

# **The Marine Life Protection Act and the Nexus with Water Quality Protection**

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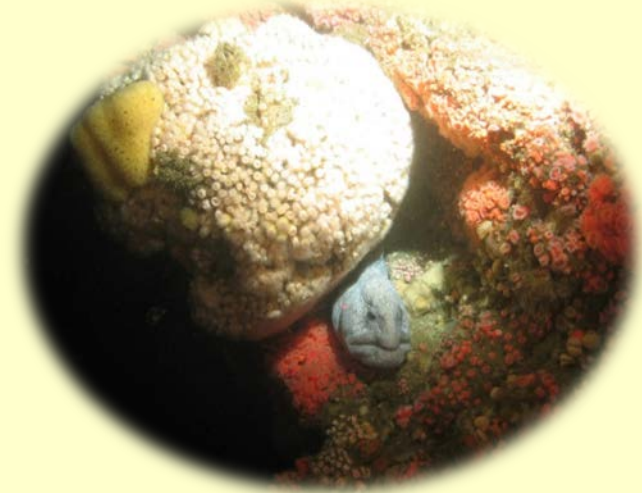




# Overview

## *Department*

- The Marine Life Protection Act (MLPA)
- Design and Designation of the Marine Protected Areas
- Management of MPAs



## *Ocean Science Trust*

- MPA Monitoring
- Nexus to Water Quality





# Background: Mandate for MPAs

## Marine Life Protection Act (MLPA)

- ❖ Signed into California State Law in 1999
- ❖ Mandated the redesign of California's system of MPAs to meet specific goals
- ❖ Focuses on marine life, habitats, and ecosystems

## Marine Managed Areas Improvement Act (MMAIA)

- ❖ Signed into State Law in 2000
- ❖ Simplified and clarified designations of Marine Manage Areas (MMAs) - includes MPAs and ASBSs





# MLPA Goals and Requirements

## Summary of MLPA goals:

- Protect biodiversity, habitats, and ecosystems
- Improve recreational and educational opportunities
- Ensure MPAs managed as a network
- Requires monitoring and evaluation

## Requirements include:

- Science based process
- Involvement of stakeholders, other interested parties
- Adaptive management

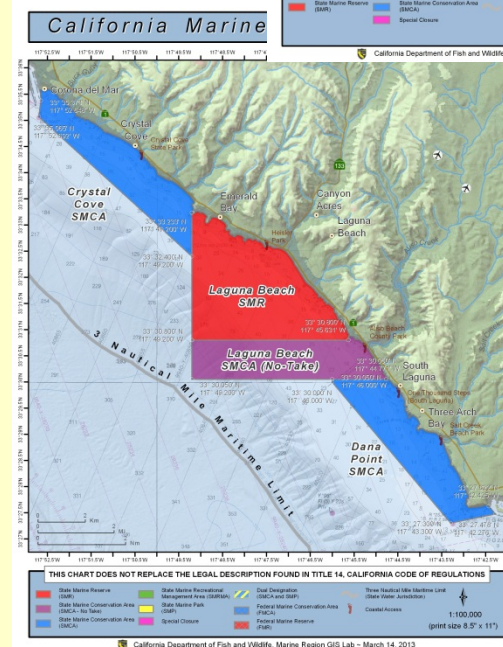
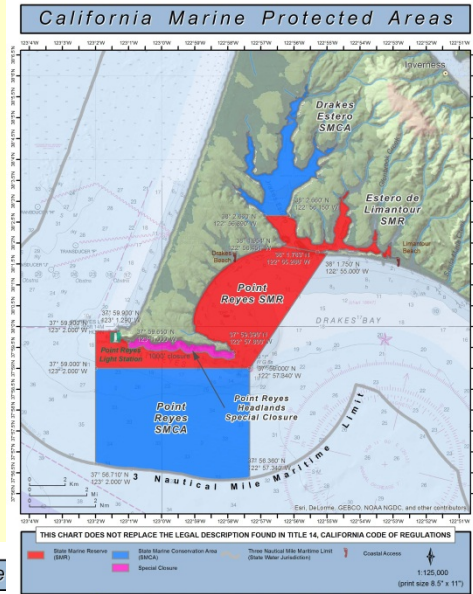




