



# Rising Seas & Protecting the Public Trust

*Long Beach* | Sept. 25, 2018

**PREVENTION FIRST**

California State  
Lands Commission



# California State Lands Commission



The Commission's jurisdiction over sovereign lands is rooted in the **Public Trust Doctrine**. Tide and submerged lands and the beds of lakes, streams, and other navigable waterways are held in trust by the State of California for the benefit of the people of California.

- 4 million acres
- 120 rivers and sloughs
- 40 lakes
- Thousands of miles of non-coastal shorelines
- **1100 miles of coastline**
- **3 nautical miles offshore**

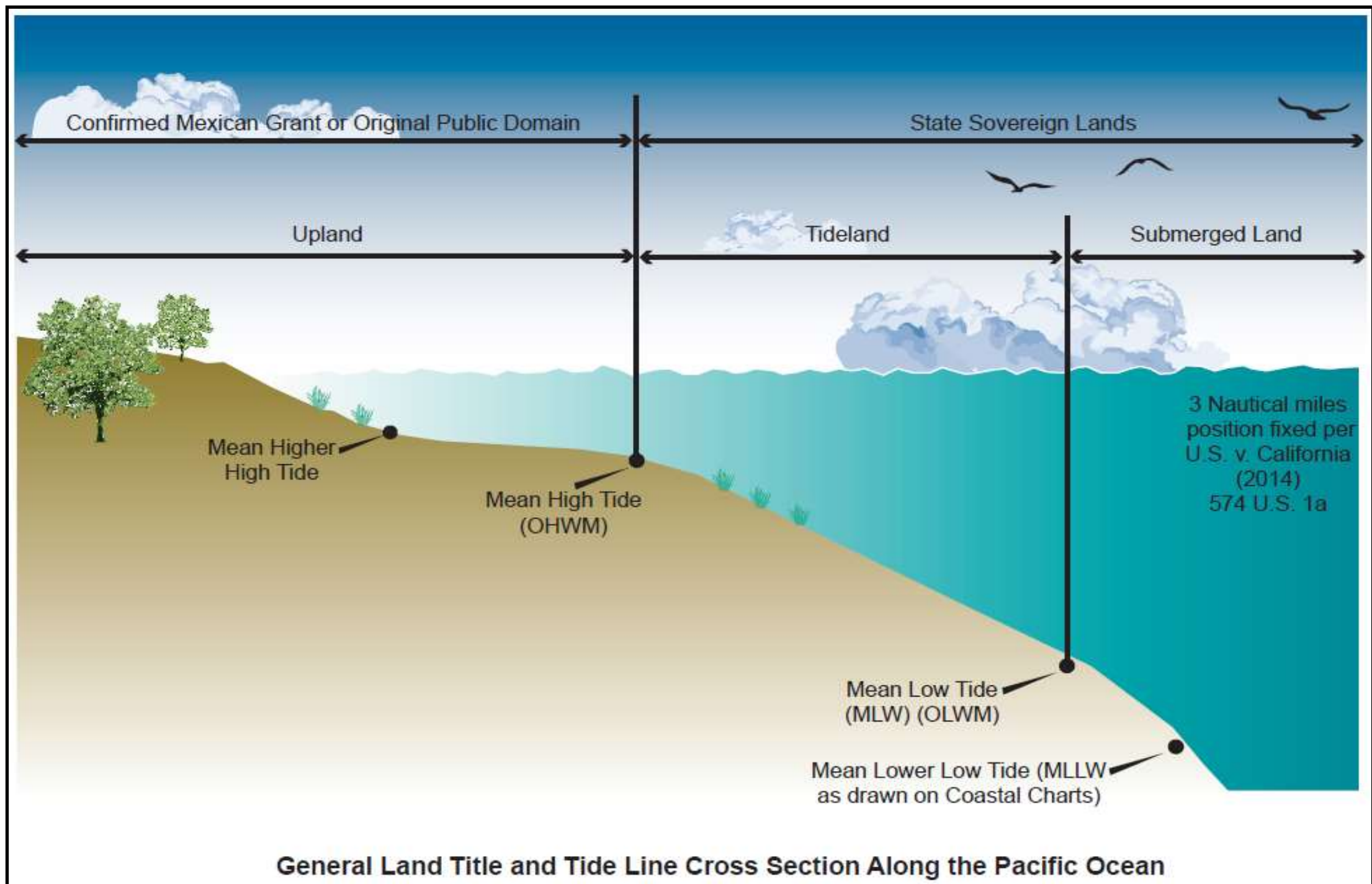


# California State Lands Commission

## What We Do

- Issue leases to use public trust lands
- Oversee marine oil terminals
- Oil spill prevention
- Regulate marine invasive species

