

# Basin Plan Amendment on Climate Change and Aquatic Habitat Protection, Management, and Restoration

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Water Resource Control Engineer

Tidal wetlands along Gallinas Creek  
submerged by a king tide

Photo: C. Toms





# Today's Presentation

- Purpose of the Basin Plan Amendment
- Project planning efforts to date
- Elements of the Basin Plan Amendment





# Purpose of the Amendment



- Climate change impacts to water quality
- Potential considerations for projects in coastal waters

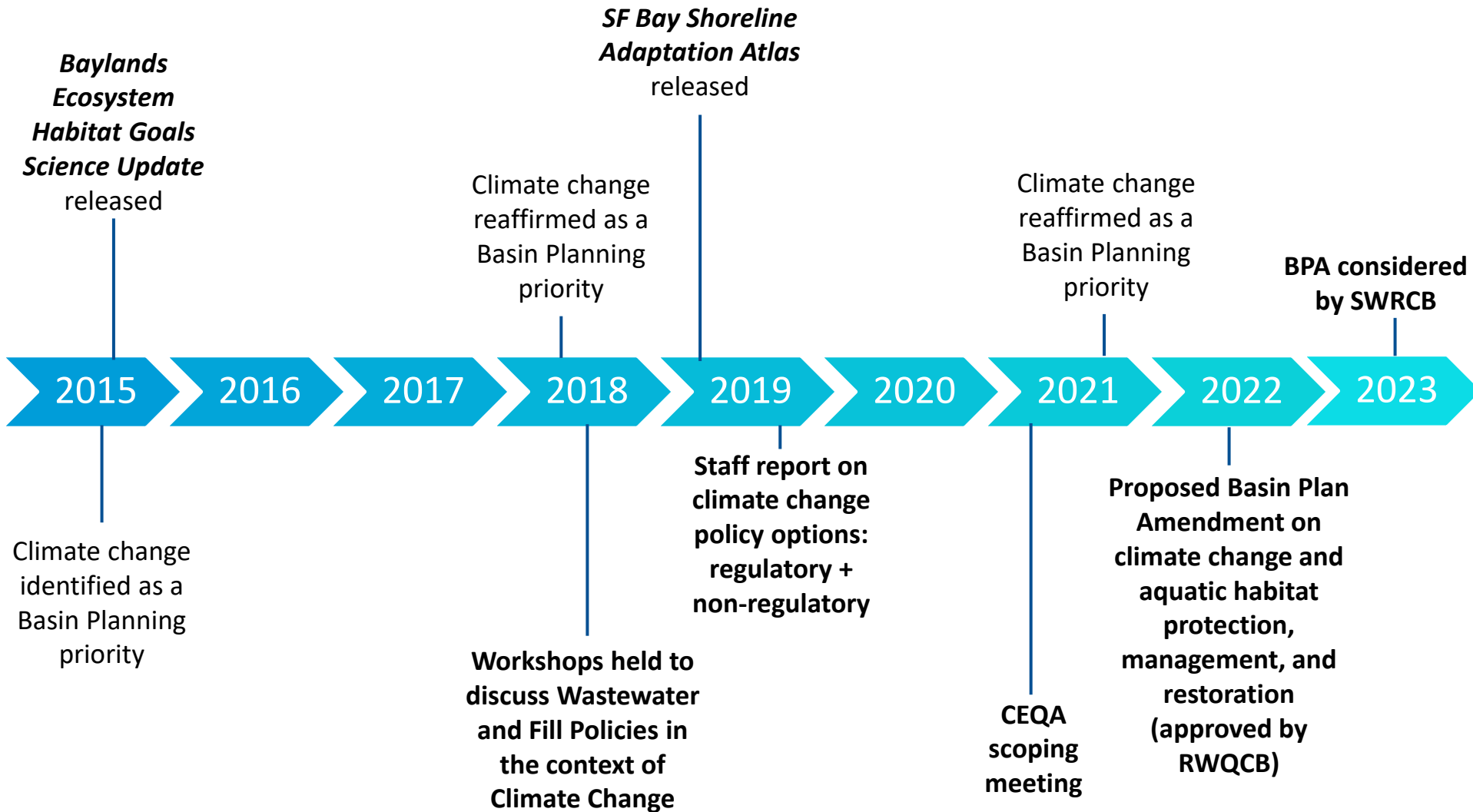
# Non-Regulatory Amendment

Collaborative

Transparent

Informative

# Timeline: How We Got Here





# New Section 1.7: The Challenge of Climate Change



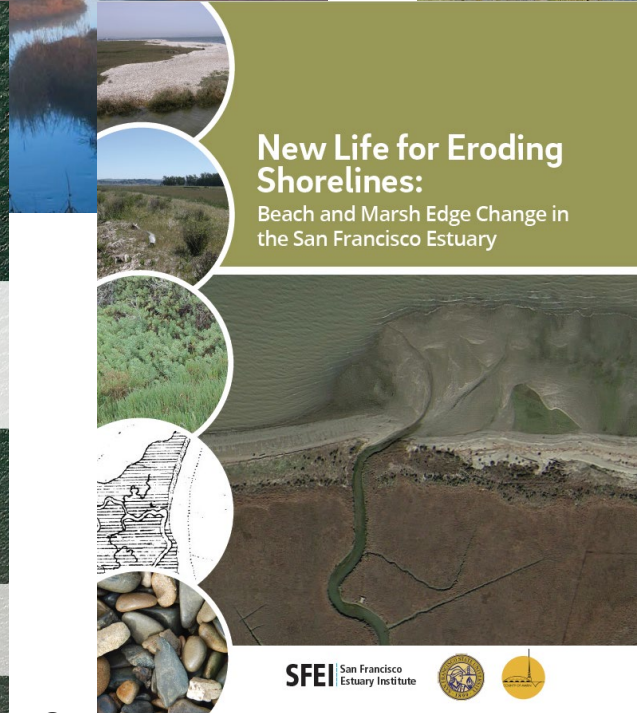
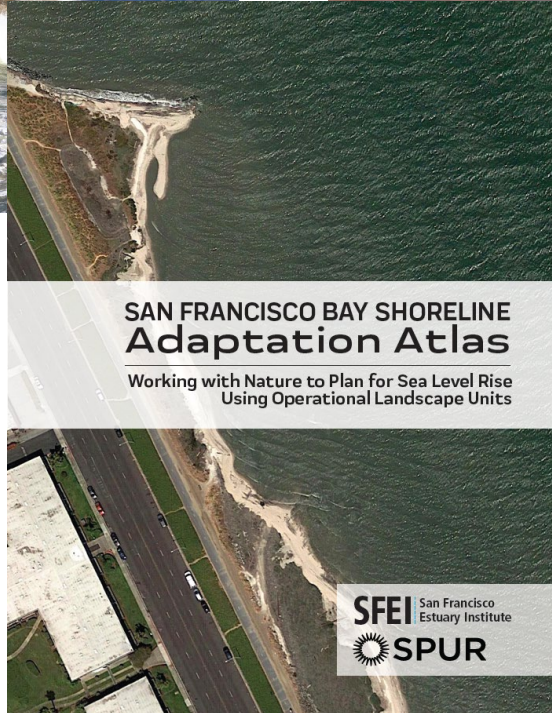
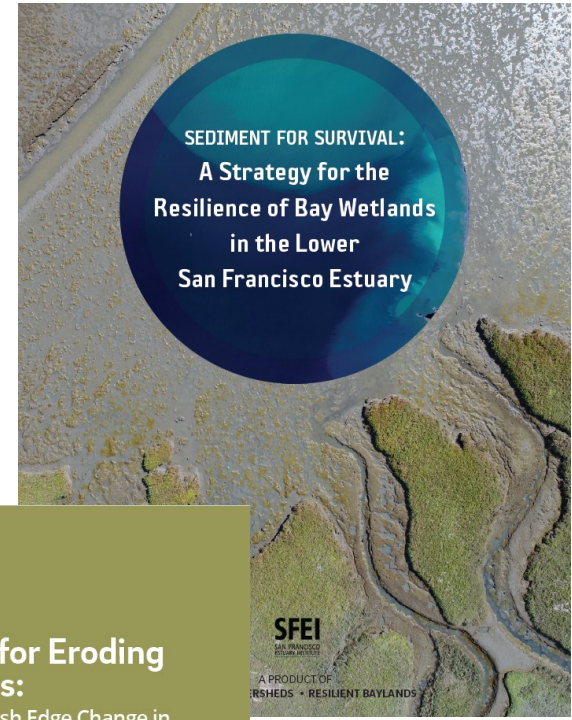
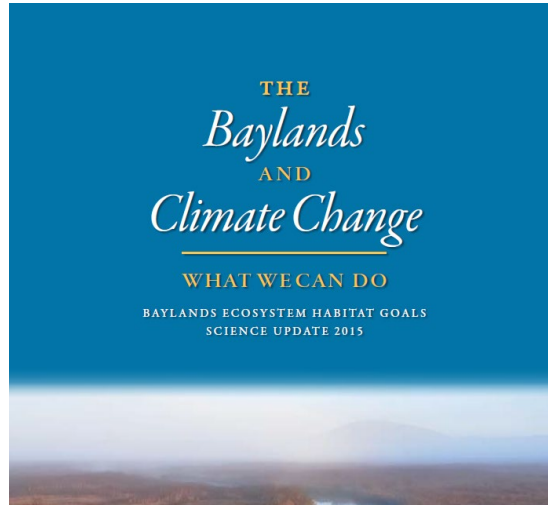
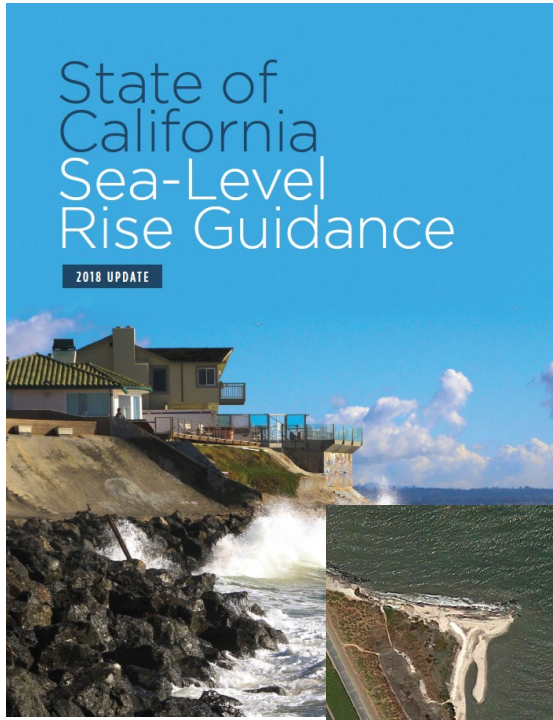
Lake Chabot  
2015