# MPA Designations

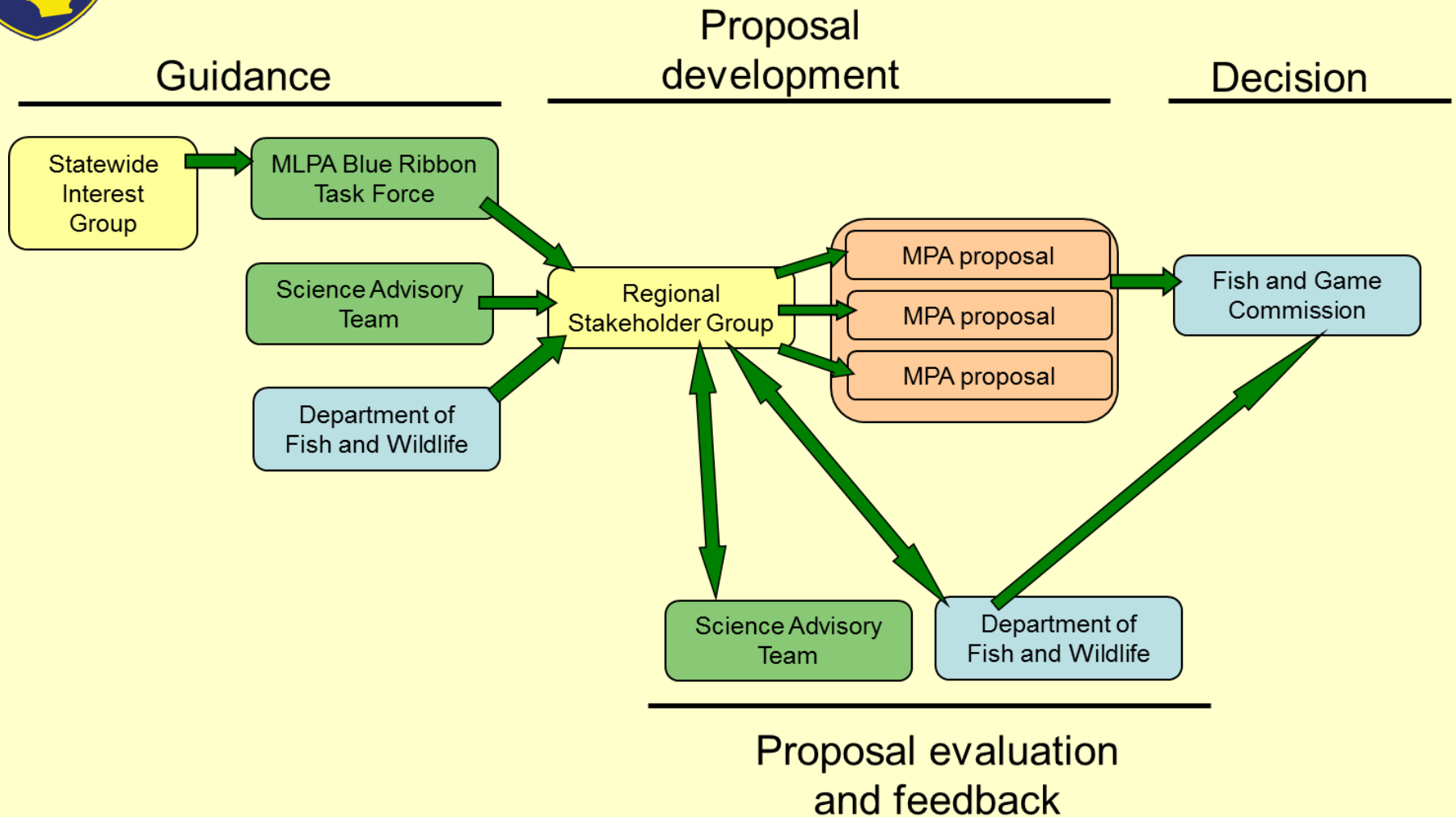
## MPA and MMA Designations:

- State Marine Reserve (SMR)
  - State Marine Park (SMP)
  - State Marine Conservation Area (SMCA)
  - State Marine Recreational Management Area (SMRMA)
  - Special Closures
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- **Study Regions** - State divided into five regions for planning purposes