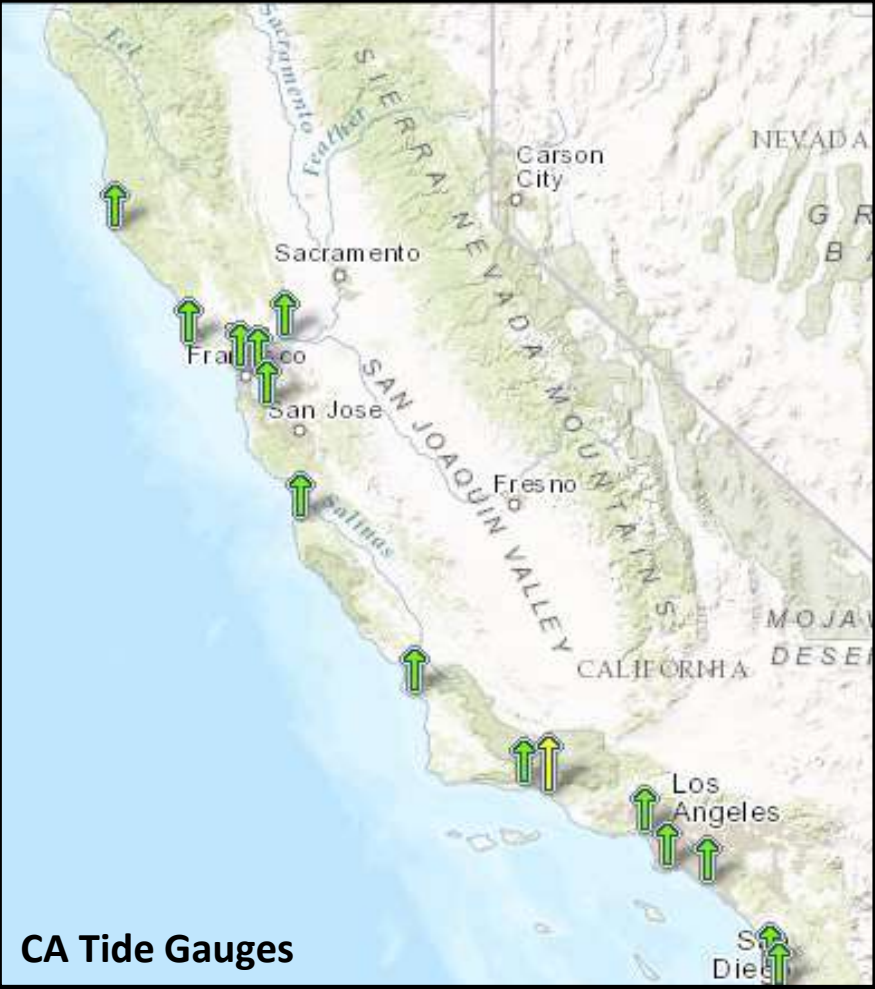







# California's Changing Coast

- Sea-level rise is *already occurring*
- CA coastal resources including ports, natural habitats, beaches, wetlands, public access, and recreation are extremely vulnerable
- 2017 State Sea-Level Rise Science report reflects potential for accelerated pace and extreme scenario



