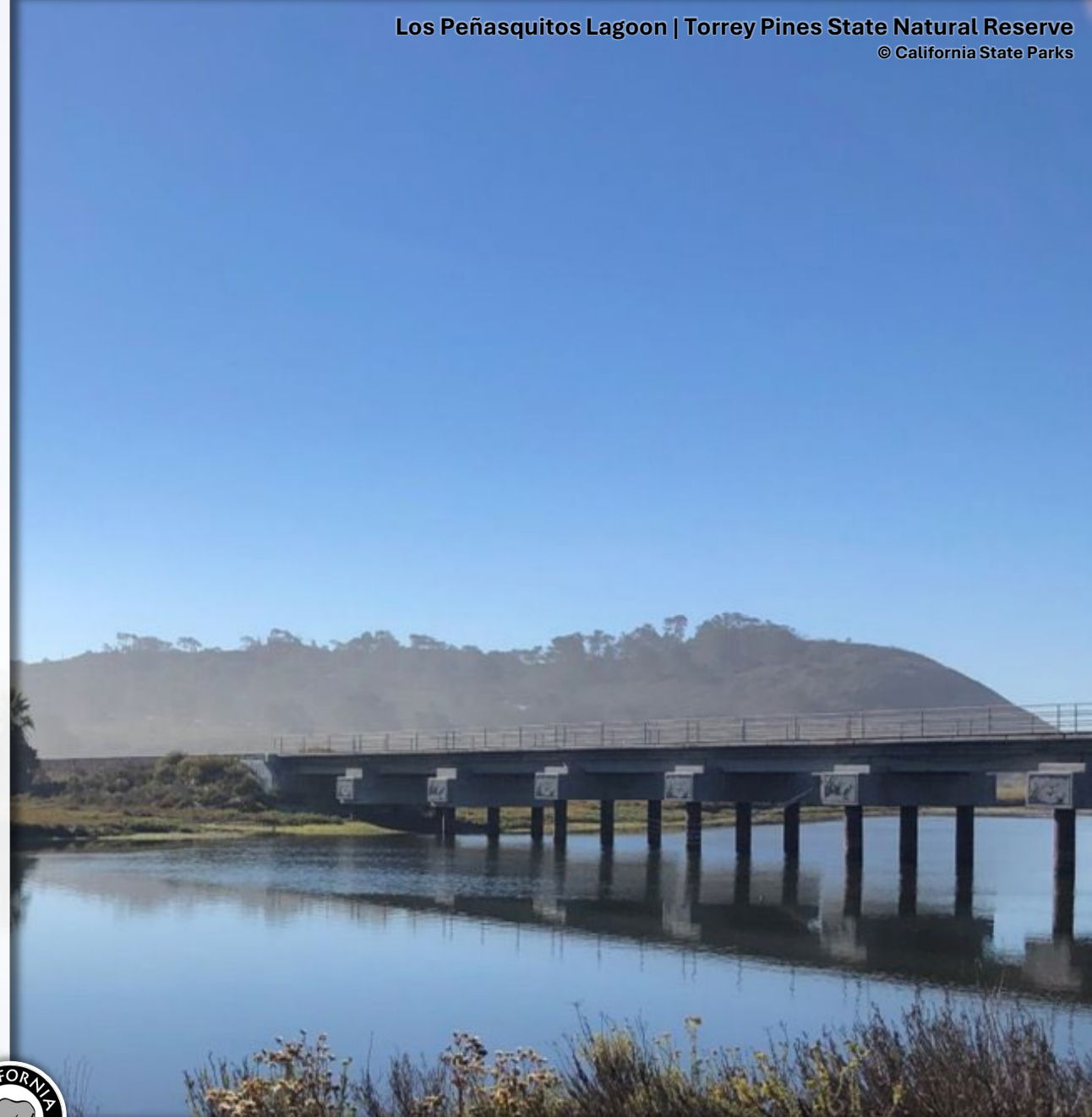


# Leveraging Data Hubs to Inform Large-Scale Estuary Assessment at California State Parks



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# California State Parks

## Mission:

*To provide for the health, inspiration, and education of the people of California by helping to **preserve the state's extraordinary biodiversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation***





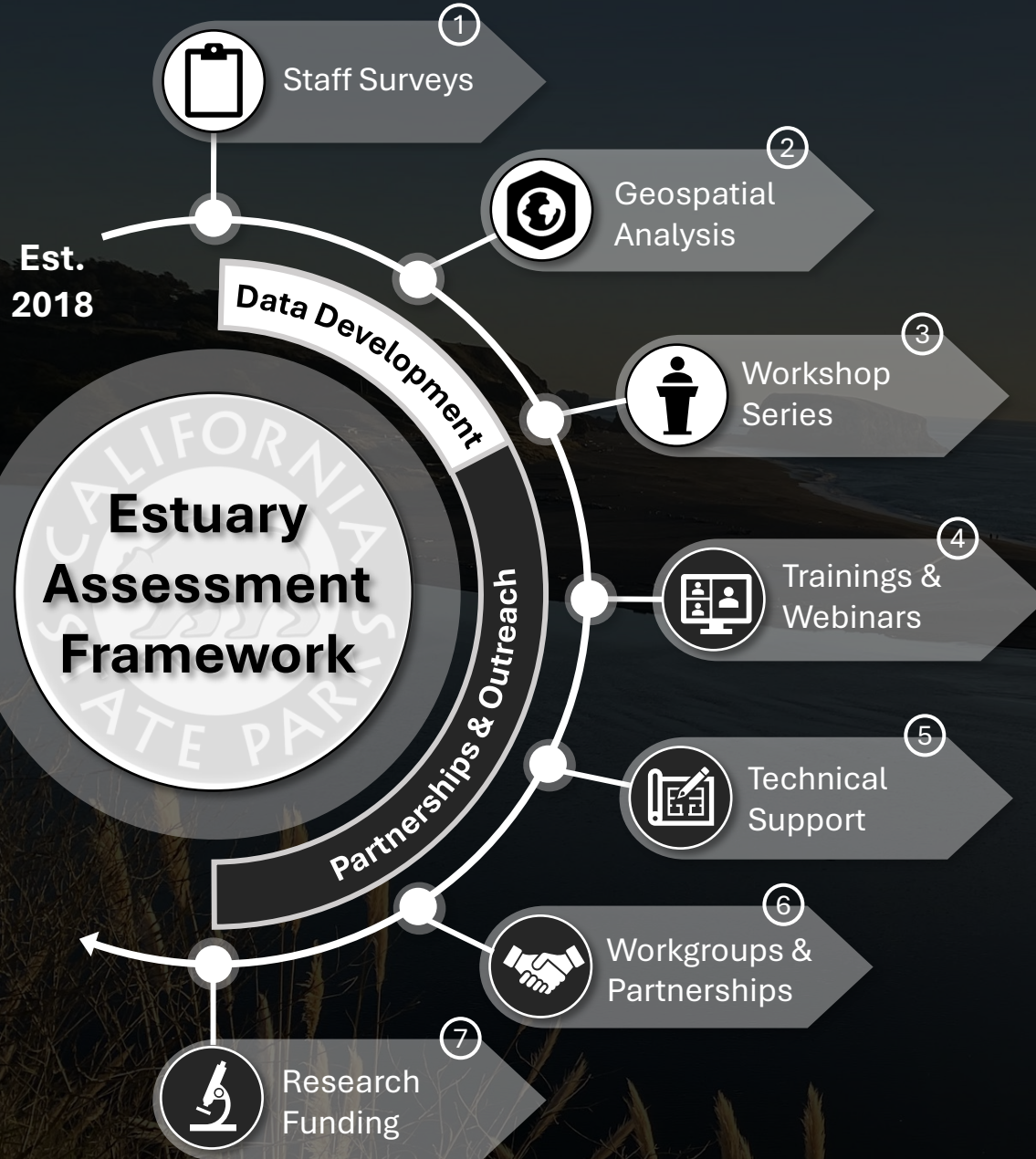


## Natural Resources Division Mission:

*The Natural Resources Division Provides overall leadership and direction to the Department's natural resources responsibility: **to acquire, protect, restore, maintain, and sustain outstanding and representative examples of California's natural and scenic values for the benefit of present and future generations***