# New Section 4.27: Climate Change and Aquatic Habitat Protection, Management, and Restoration



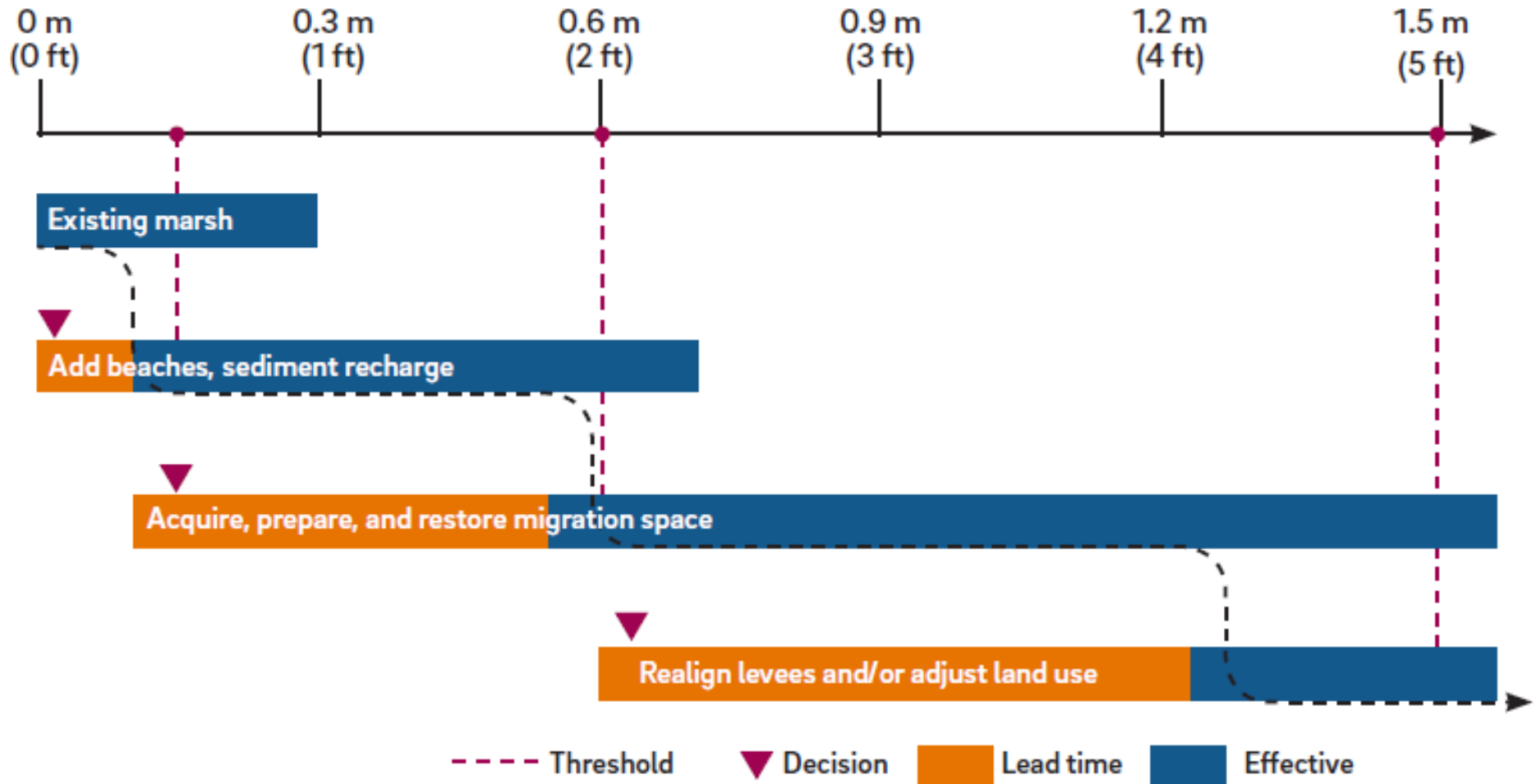


# Question 1: Best Available Science?

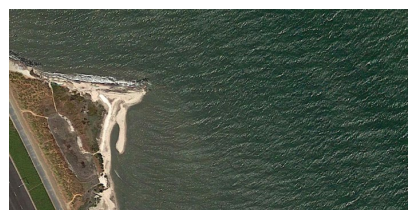




## Question 2: Phased Adaptation Framework?

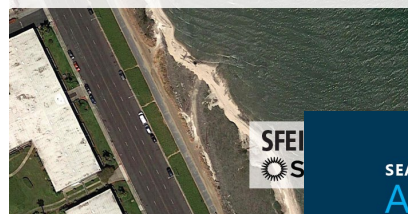


