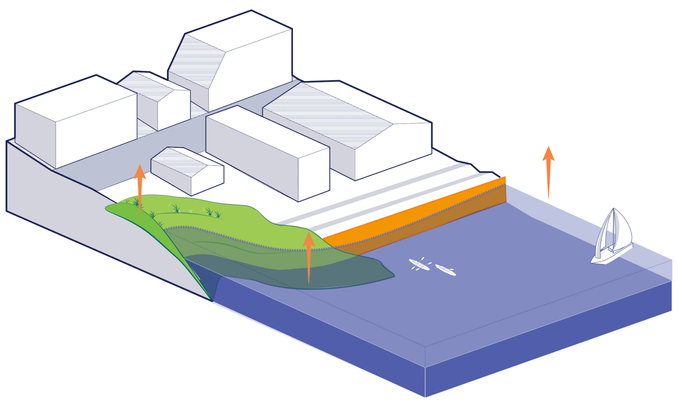
SUBREGIONAL ADAPTATION PLANNING

Oakland Alameda Adaptation Committee (OAAC ADAPT)

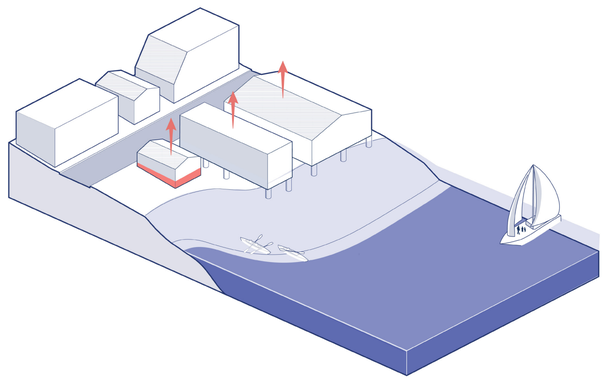
Approaches to Adaptation

Traditional Approaches



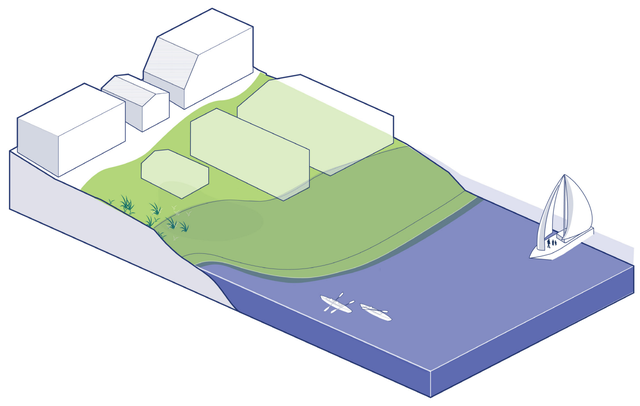
Protect

Keep coastal water out, stay in place



Accomodate

Let coastal water in, stay in place



Retreat or Avoid

Move out of the area over time

Port of San Francisco Waterfront Resilience Program Port Commission Meeting June 2022
https://sfport.com/files/2022-07/WRP%20Update%20on%20Adaptation%20Strategies%20Process%20to%20Port%20Commission%20-%206.14.22.pdf

Planning Principles

- Pathways Approach
- Critical Infrastructure & Services
- Multi-benefit
- Equity & Environmental Justice
- Transportation & Transit
- Community Health & Wellbeing
- Governance, Collaboration, & Finance
- Ecosystem Health & Resilience
- Housing, Development, & Land Use
- Groundwater & Shoreline Contamination
- Public Access, Recreation, & Urban Design

Spectrum of Change

Resistance

Maintain current or historical physical and social conditions

Resilience

Improve capacity to "bounce back" or "bounce forward" after a disturbance

Transformation

Center social systems in adaptation planning

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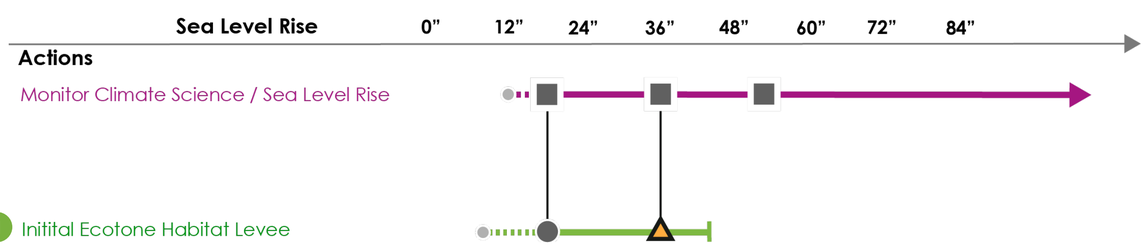
ADAPTATION PATHWAYS APPROACH

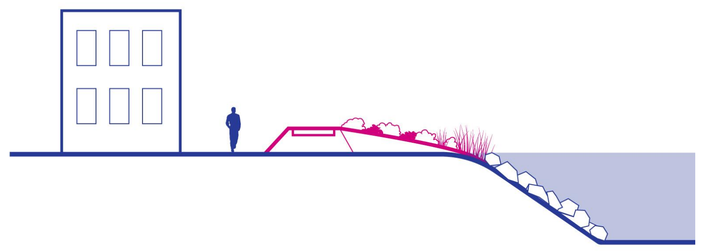
Adaptation pathways help us plan under uncertainty. We want to make decisions that **benefit people and ecosystem today** while maintaining or **expanding adaptation options** for future decision-makers and **future generations**.