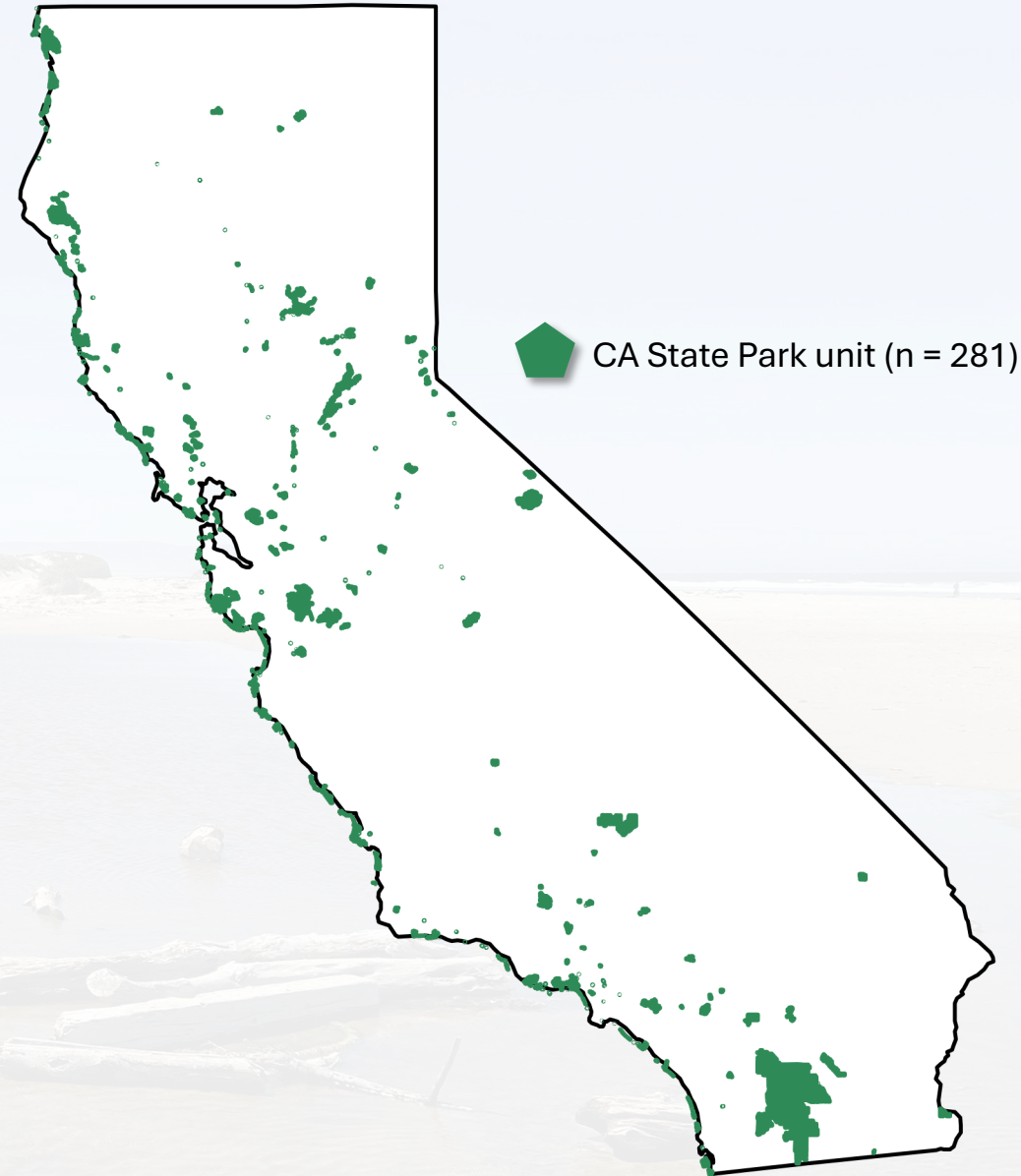








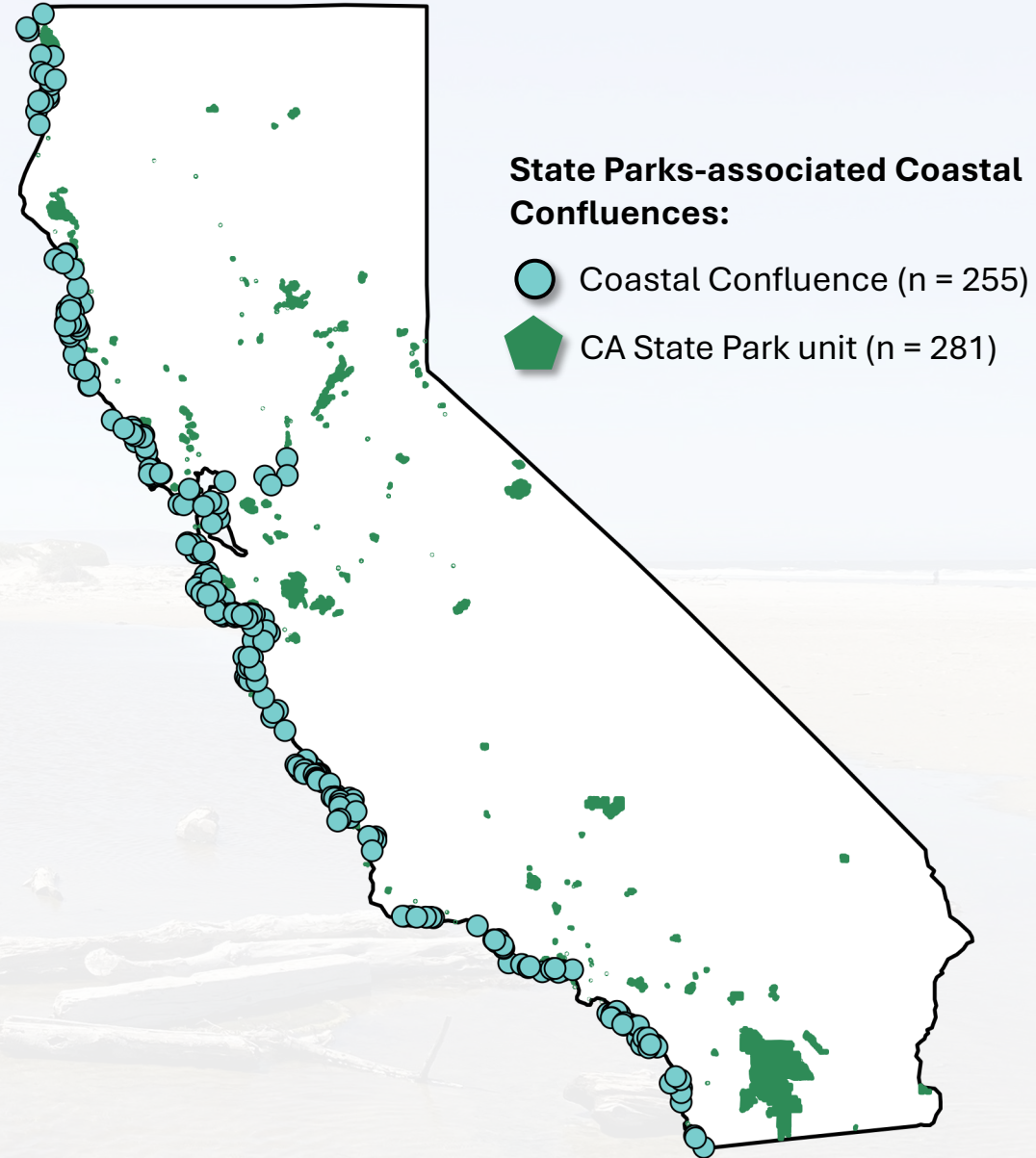
**Data Hub/Source:**  
State Parks Open & Public GIS Data  
[https://www.parks.ca.gov/?page\\_id=29682](https://www.parks.ca.gov/?page_id=29682)







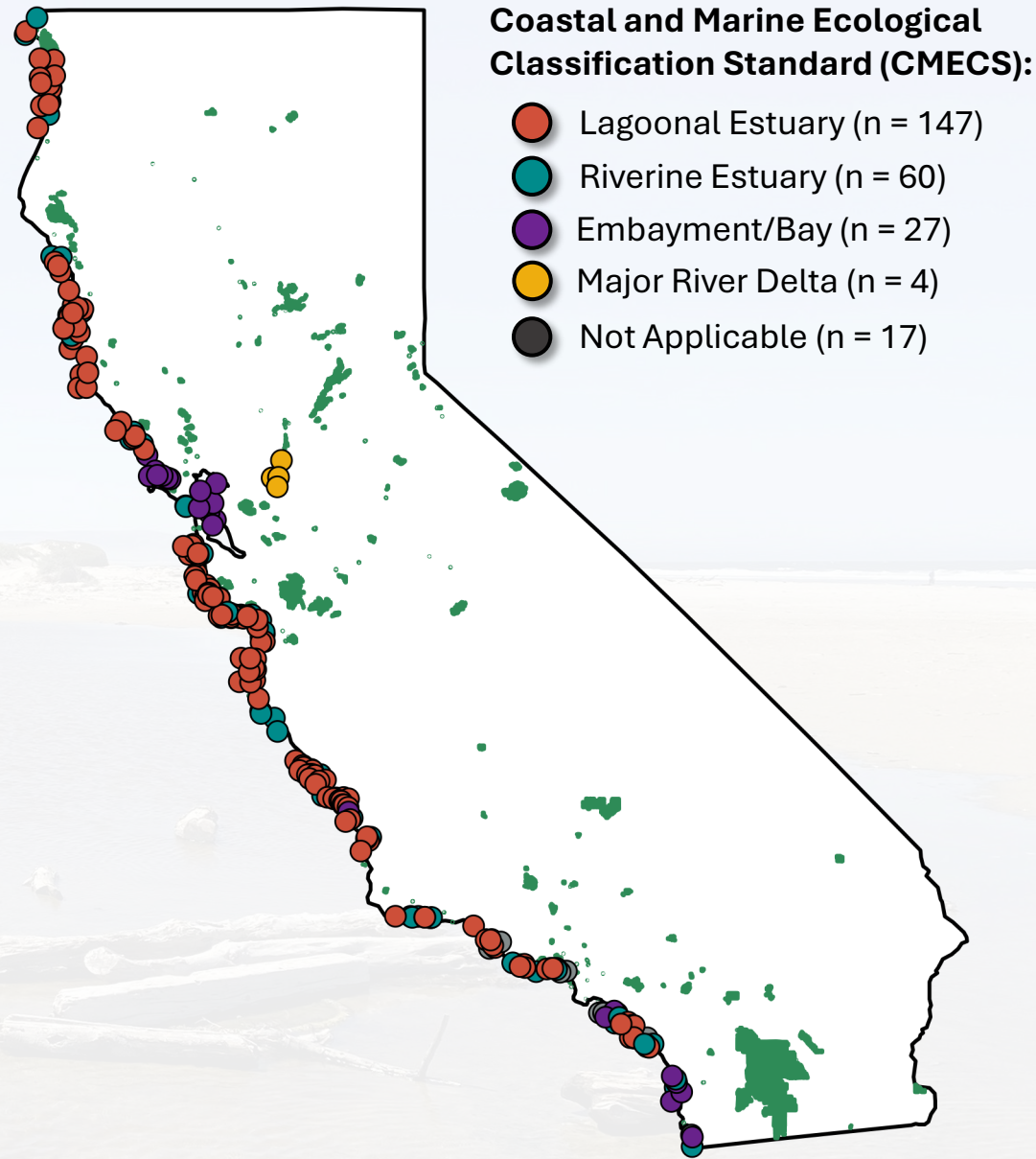
**Data Hub/Source:**  
Heady et al, 2014 - *An Inventory and Classification of U.S. West Coast Estuaries*  
<https://www.scienceforconservation.org/products/inventory-and-classification-of-u.s.-west-coast-estuaries>