# Question 3: Cross-Jurisdictional Framework?



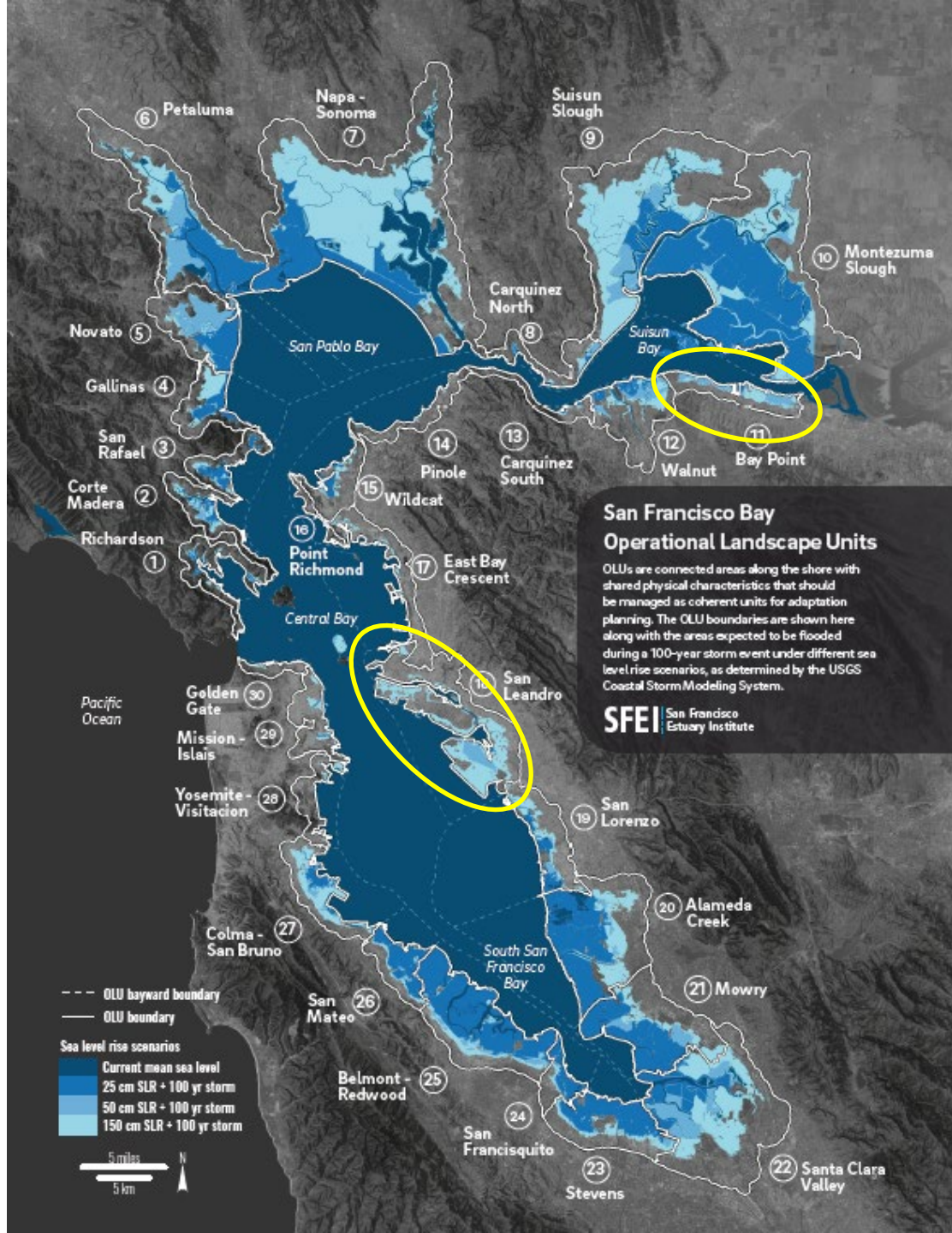
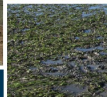
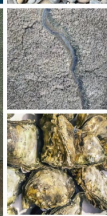
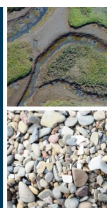
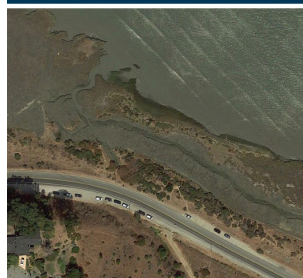
## SAN FRANCISCO BAY SHORELINE Adaptation Atlas

Working with Nature to Plan for Sea Level Rise  
Using Operational Landscape Units