Adaptation pathways allow us to make **incremental adaptation decisions** and actions over time

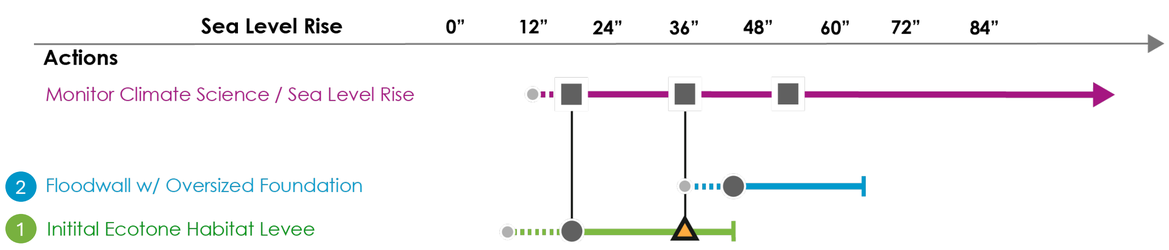
- Developing a **long-term plan** that considers the **higher end projections** of what is **plausible** in the future
- Identifying **near-term actions** that address both **existing risks** and **likely projections** of the future
- Identifying **triggers** and/or **thresholds** for **additional actions** over time
- Identifying **decision points**, or actions that **change** the **adaptation trajectory**

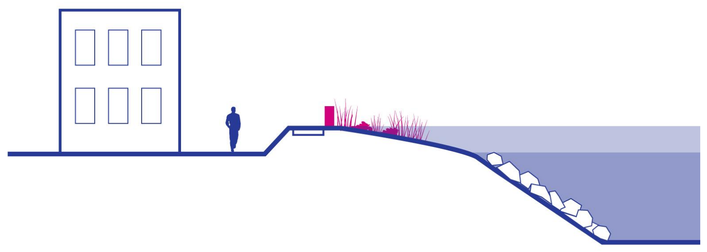
Step 1 (Near-Term Decision)



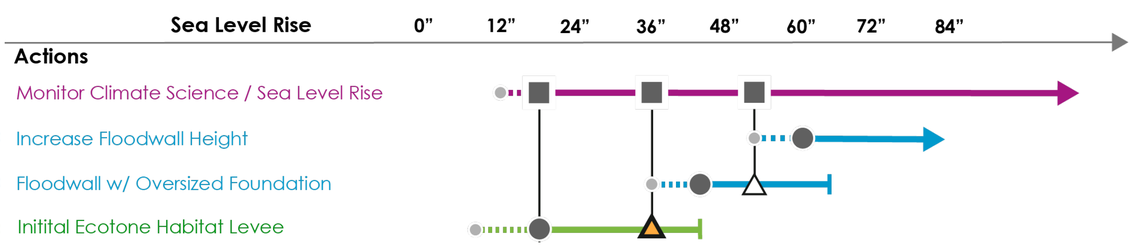


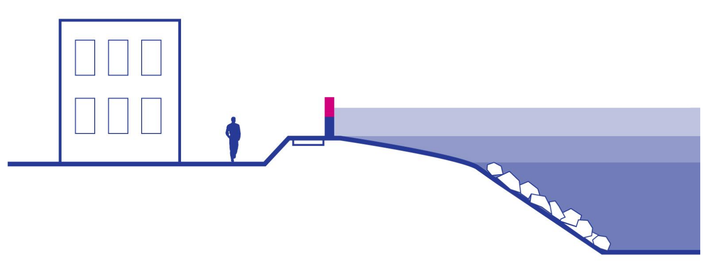
Step 2 (Future Decision – Gray Path Example)



