California Estuary Monitoring Program

Dr. Jan Walker
Commission
March 6, 2026

Many of you are investing in coastal protection.

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CLIMATE BOND
PROP 4 • 2024
GOVERNOR GAVIN NEWSOM
STATE OF CALIFORNIA

We don't have the tools to prioritize and evaluate the effectiveness and success of those investments at a project site or regionally.

There are three main messages for today.

Estuary Toolkit

Comprehensive assessment program applicable across the state, regional, and local levels.

Broad Consensus

Broad scientific and agency participation and endorsement of the monitoring tools.

Assessments

Opportunity to influence state and local decisions and contribute to future assessment tools.

The **Estuary Monitoring Program** consists of several elements that together can help assess those investments.

- Assessment Framework
- Standard Operating Procedures
- Data Management
- Sampling Design
- Implementation Strategy

State

EMPA
Monitoring Program

Region

SOUTHERN CALIFORNIA
WETLANDS
RECOVERY
PROJECT

Local

SANTA MONICA BAY
NATIONAL ESTUARY PROGRAM

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- Assessment Framework
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State — EMPA Monitoring Program

Region — Southern California Wetlands Recovery Project

Local — Santa Monica Bay National Estuary Program

An assessment framework that is **modular, flexible**, and **adaptable** to accommodate different programmatic needs.

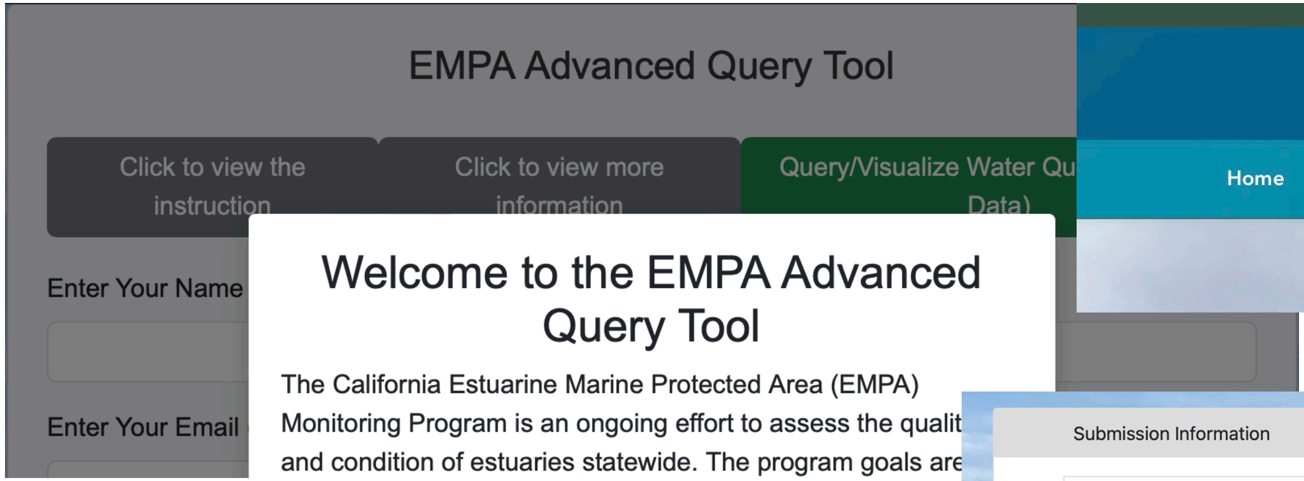
- **Modular**: Programs or agencies can prioritize functions for inclusion based on program needs and estuary type.
- **Flexible:** Multiple indicators can be used to assess a given ecological function.
- **Adaptable:** Functions can be added over time.