## SEA LEVEL RISE Adaptation Framework

A user guide to planning with nature,  
as demonstrated in Marin County





# Question 4: Nature-based Approaches?



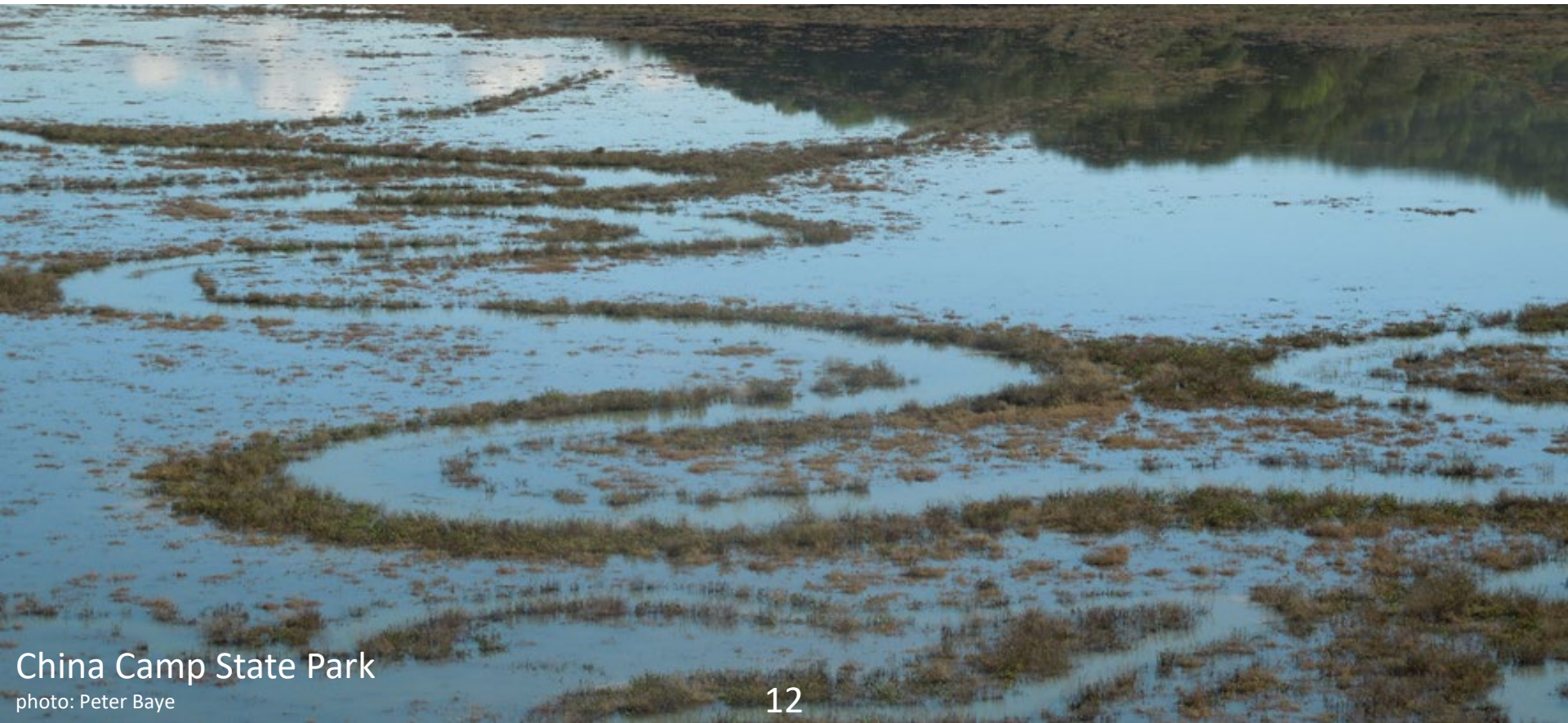
Restored migration space at  
Spring Branch Creek Enhancement Project

Photo: Stuart Siegel



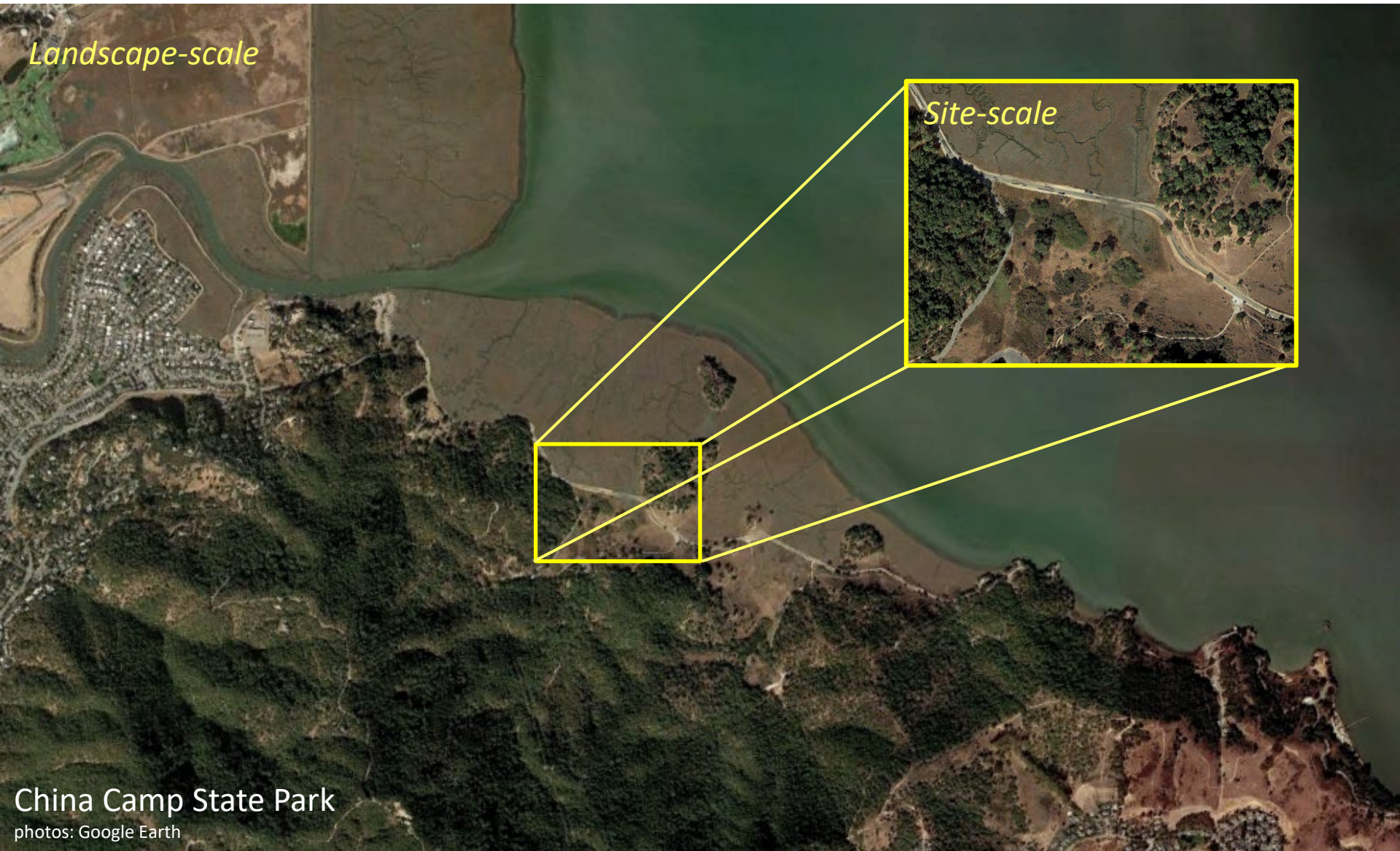
# Question 5: Impacts given the reasonably foreseeable conditions from climate change?