CA Tide Gauges



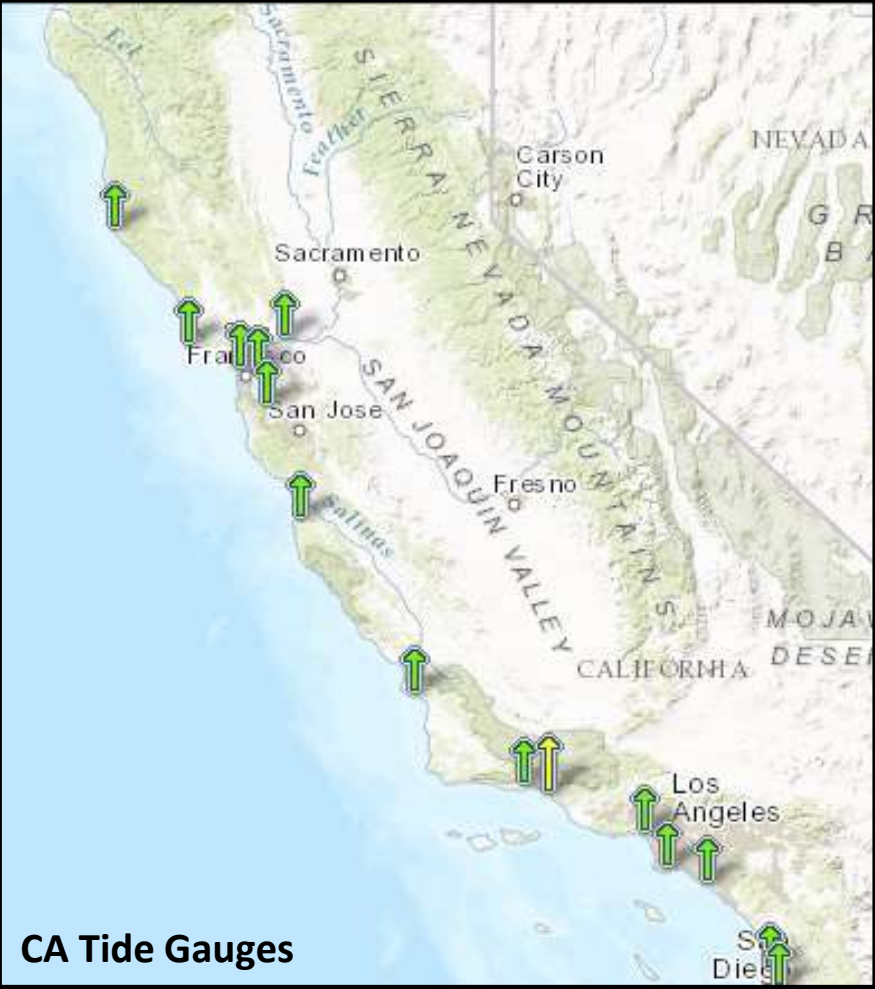

1972 Broad Beach Coastline Malibu, CA 2013

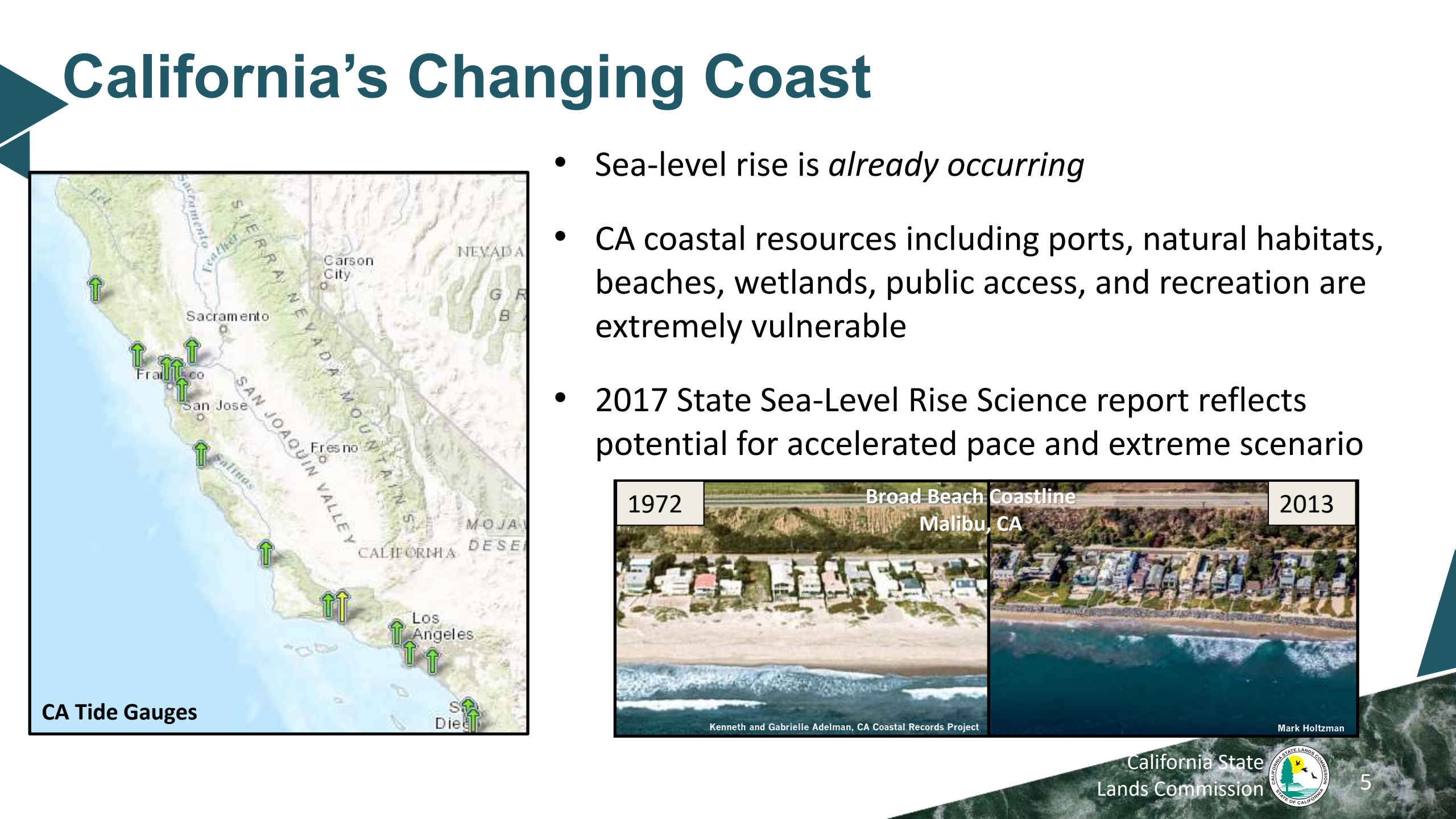
Kenneth and Gabrielle Adelman, CA Coastal Records Project Mark Holtzman