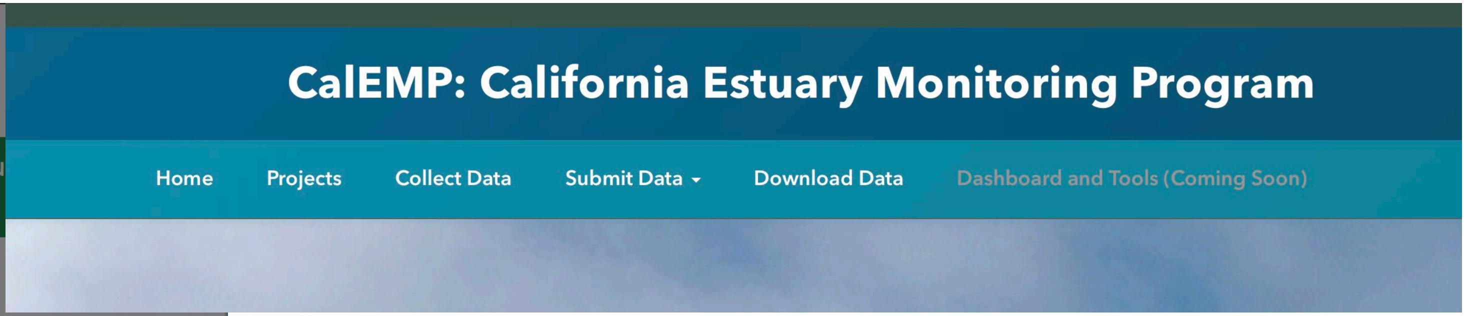
Estuary		**Indicators**		
		Water quality	**Sediment nutrient concentration**	**General community composition (eDNA)**
Functions	Nekton Habitat			
	Primary Production			
	Secondary Production			

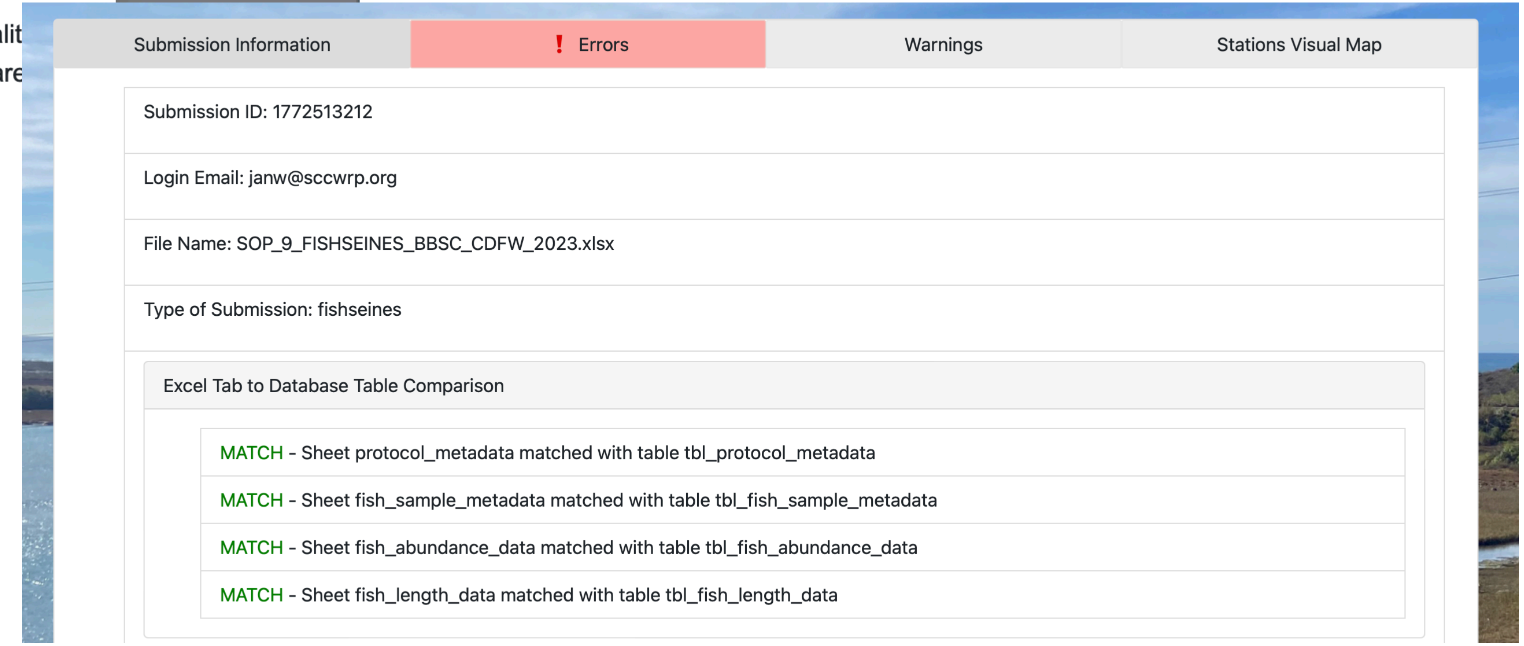
Green squares represent the indicators that can be used to evaluate function