**Data Hub/Source:**  
Heady et al, 2014 - *An Inventory and Classification of U.S. West Coast Estuaries*  
<https://www.scienceforconservation.org/products/inventory-and-classification-of-u.s.-west-coast-estuaries>







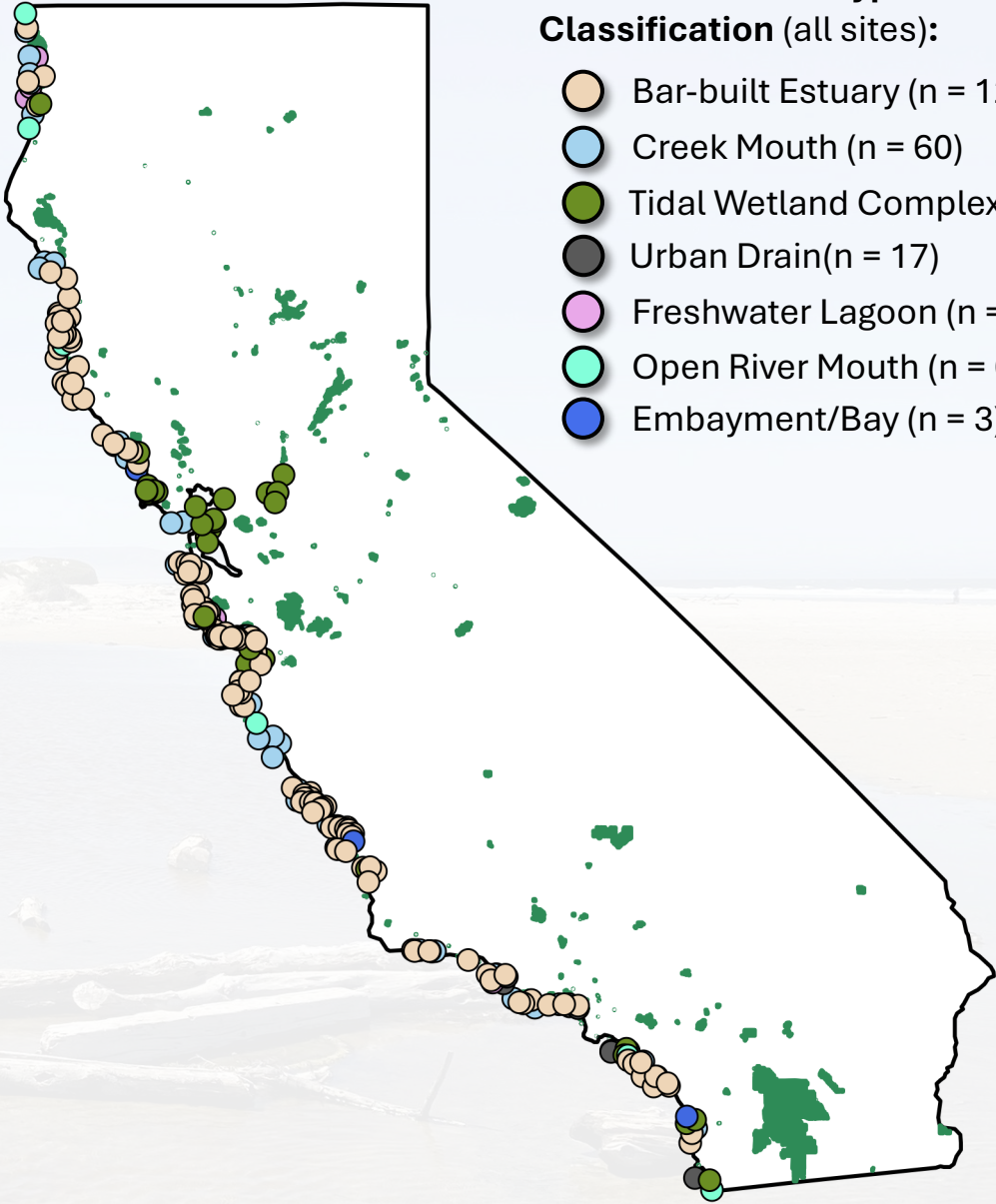
**Data Hub/Source:**

Adapted from O'Connor et al, 2020 – *Development of a BBE monitoring system and resource management framework tool for CA State Parks*  
[https://mlml.sjsu.edu/ccwg/wp-content/uploads/sites/23/2020/03/Final-report\\_BBE-monitoring-plan-for-state-parks\\_2020.3.13.pdf](https://mlml.sjsu.edu/ccwg/wp-content/uploads/sites/23/2020/03/Final-report_BBE-monitoring-plan-for-state-parks_2020.3.13.pdf)



**State Parks Archetype Classification (all sites):**

- Bar-built Estuary (n = 126)
- Creek Mouth (n = 60)
- Tidal Wetland Complex (n = 36)
- Urban Drain(n = 17)
- Freshwater Lagoon (n = 7)
- Open River Mouth (n = 6)
- Embayment/Bay (n = 3)

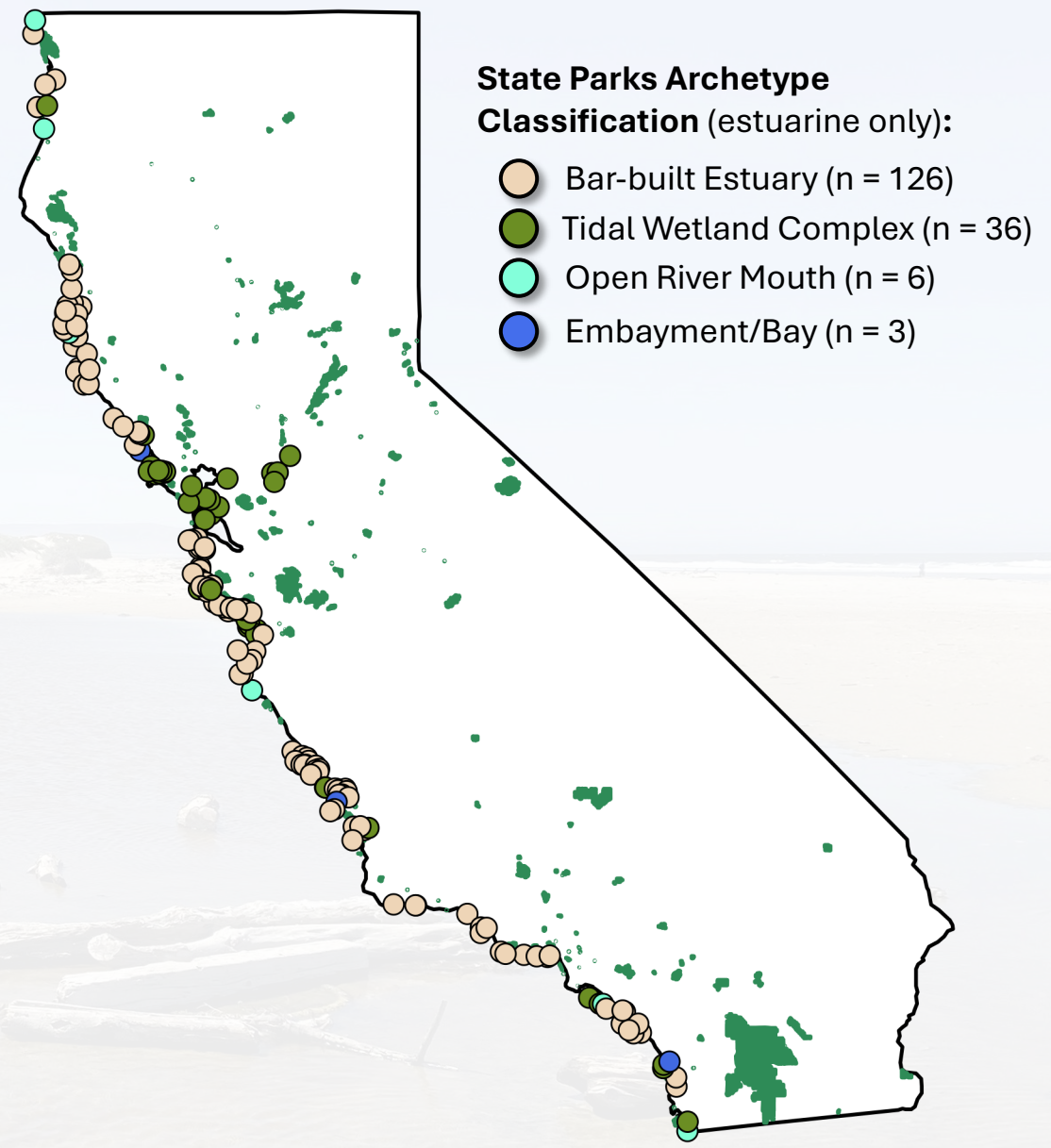




**153** unique estuaries across the CA State Parks System, affiliated with **93** coastal parks.

**75%** of all coastal units of the CA State Parks System are affiliated with an estuary.

**45%** of all CA bar-built estuaries are affiliated with the State Parks System.





- 2 rounds of statewide surveys with local expert State Parks scientists and managers
- Reviewed 40+ qualitative data fields for each estuary site
- Data aggregation into State Parks System-wide estuaries inventory