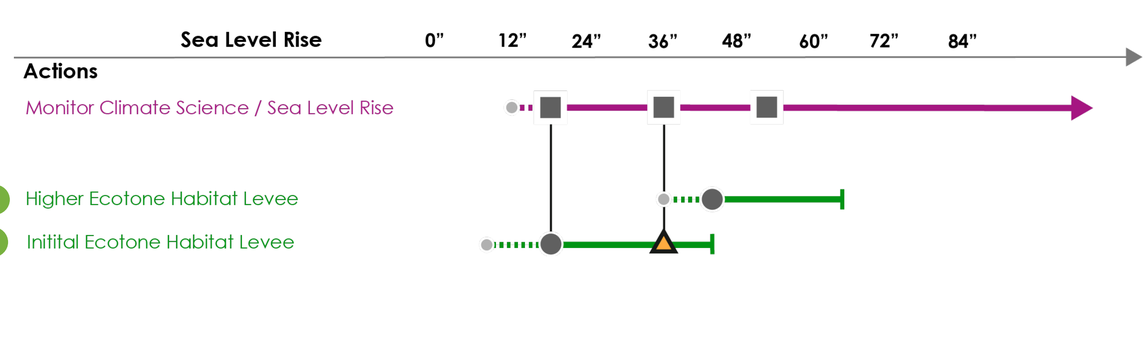


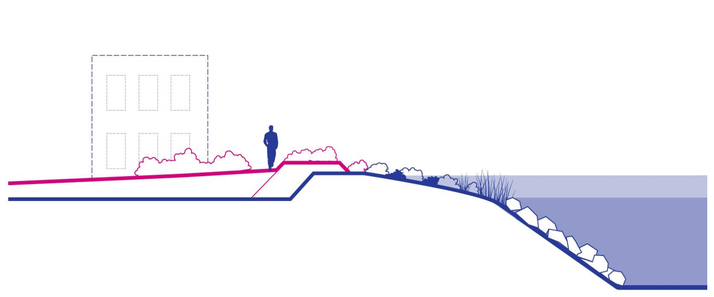
Step 3 (Future Decision – Gray Path Example)



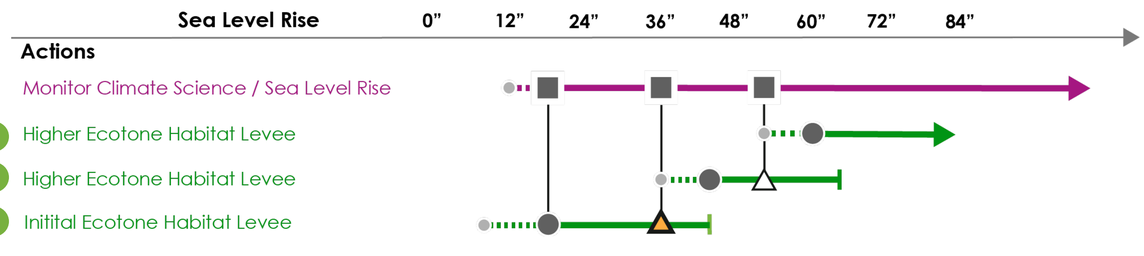


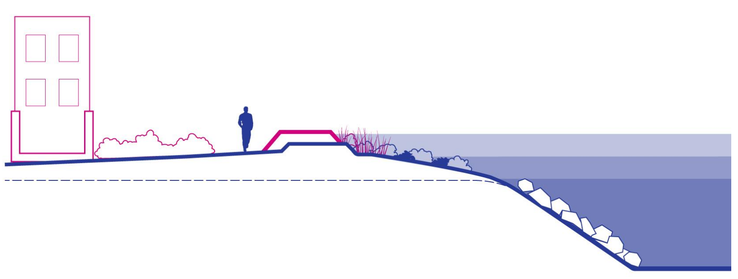
Step 2 (Future Decision – Green Path Example)





Step 3 (Future Decision – Green Path Example)





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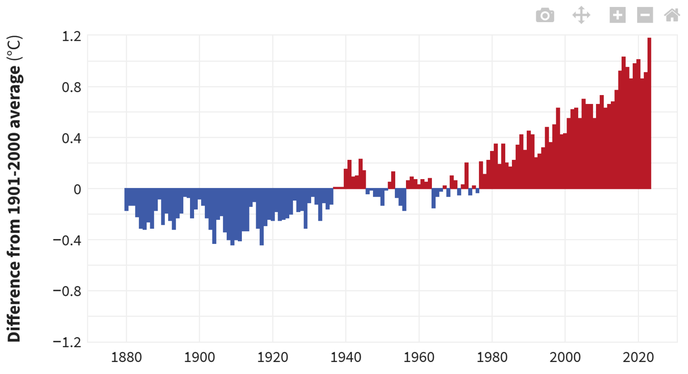
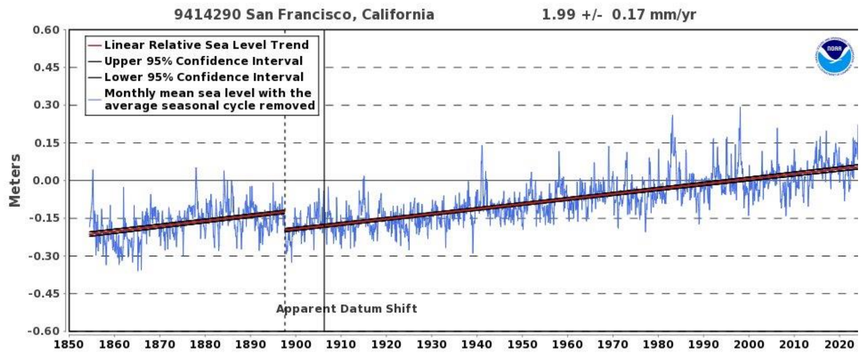
Climate Change