SOP	Indicator	Collection Method
1/2	Water quality: PH, temperature, DO, salinity Water Elevation	Continuous data sensors YSI
3	Sediment nutrient concentration	Sediment cores – TOC/TN
4	General community composition (eDNA)	Water grabs - eDNA Sediment grabs
5	Sediment characteristics	Sediment cores - grainsize
6	Benthic infauna community (small and large)	Sediment cores
7	SAV and Macroalgae surveys	Transects
8/9	Fish community	BRUVs Fish seines
10	Mobile invertebrate community	Traps
11	Marshplain vegetation community	Transects
12	Topographic complexity	RTK surveys
13	Sediment accretion	Feldspar plots
	General habitat condition	CRAM

An **integrated, user-friendly data management system** to increase transparency, accessibility, and quality control.







https://calemp.sccwrp.org

Broad scientific and agency consensus and endorsement of the monitoring tools.

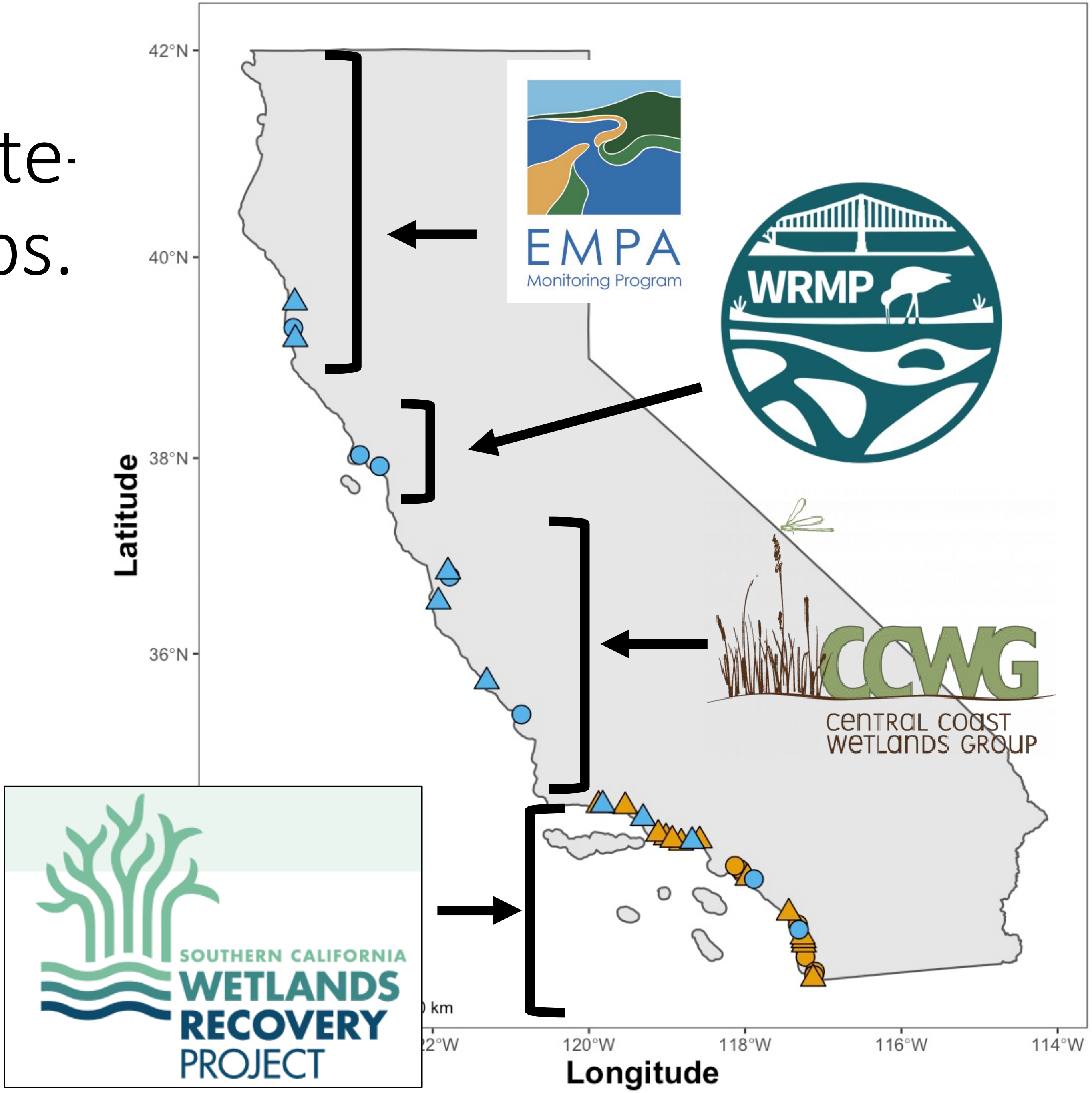
Our vision for implementation is via state-regional-local partnerships.