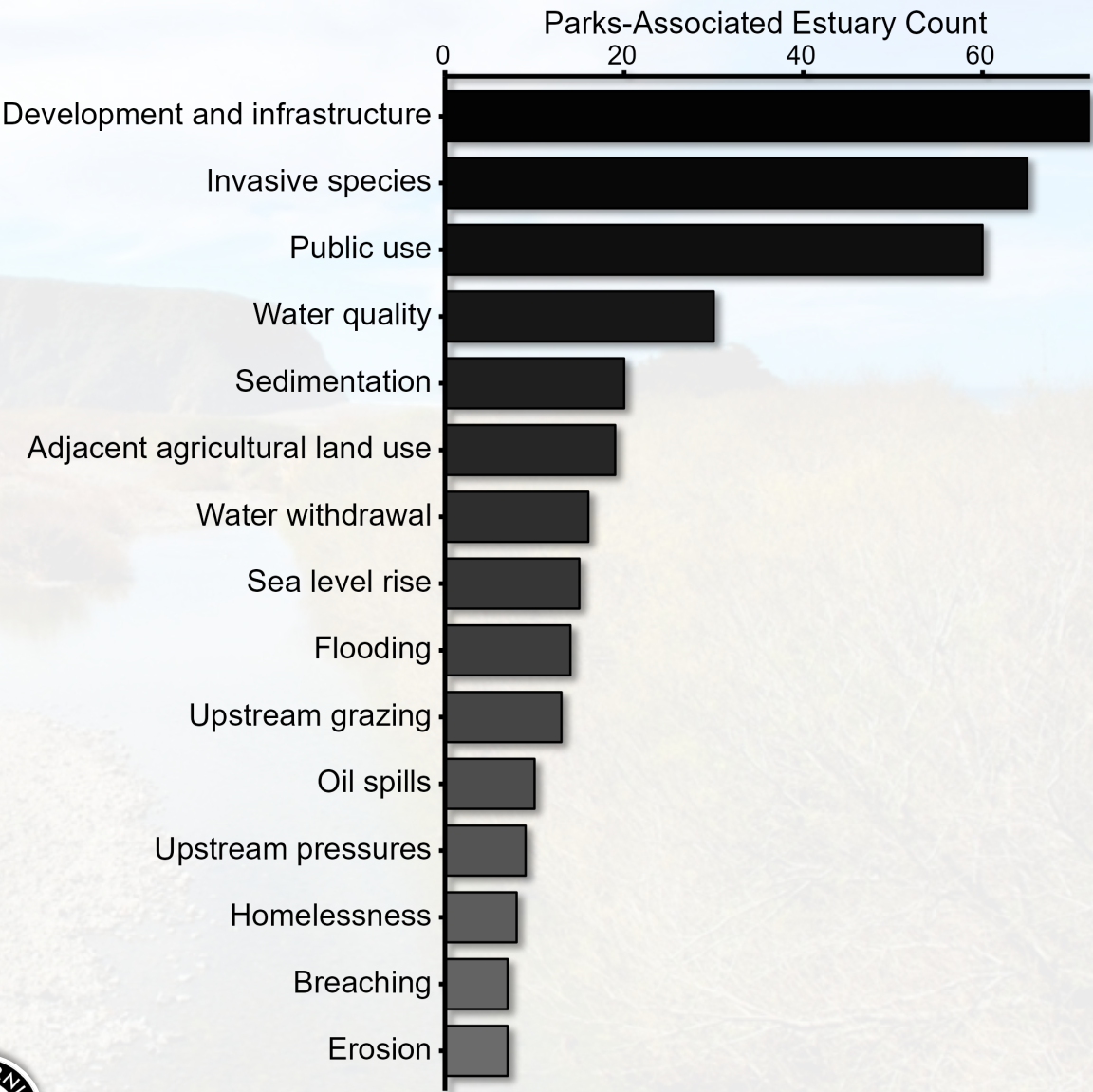






# Natural Resources Stressors:

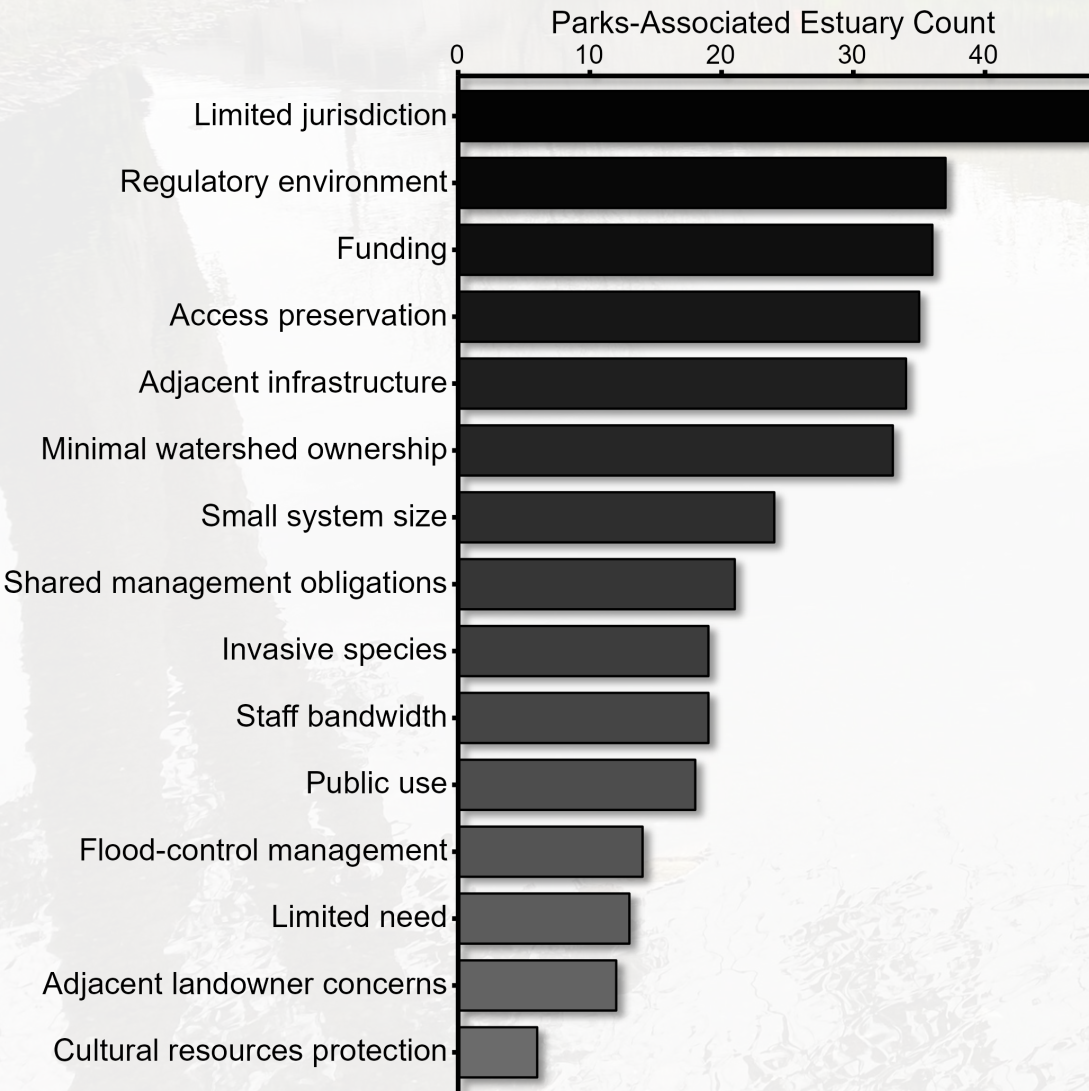
Top 15 of 33+ reported





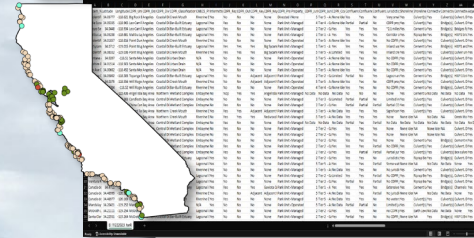
# Management Challenges:

Top 15 of 35+ reported

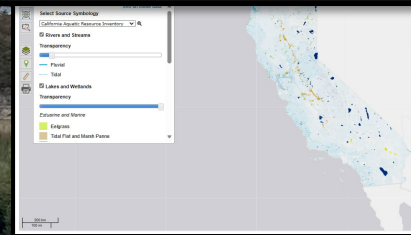




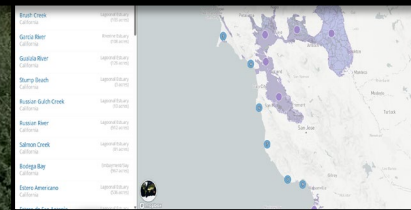
## Existing State Parks Estuaries Inventory



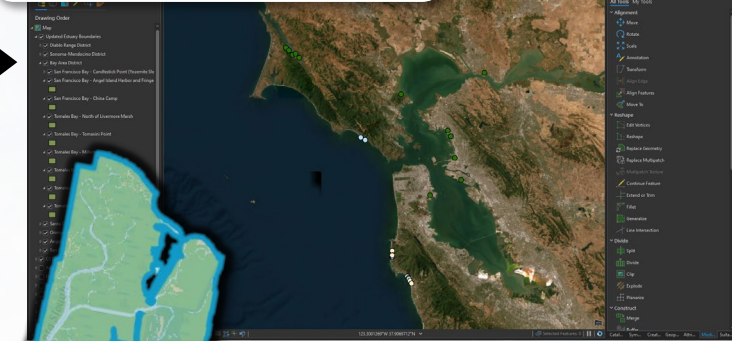
## NWI & California Aquatic Resources Inventory



## PMEP Estuary Extent



## State Parks Estuary Boundaries Layer



Tijuana River | Border Field State Park

## Data Hub/Source:

California Aquatic Resources Inventory (SFEI)

<https://www.ecoatlas.org/regions/ecoregion/statewide>

National Wetlands Inventory (USFWS)

<https://www.fws.gov/program/national-wetlands-inventory>

West Coast USA Current & Historical Estuary Extent (PMEP)

<https://www.pacificfishhabitat.org/data/estuary-extents>





Parks-affiliated estuary  
boundaries encompass **25,386**  
**acres** of tidal wetland, subtidal  
open water, and transitional  
habitat.