- Environmental drivers
- Impacts of no action
- Coherent landscapes
- Habitat type conversion





# Question 5: Impacts given the reasonably foreseeable conditions from climate change?



China Camp State Park  
photos: Google Earth



# Question 5: Impacts given the reasonably foreseeable conditions from climate change?

**Impacts of  
no action**

Surfer's Beach, Half Moon Bay

Photo: CA King Tides Project



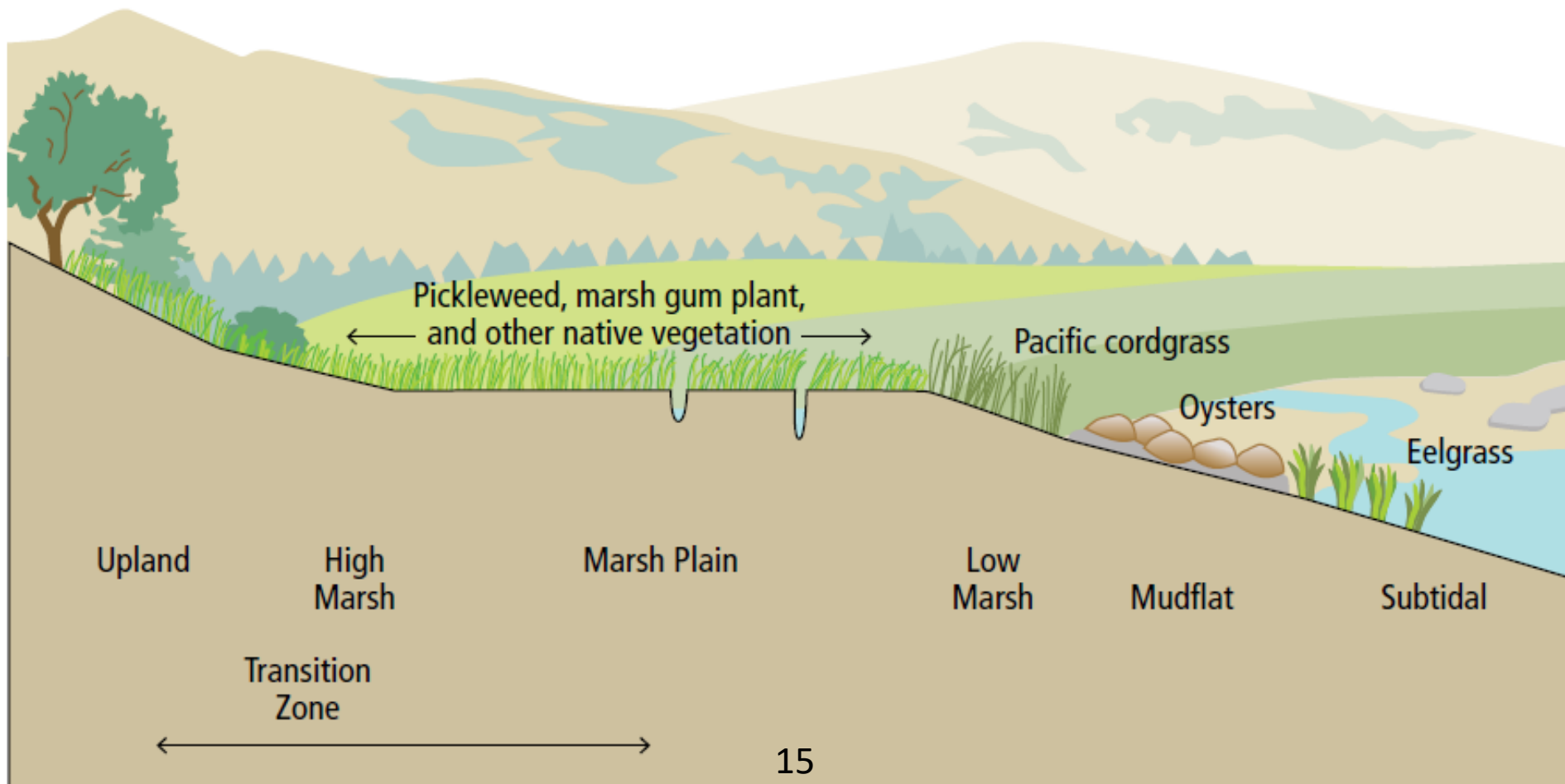


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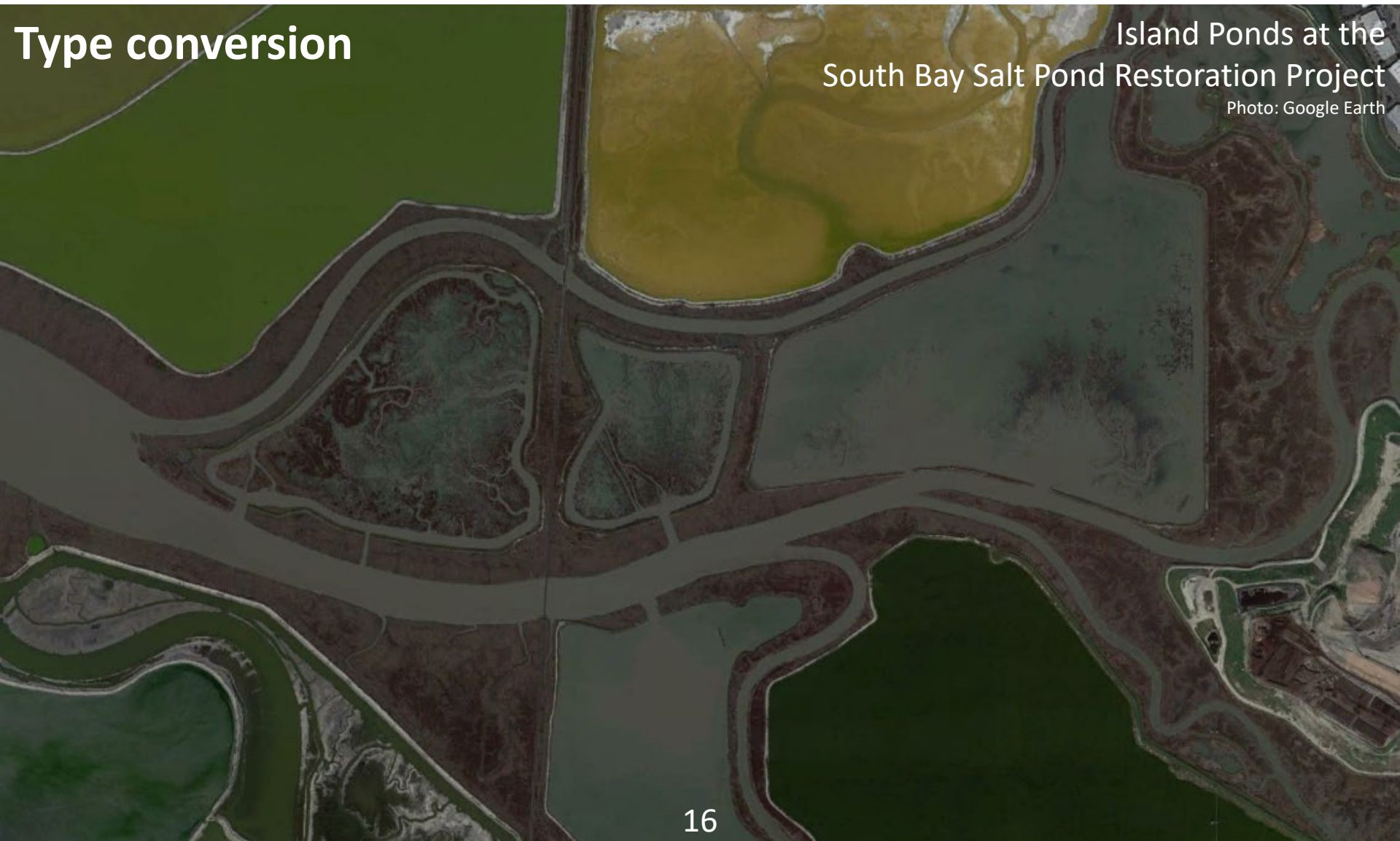
## Coherent landscapes