1. State coordination via the California Estuary Monitoring Workgroup

2. Program management via a single entity (e.g., SCCWRP, SFEI, CCWG)

3. Regional science management and monitoring

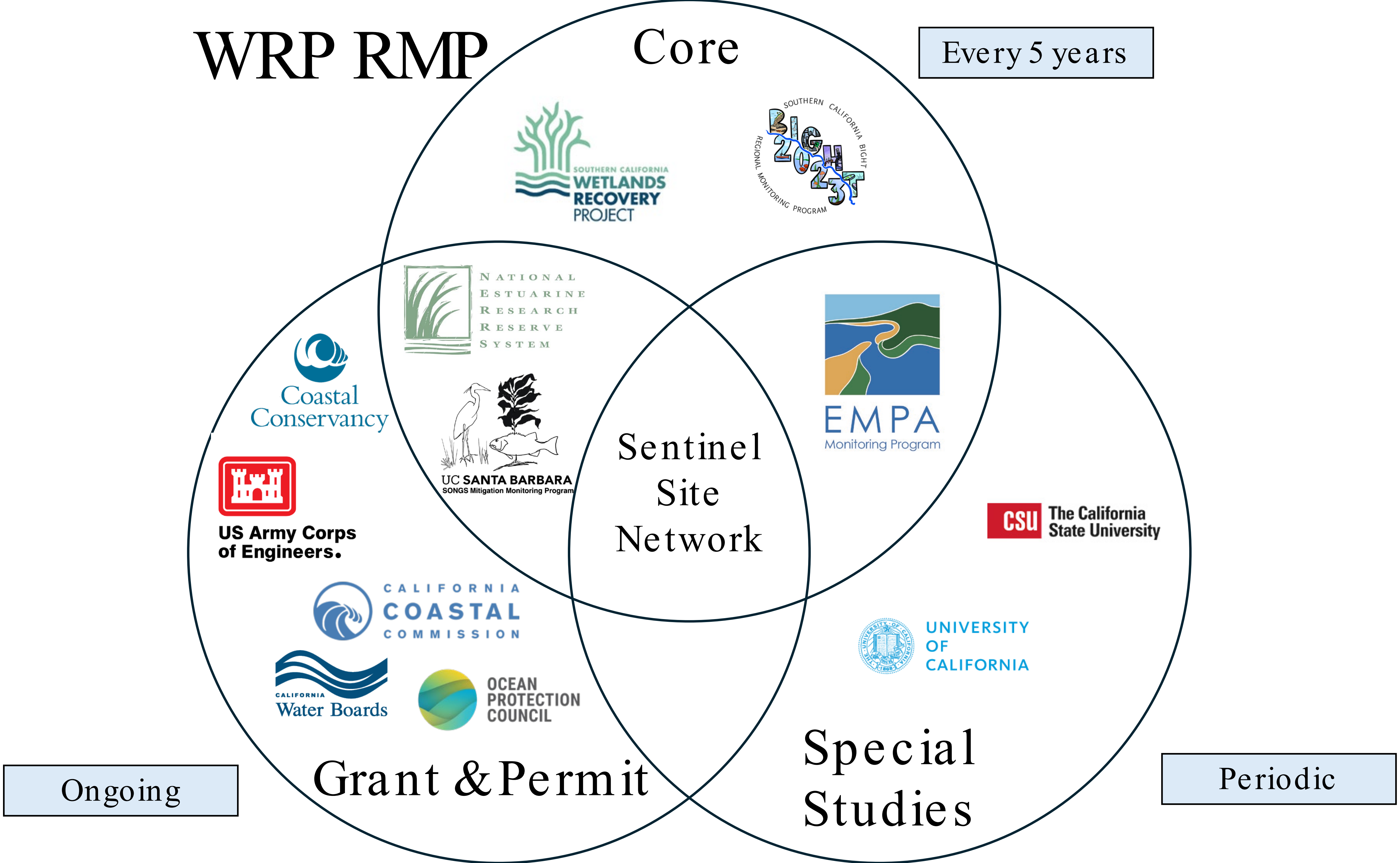
4. Local implementation via project-based monitoring