**9,895 acres** of which fall within  
the unit boundaries of the State  
Parks System

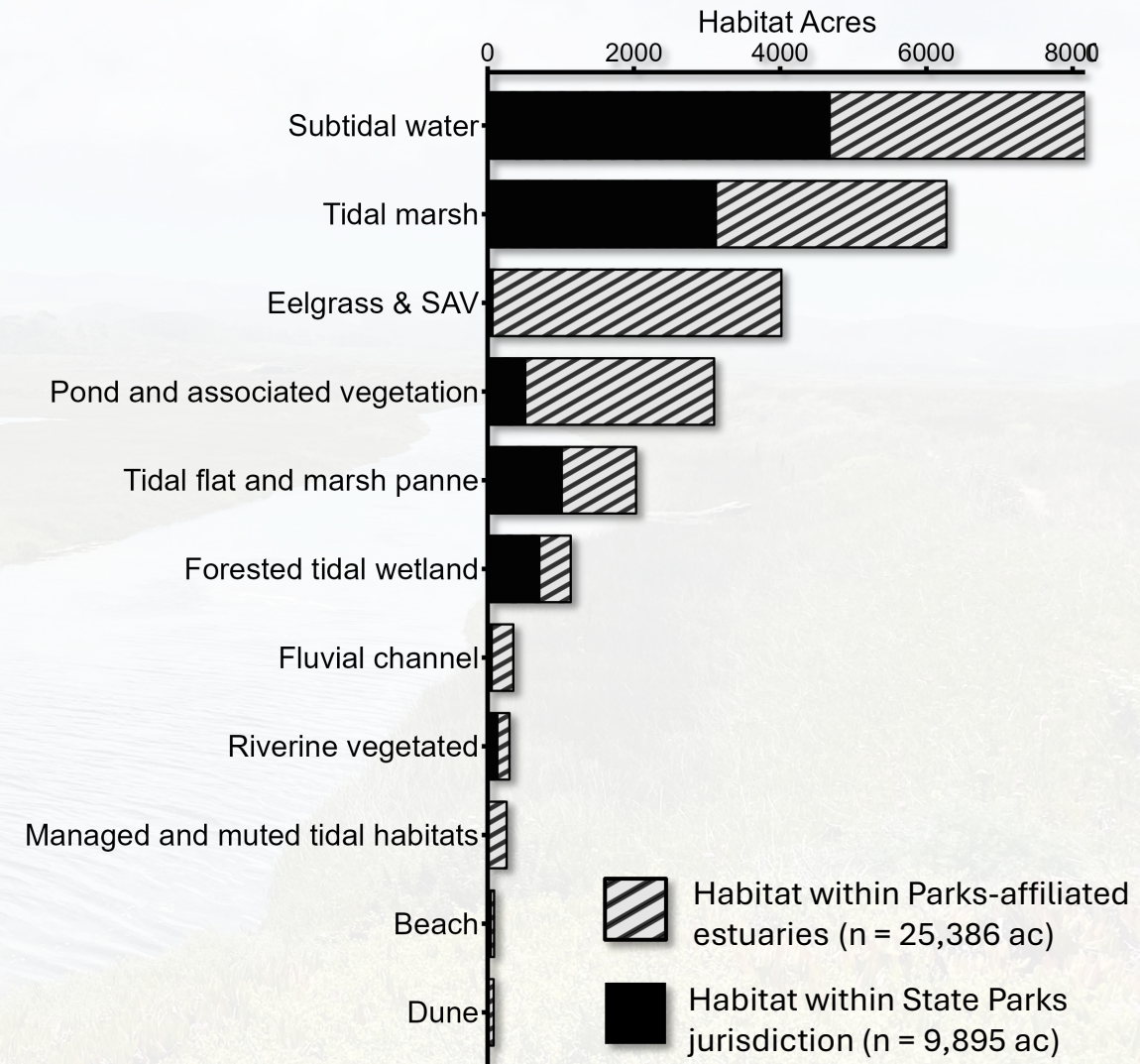




# Habitat Classification (CARI)

Top 11 of 15 CARI major wetland class features

California Aquatic Resources Inventory  
Wetland Class Landcover



## Data Hub/Source:

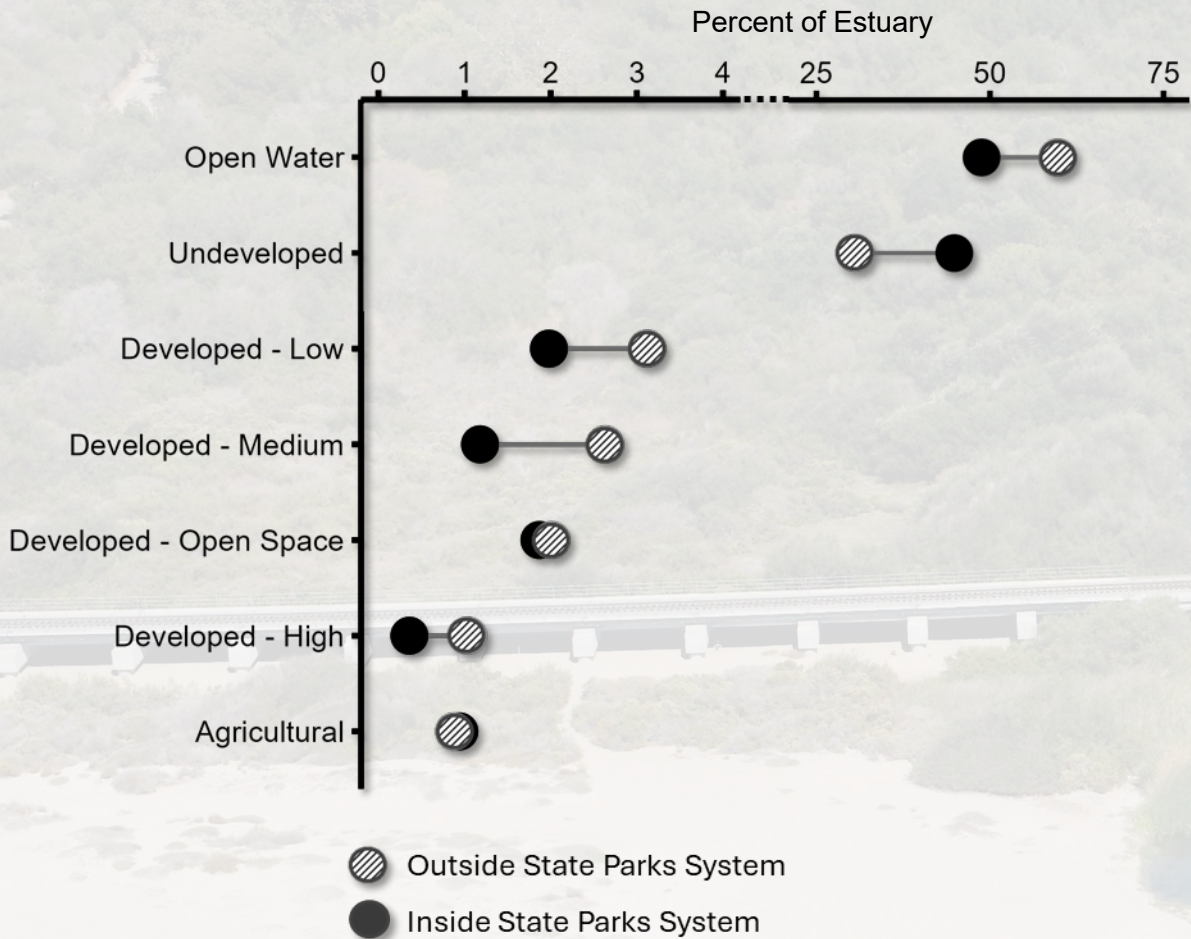
California Aquatic Resources Inventory (SFEI)  
<https://www.ecoatlas.org/regions/ecoregion/statewide>





# Landcover Classification (NLCD)

Relative percent landcover class distribution within State Parks-affiliated estuary boundary, statewide.