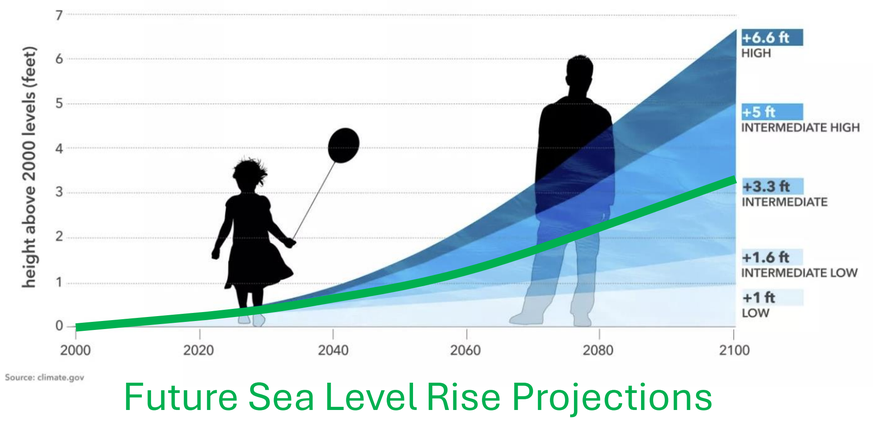
Our changing climate is changing the entire water cycle,
Sea Levels are rising, Groundwater tables are rising, and Precipitation intensity is increasing