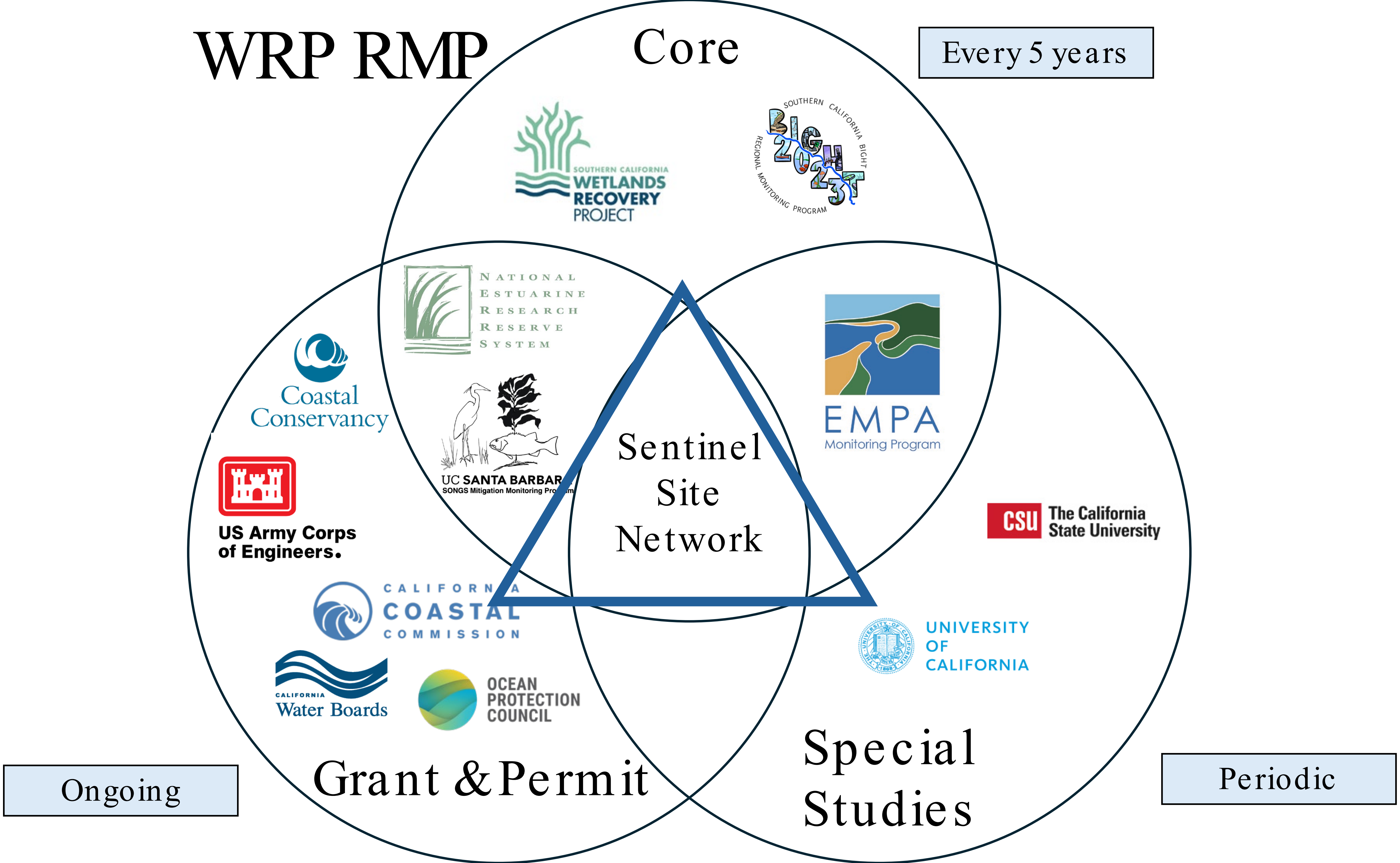
SOUTHERN CALIFORNIA
WETLANDS RECOVERY
PROJECT

A cooperative of 18 public agencies working together to protect and restore Southern California's coastal resources