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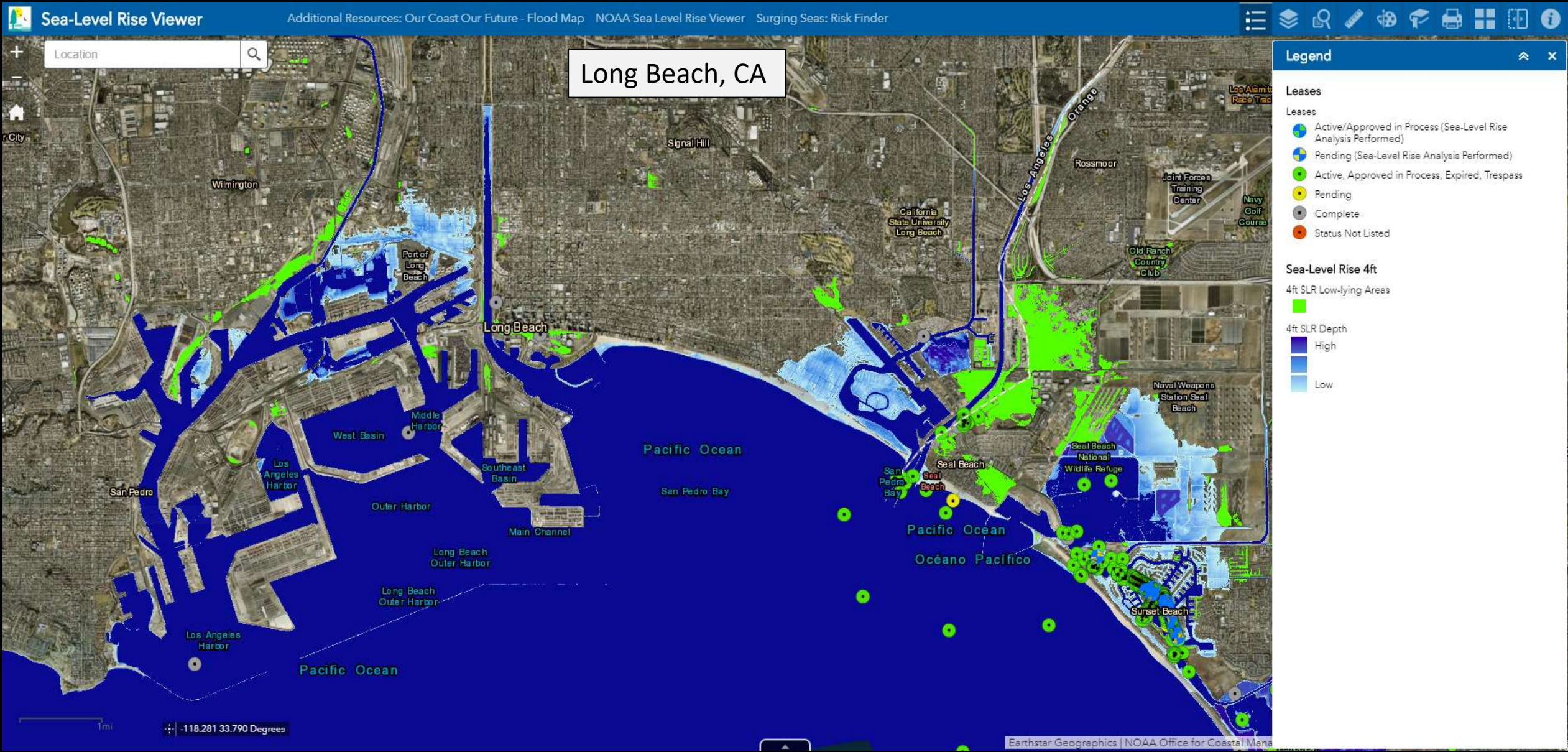
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- 5