Global Temperatures are Rising



Global and Local Sea Levels are Rising



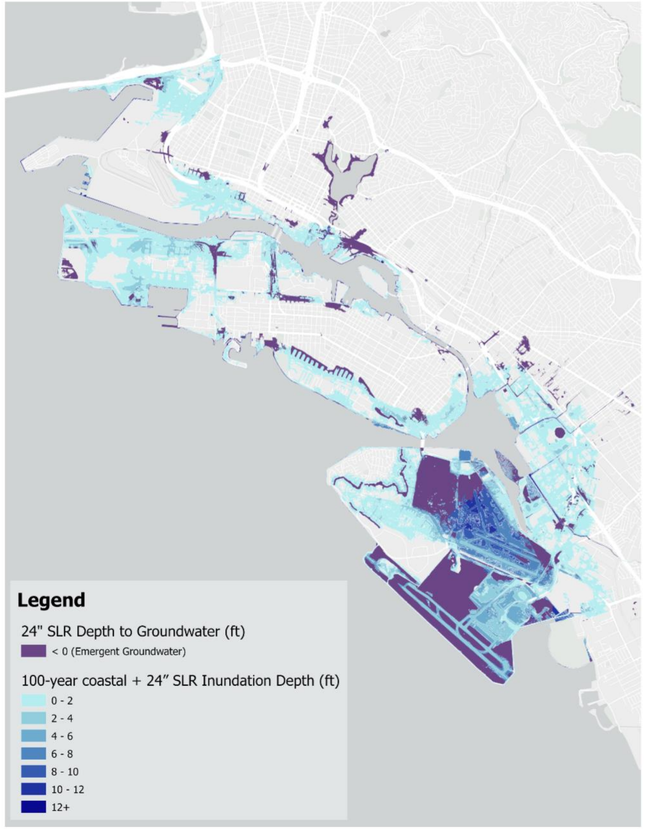
Source: climate.gov

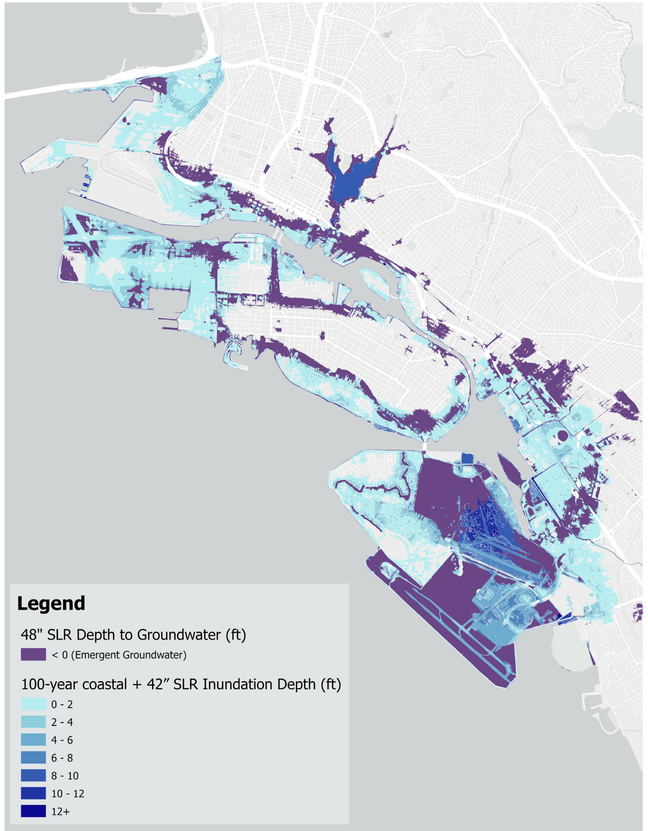
Future Sea Level Rise Projections

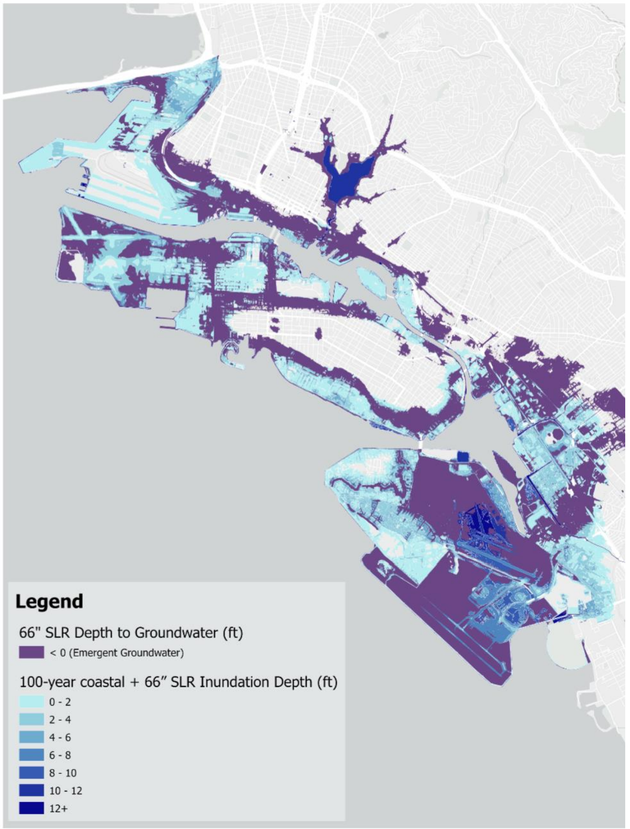
Coastal Flooding

In the absence of adaptation, rising seas and coastal flooding can overtop shorelines, and rising groundwater can impact communities from below,

The areas most at risk are the areas developed on Bay fill.