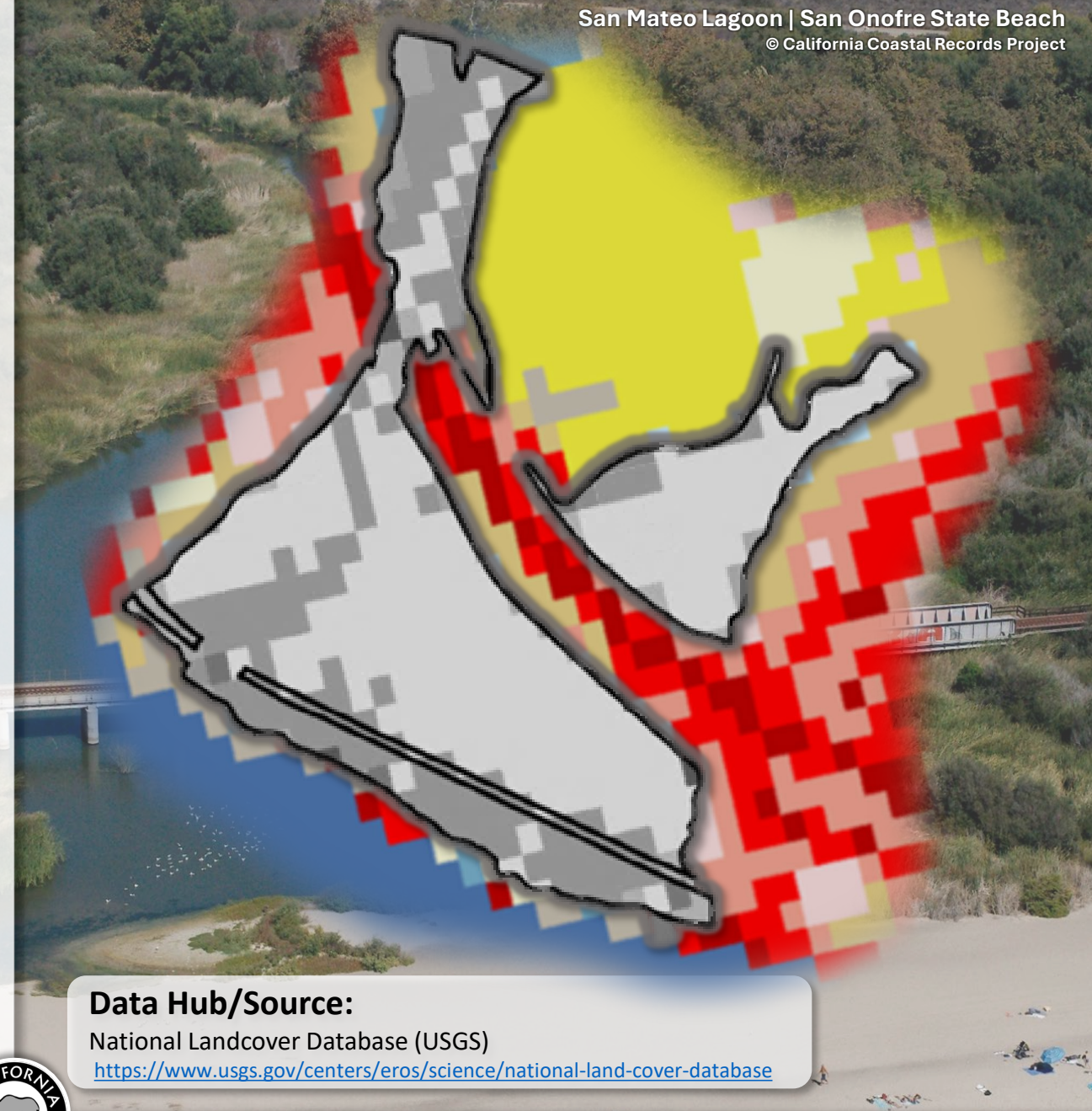
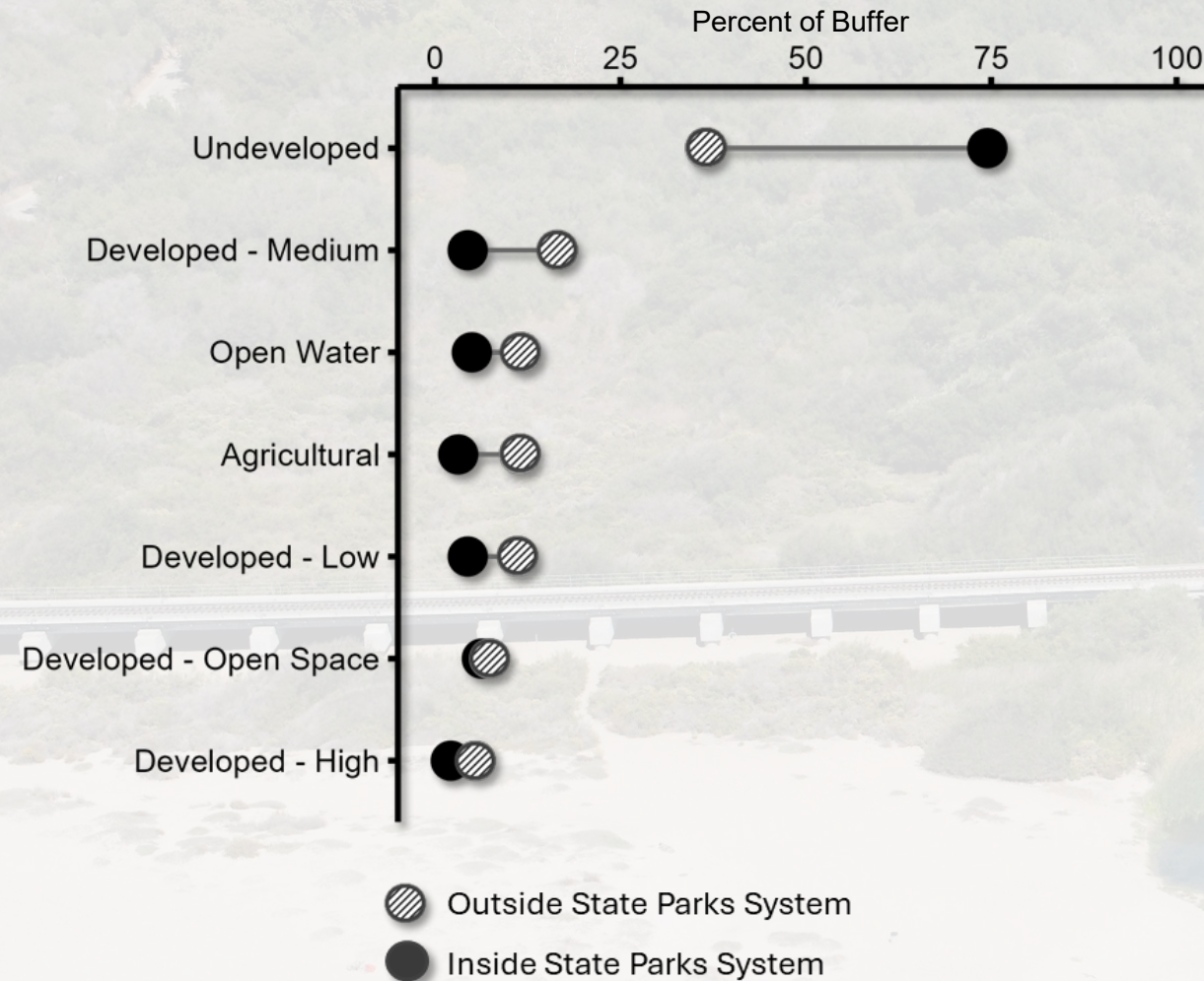
**Data Hub/Source:**  
National Landcover Database (USGS)  
<https://www.usgs.gov/centers/eros/science/national-land-cover-database>





# Landcover Classification (NLCD)

Relative percent landcover class distribution within State Parks-affiliated estuary boundary 250-meter buffer



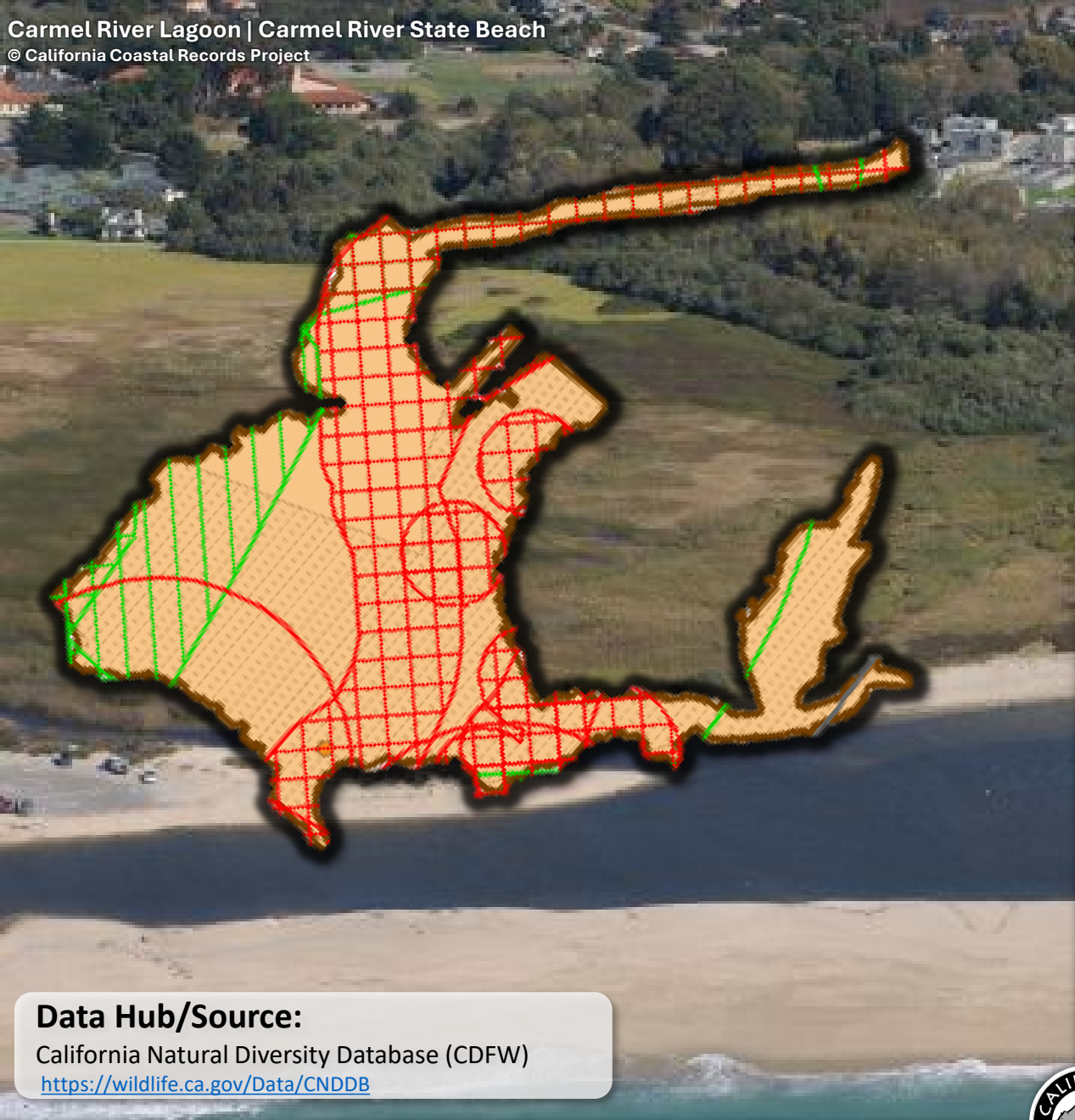
## Data Hub/Source:

National Landcover Database (USGS)

<https://www.usgs.gov/centers/eros/science/national-land-cover-database>





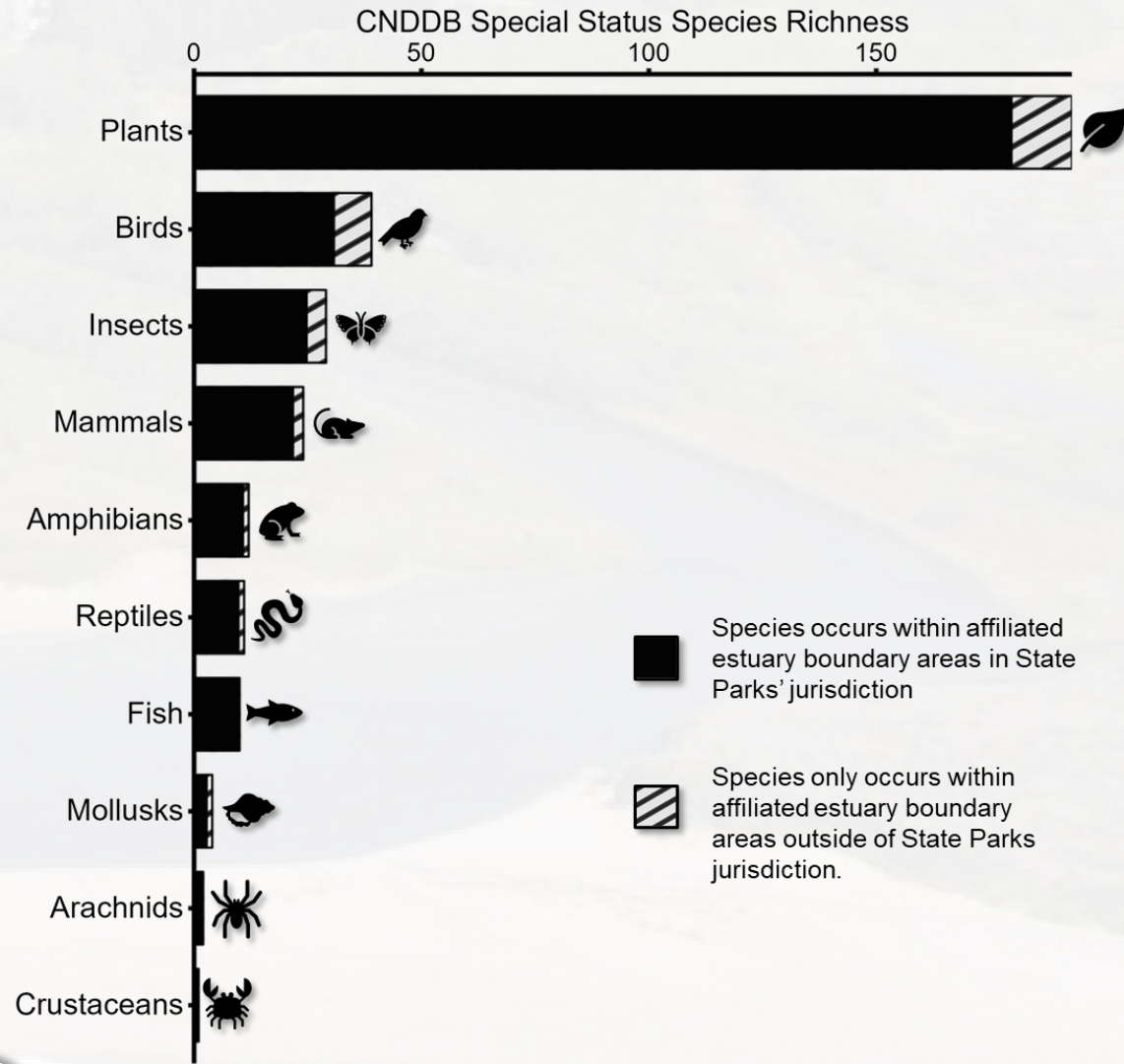


### Data Hub/Source:

California Natural Diversity Database (CDFW)  
<https://wildlife.ca.gov/Data/CNDDDB>

# Special Status Species

Special status species richness across all Parks-affiliated estuaries (S = 325)

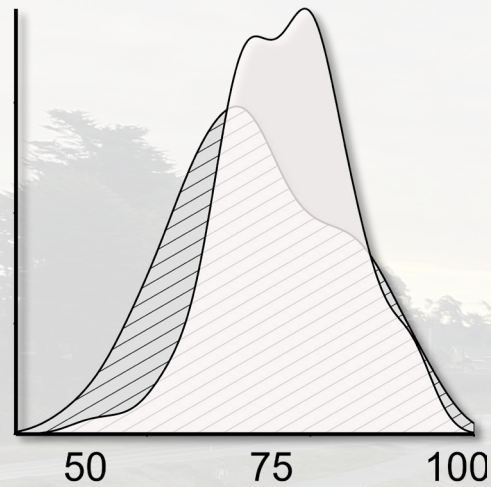




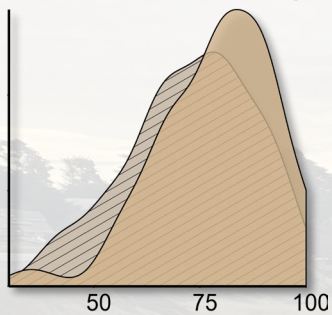
# Estuary Condition

California Rapid (Wetland) Assessment Methodology (CRAM) - Assessment Areas within State Parks-affiliated estuaries (n = 286 assessments).

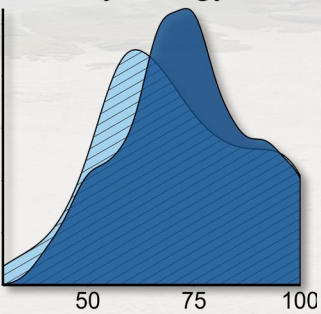
CRAM Index Score



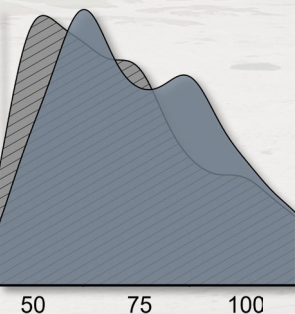
Buffer and Landscape



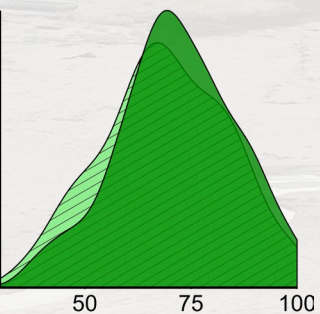
Hydrology



Physical Structure



Biotic Structure



- Assessment Areas within State Parks boundaries
- Assessment Area outside State Parks boundaries