WRP RMP



Core
Every 5 years
SOUTHERN CALIFORNIA WETLANDS RECOVERY PROJECT
SOUTHERN CALIFORNIA BIGHT 2023 REGIONAL MONITORING PROGRAM
NATIONAL ESTUARINE RESEARCH RESERVE SYSTEM
EMPA Monitoring Program
Coastal Conservancy
UC SANTA BARBARA
SONGS Mitigation Monitoring Program
Sentinel Site Network
US Army Corps of Engineers.
CSU The California State University
CALIFORNIA COASTAL COMMISSION
UNIVERSITY OF CALIFORNIA
CALIFORNIA Water Boards
OCEAN PROTECTION COUNCIL
Grant & Permit
Special Studies
Ongoing
Periodic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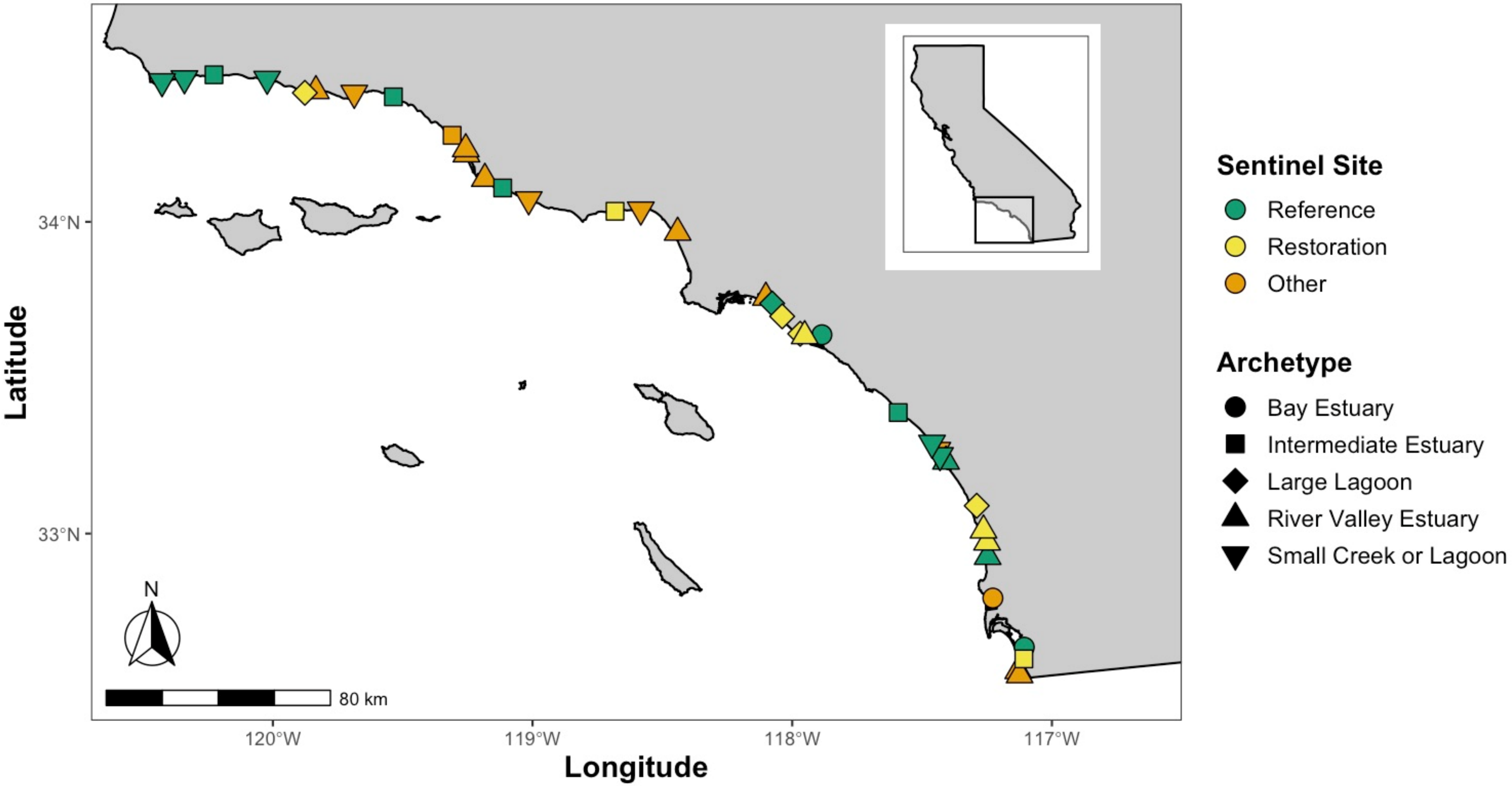
A **sentinel site network** will be used to provide a consistent frame of reference.



The program is being used to assess investments.

	Arroyo Sequit	Big Sycamore	Zuma Canyon	Topanga Canyon	Malibu Canyon
Trophic Food Web Support	↘	↘	↗	------	↗
Nursery Habitat Provisioning for Fish	------	↘	↗	------	------
Forage and Breeding Function for Birds	------	------	------	------	------
Habitat Structure and Complexity	------	------	↗	------	↗
Vegetation Community	------	------	------	------	↗
SLR Amelioration	------	------	↗	------	------

Status

Poor | Below Average | Average | Good | Excellent

Trend

↗ Improving | ↘ Declining | ------ Consistent

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