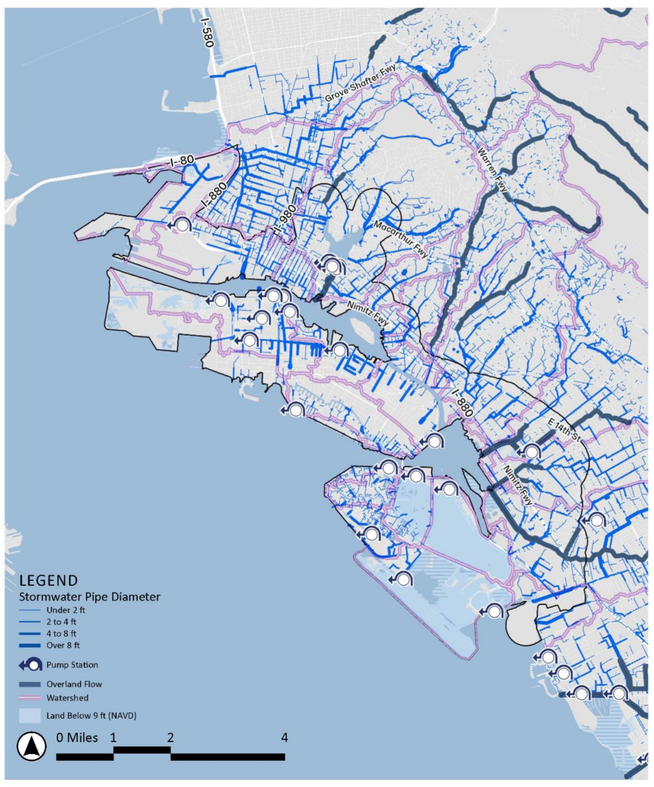




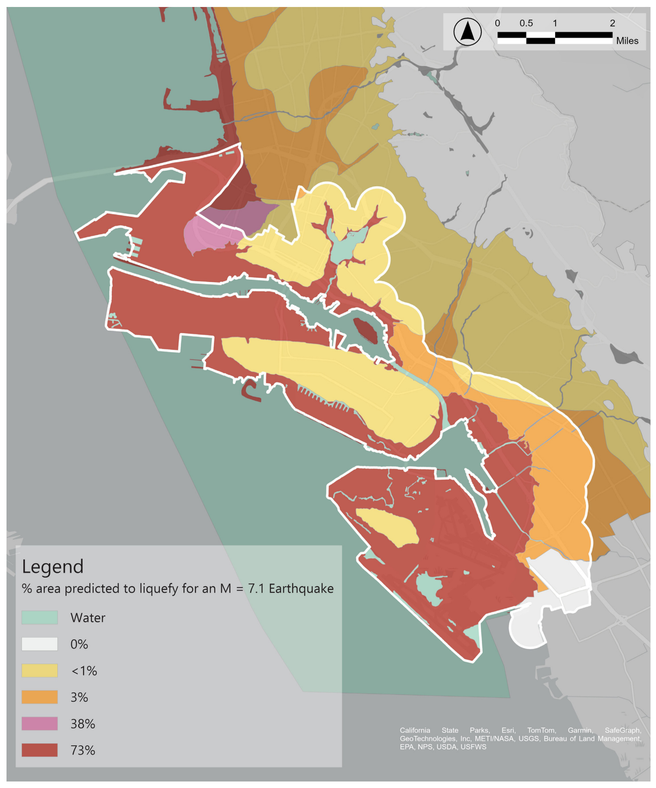


Other Hazards

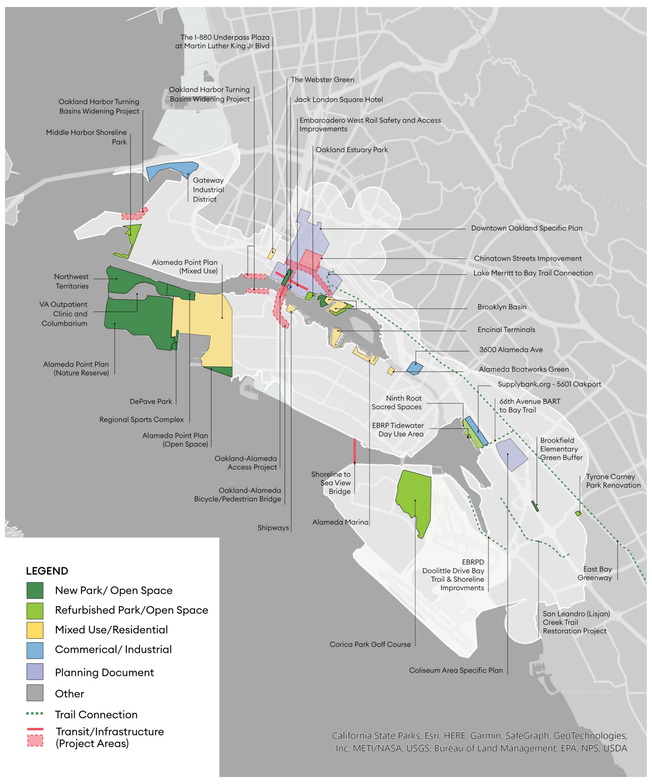
The adaptation options must consider watershed drainage patterns (for precipitation and groundwater), liquefaction hazards, and planned projects along the shoreline.