Diagram of the “complete” marsh

Graphic: Habitat Goals 2015



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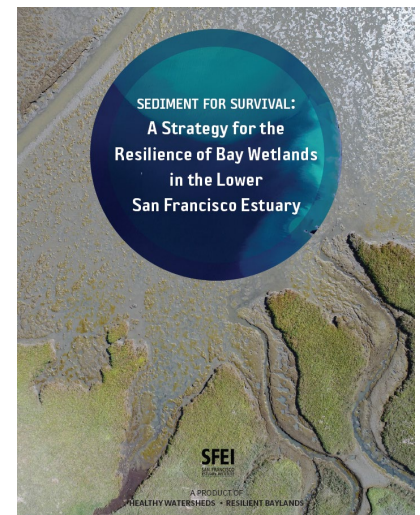
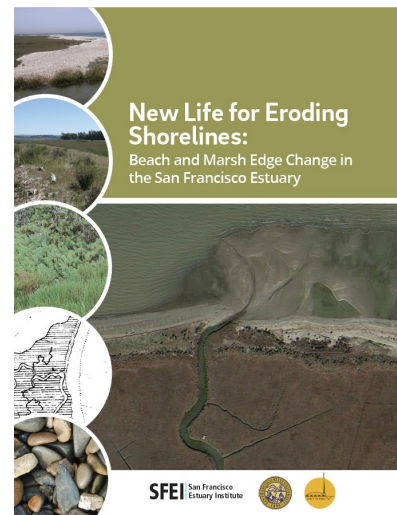
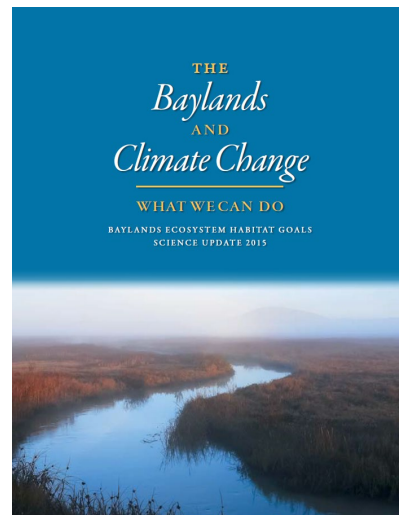
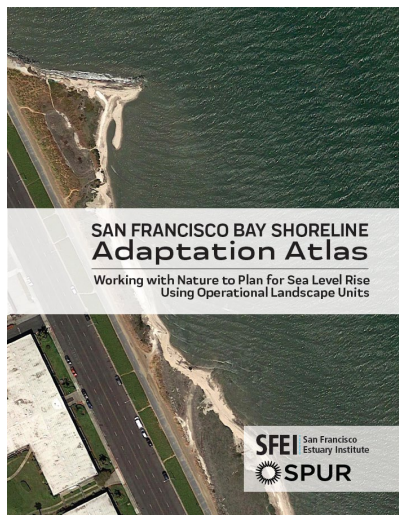
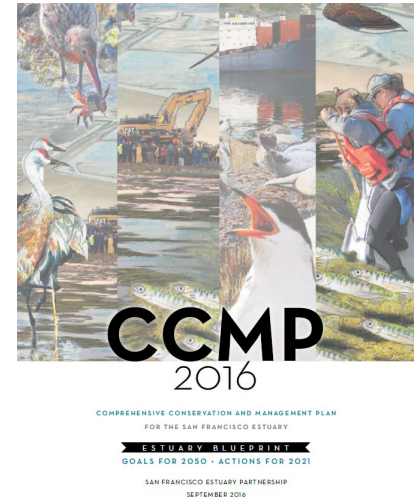
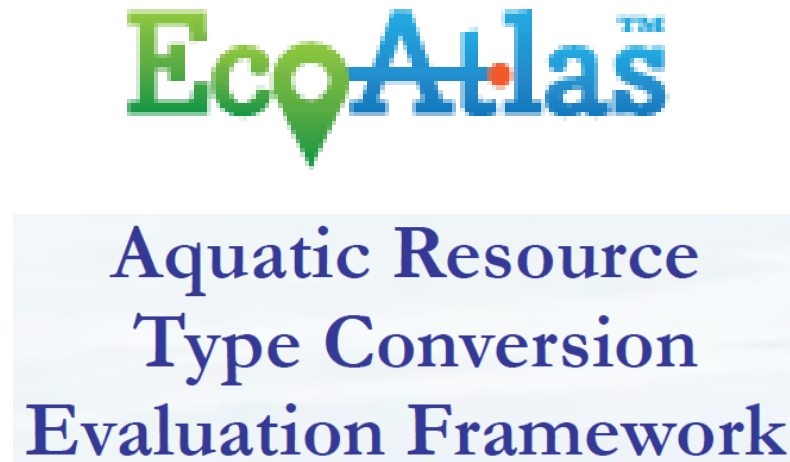
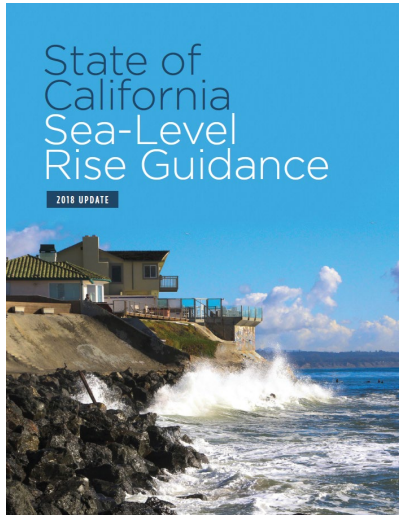
**Type conversion**

Island Ponds at the  
South Bay Salt Pond Restoration Project

Photo: Google Earth



# Proposed Administrative Changes





# Questions?