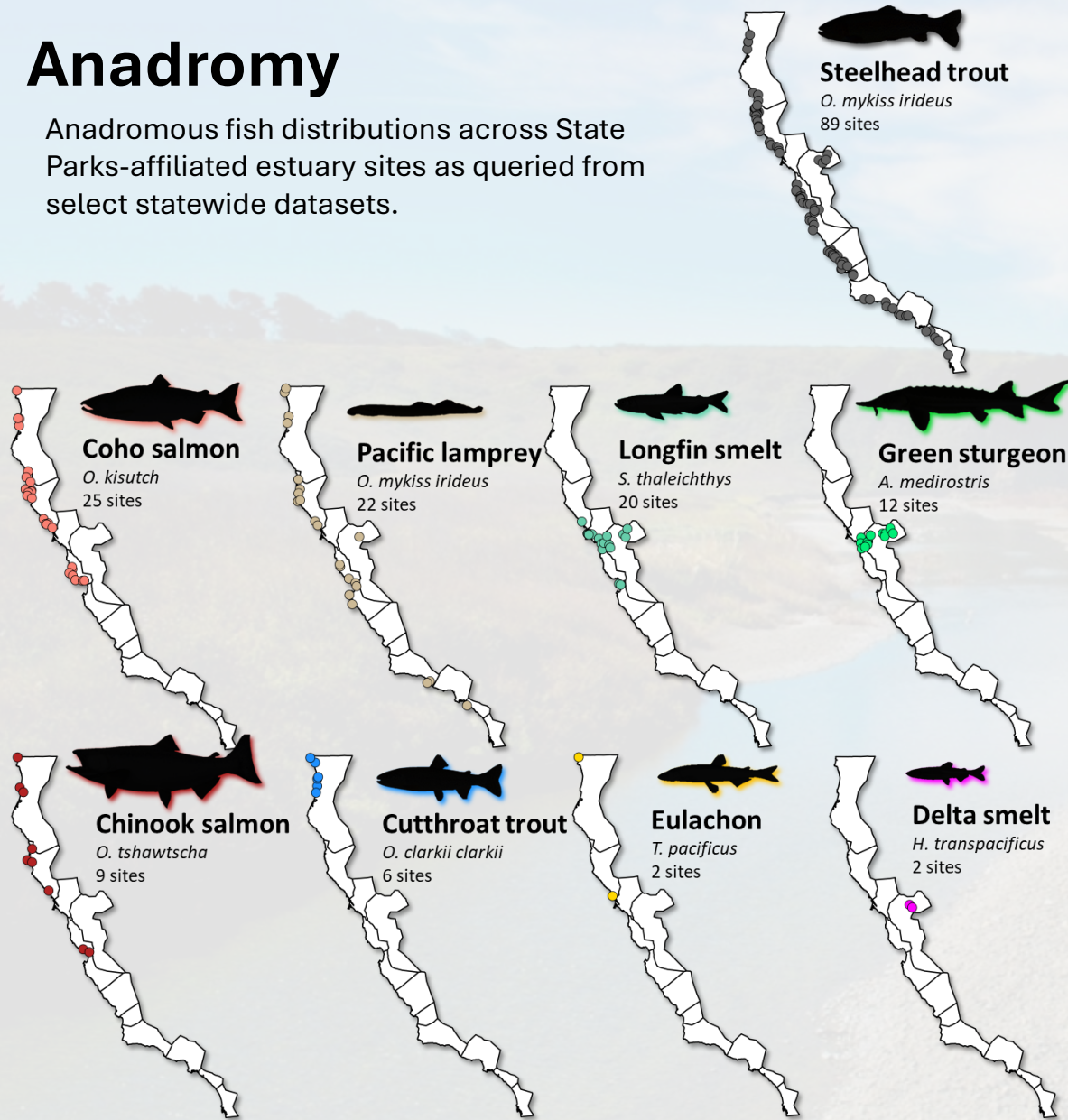


**Data Hub/Source:**  
CA Rapid Wetland Assessment Method (CRAM)  
<https://www.cramwetlands.org/>



# Anadromy

Anadromous fish distributions across State Parks-affiliated estuary sites as queried from select statewide datasets.



## Data Hub/Source:

California Natural Diversity Database (CDFW)

<https://wildlife.ca.gov/Data/CNDDDB>

PMEP West Coast Estuaries Focal Species List (PMEP)

<https://estuaries.pacificfishhabitat.org/explore>

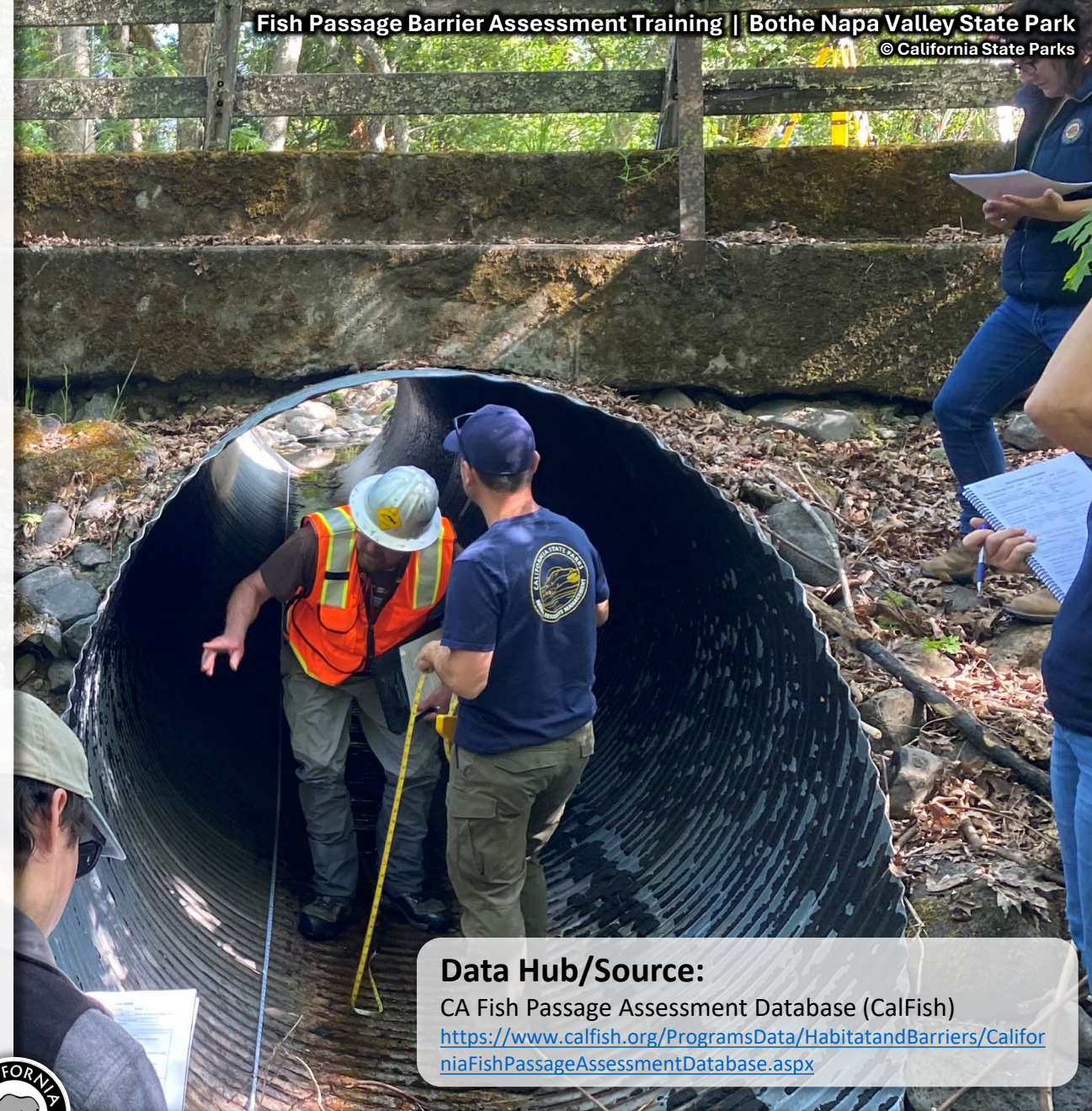
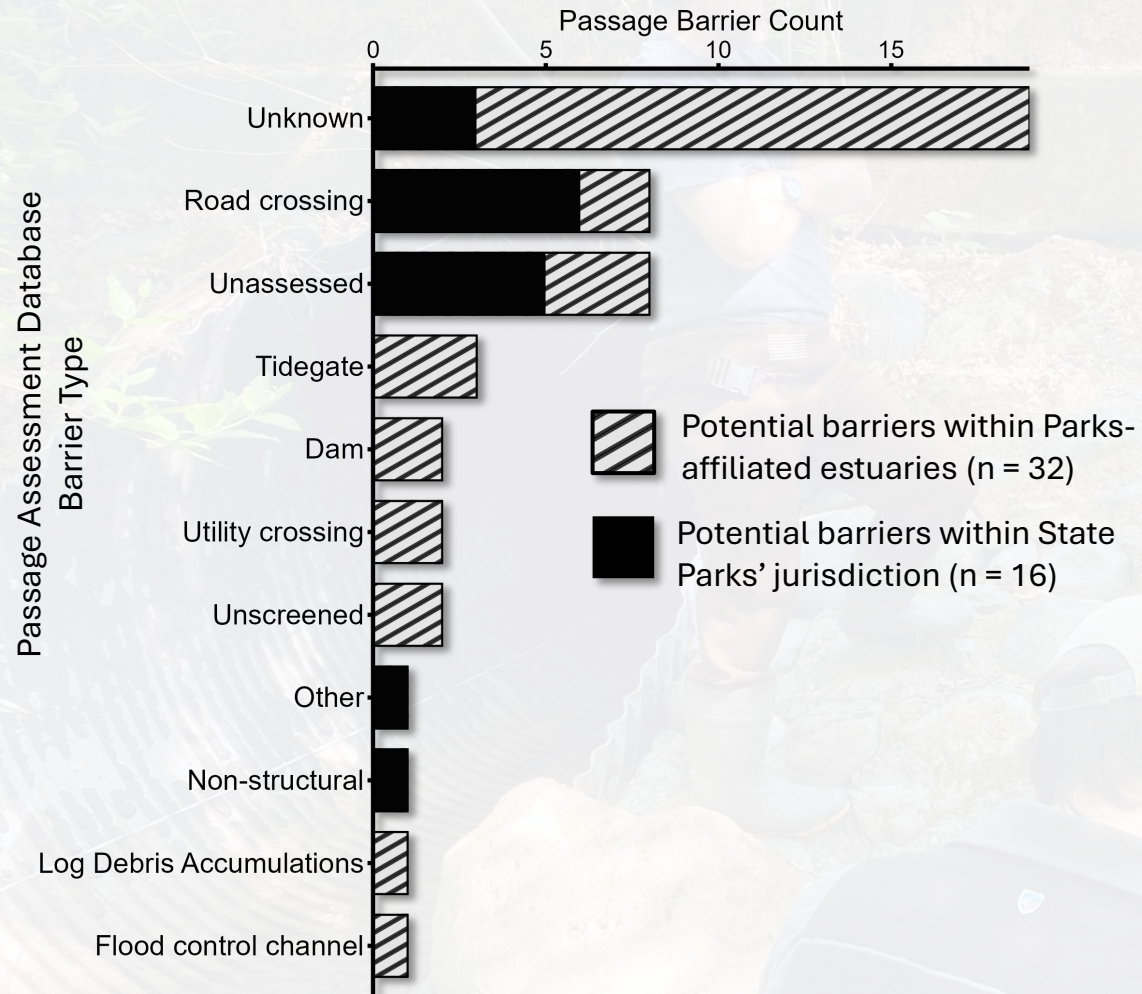
Biogeographic Info & Observing System (BIOS, CDFW)

<https://wildlife.ca.gov/Data/BIOS>





# Fish Passage Barriers



## Data Hub/Source:

CA Fish Passage Assessment Database (CalFish)

<https://www.calfish.org/ProgramsData/HabitatandBarriers/CaliforniaFishPassageAssessmentDatabase.aspx>





# Questions