Drainage patterns



Liquefaction



Planned Projects

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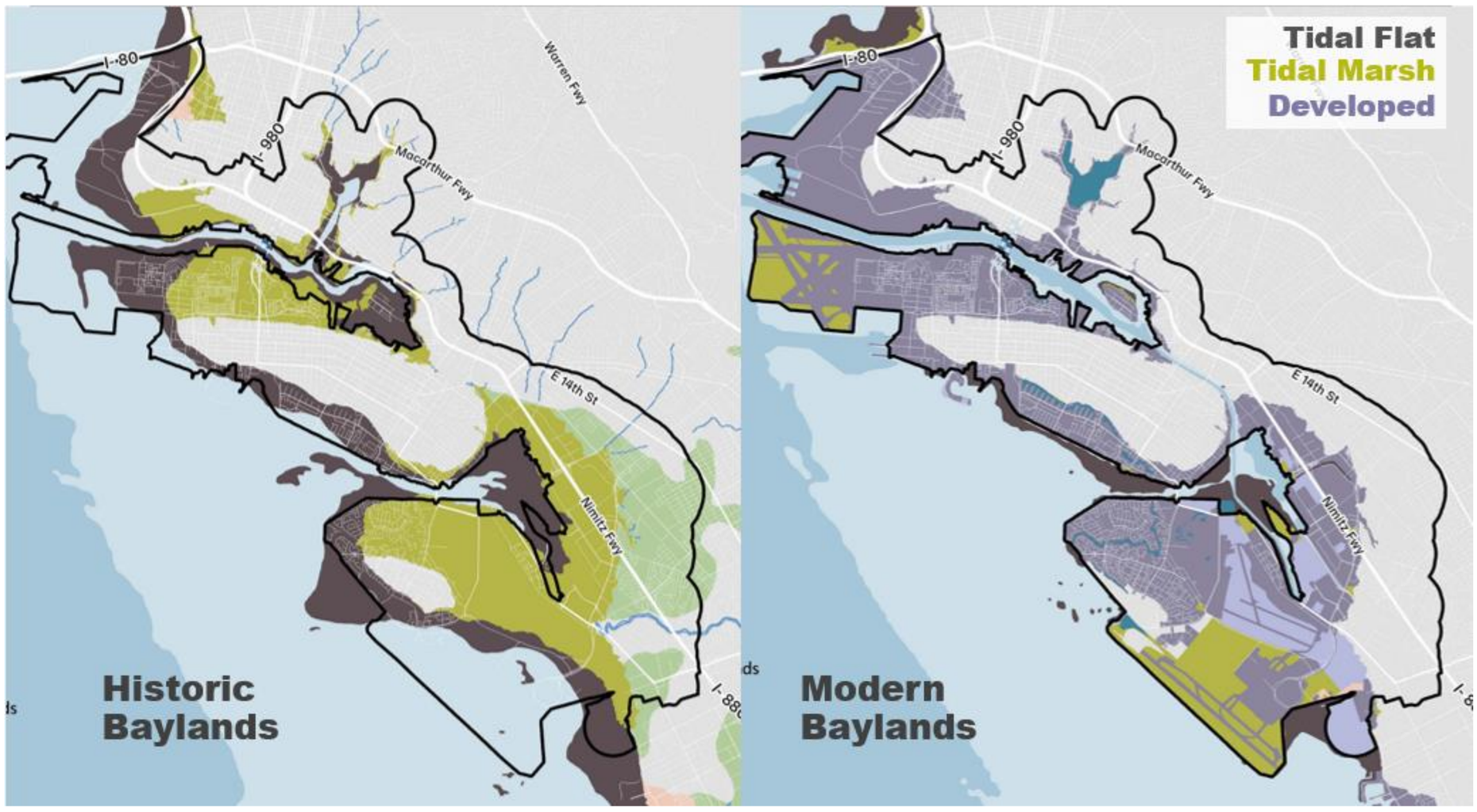
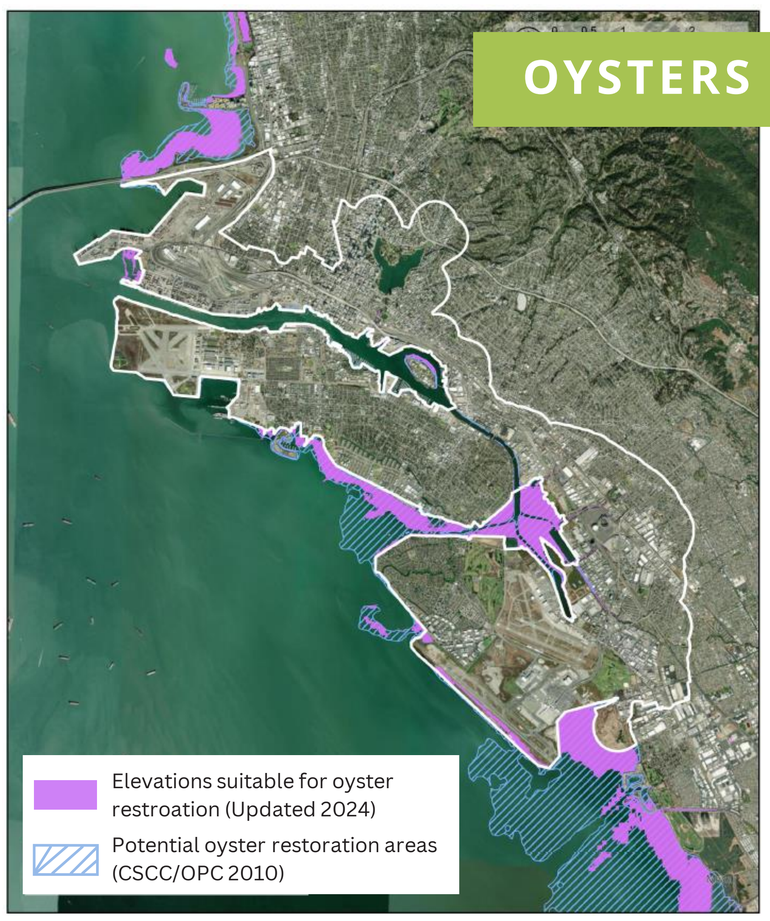
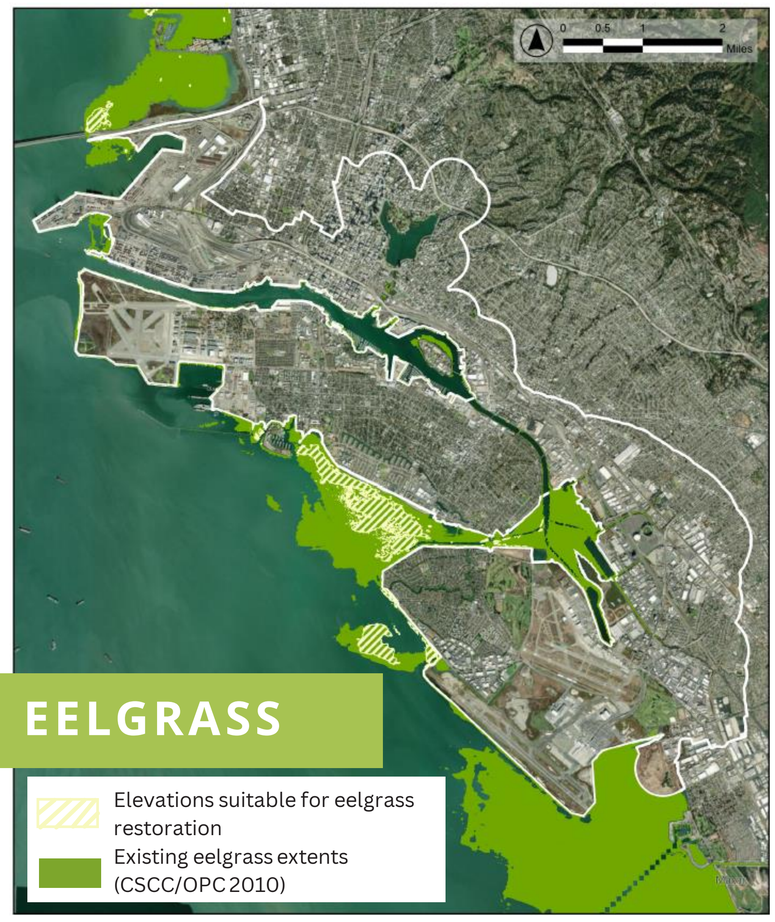