Low risk aversion scenario:  
4 ft by 2130

Med-high risk aversion scenario:  
4 ft by 2080

H++ scenario:  
4 ft after 2060



# Efforts to Address Sea-Level Rise

## Partner With Grantees – AB 691

- AB 691 (Muratsuchi, 2013)
  - Sea-level rise assessments for granted lands w/ revenues > \$250k/year
  - Submissions due July 1, 2019
- Protect and adapt Public Trust lands, assets, & resources
- Develop recommendations to support local implementation efforts



## NON-INTERVENTION



Eroding bluff in Pacifica, CA (Photo credit: Eric Cheng)

## SHORT-TERM

### PROTECT

#### HARD APPROACH

- Breakwater
- Caisson
- Groin
- Revetment
- Bulkhead
- Seawall

#### SOFT APPROACH

- Emergency beach nourishment



Seawall in Ventura, CA (Photo credit: UCSD)

## MID-TERM

### PROTECT & ACCOMMODATE

#### SOFT APPROACH

- Systematic beach nourishment



Dauphin Island East End beach nourishment, AL (Photo credit: Bret M. Webb)

## LONG-TERM

### ACCOMMODATE & RELOCATE

#### SOFT APPROACH

- Edging
- Sills
- Vegetation only
- Horizontal levees
- Berms

#### PHASED RETREAT



Edging project in New Smyrna Beach, FL (Photo credit: Florida Living Shorelines)

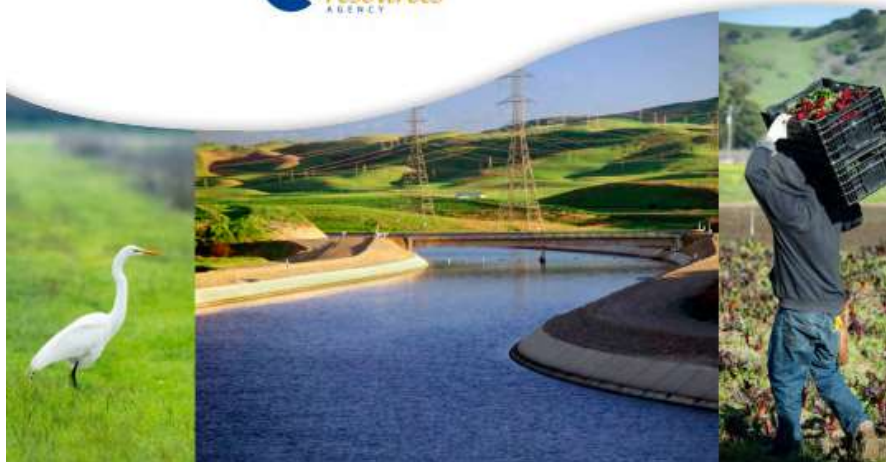


# Efforts to Address Sea-Level Rise



Safeguarding California Plan:  
2018 Update

California's Climate Adaptation Strategy | January 2018



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Lands Commission





[www.slc.ca.gov](http://www.slc.ca.gov)

**THANK YOU**

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