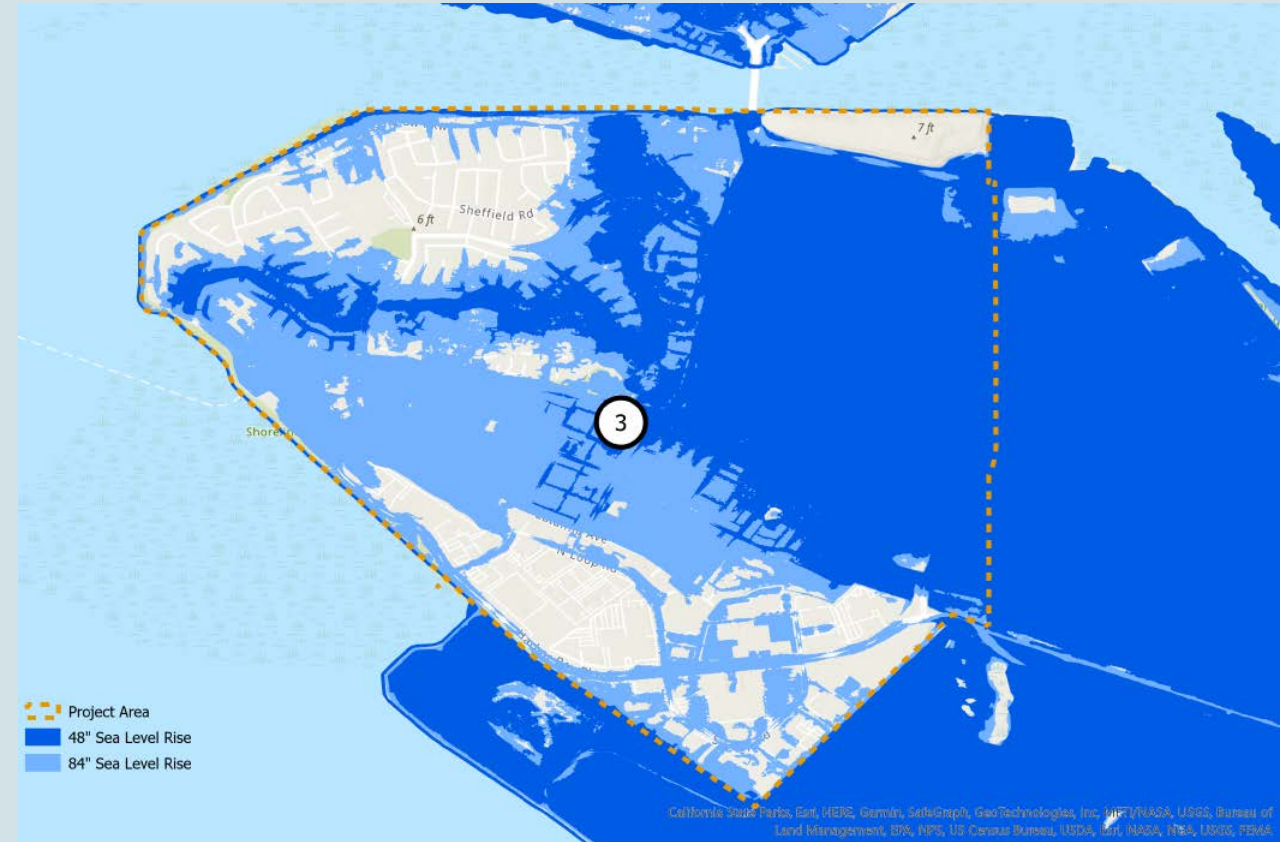
# Oakland-Alameda Estuary Adaptation Project

- **Purpose:** Develop adaptation design concept to protect Jack London District/Oakland Chinatown and Alameda's northern shoreline/Posey-Webster Tubes
- **Tasks:**
  - Structural/nature-based alternatives
  - Public outreach
  - Draft and final concept (10% design) with cost estimates
- **Budget:** \$500,000 (\$425,000 Caltrans & \$75,000 Alameda)



# Bay Farm Island Adaptation Project

- **Purpose:** Develop long-term plan for entire Bay Farm Island and designs for short-term fixes at northern waterfront low spots.
- **Tasks:**
  - Feasibility alternatives and design
  - Public outreach
  - Northern waterfront design
  - Coordinate with permitting agencies
  - Draft and final long-term concept
- **Budget:** \$2 million (\$1.5 million FEMA & \$530,000 Alameda)





# Community Partners

- **Role:** Lead community engagement process for three funded adaptation projects
- **Budget:** \$323,000
- **Selected** by Steering Committee:
  - Greenbelt Alliance (with REAP Climate Center, Hood Planning Group, Ninth Root, Sogorea Té Land Trust)
  - Community Action for a Sustainable Alameda (CASA)



# Consultants

- **Role:** Lead technical analysis for three funded adaptation projects
- **Budget:** \$2,767,000
- **Selected** by Steering Committee:
  - CMG Landscape Architecture (prime)
    - Pathways Climate Institute
    - Moffatt & Nichol
    - ESA
    - Schaaf & Wheeler
    - Earth Mechanics, Inc.
    - NHA Advisors



# Next Steps

- Enter into contracts with Community Partners
- Enter into contract with SFEI as Scientific Advisor
- City Council request approval of Consultant: Sept 2023
- Project kick-off: late 2023



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Learn more: [www.alamedaca.gov/AdaptationWorkingGroup](http://www.alamedaca.gov/AdaptationWorkingGroup)