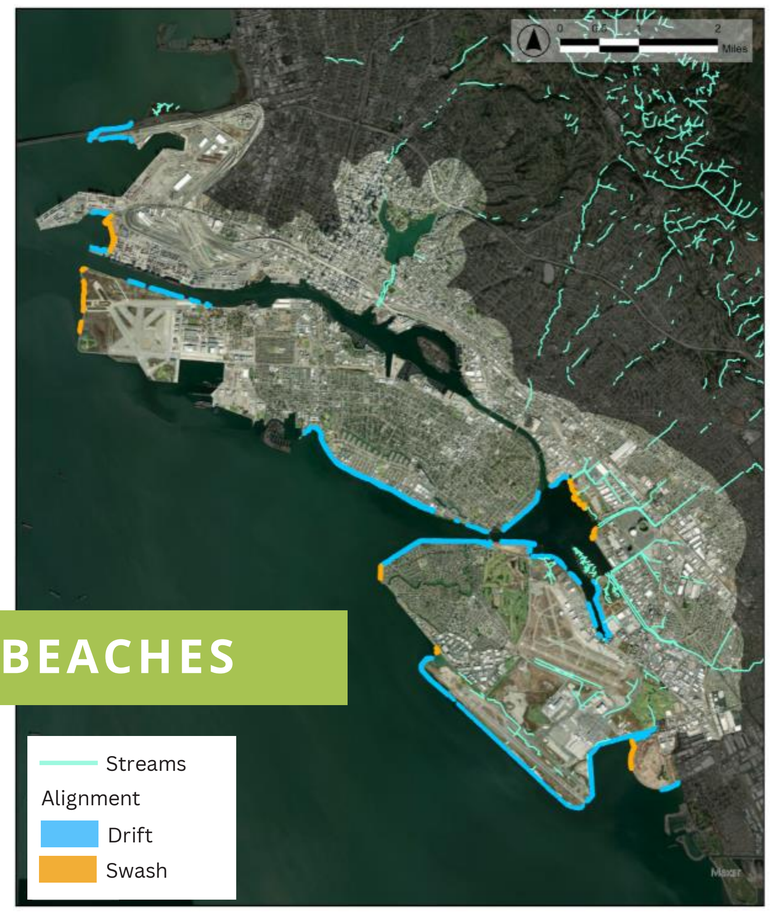
OPPORTUNITIES FOR NATURAL AND NATURE-BASED FEATURES

The development of the Subregional Adaptation Plan presents an opportunity to plan for ecological and other community co-benefits as an integral part of our adaptation approach.



We will continue to:

- Engage local experts within the OAAC, Scientific Partners, and consultant team
- Use the green-to-gray spectrum, integrating nature-based features and hybrid solutions wherever feasible
- Learn from existing pilot projects, and identify where new pilot projects may be needed in the Subregion



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