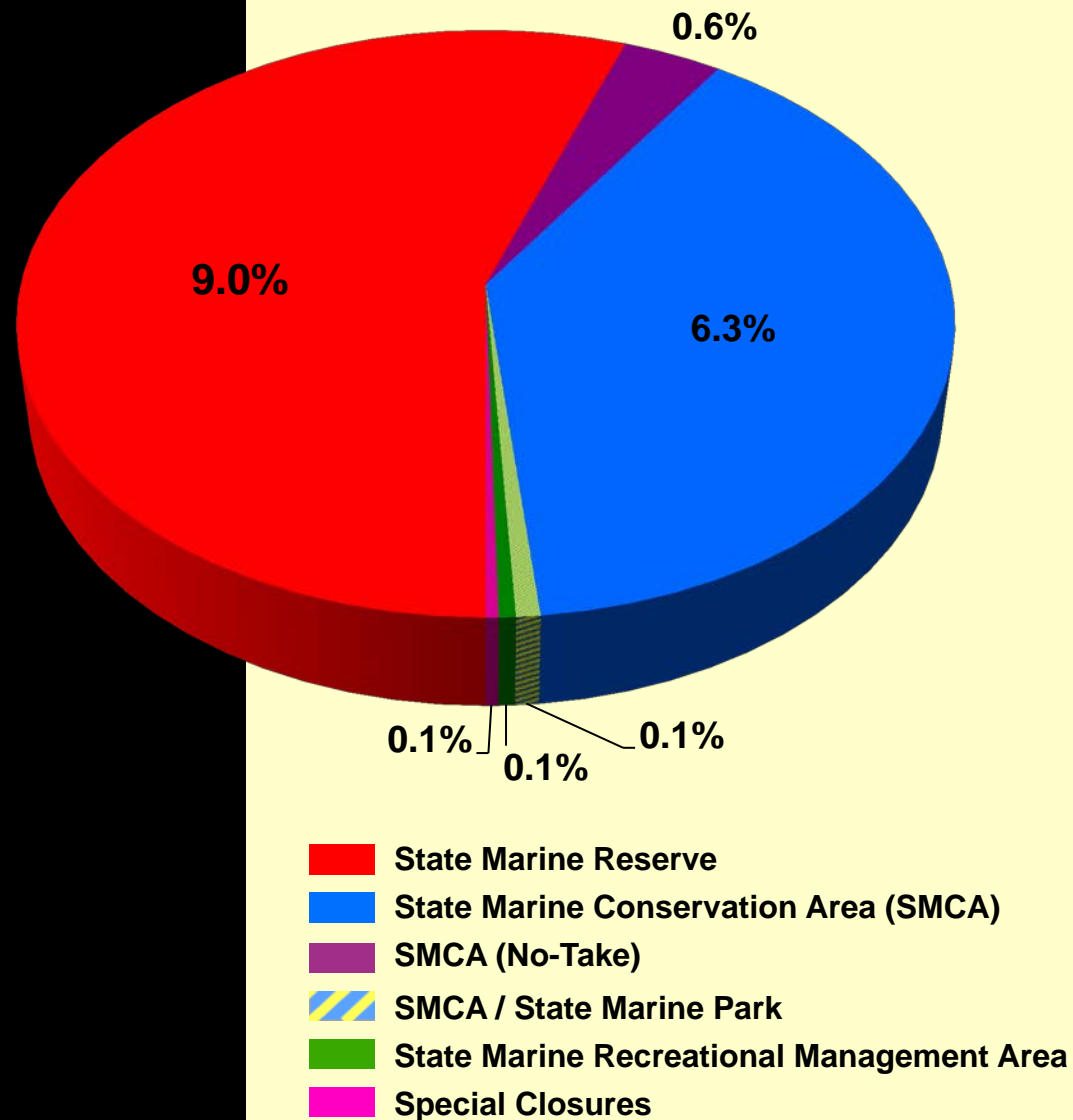


# MPA Re-designation Process





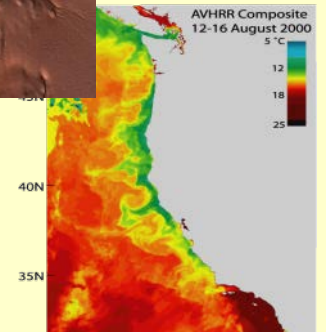
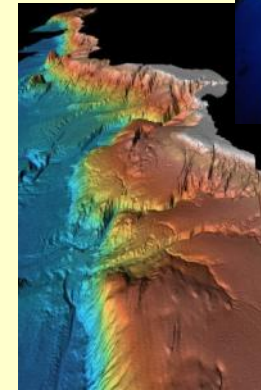
# California's MPA Network





# Role of Science

- ❖ Legal Mandate
- ❖ Science Advisory Team (SAT) of diverse experts
- ❖ Simple and credible MPA scientific design guidelines and evaluations
- ❖ Stakeholders designed areas with scientific input (plus policy and agency input)







# Water Quality Considerations

- **Central Coast-** Water quality was not considered
- **North Central Coast-** Overview of water quality concerns and protections reviewed
  - No formal evaluation conducted on MPA proposals
- **South Coast-** More formal workgroup formed to develop criteria and subsequent evaluations on MPA proposals
- **North Coast-** Followed the South Coast process and continued water quality evaluations on MPA proposals.



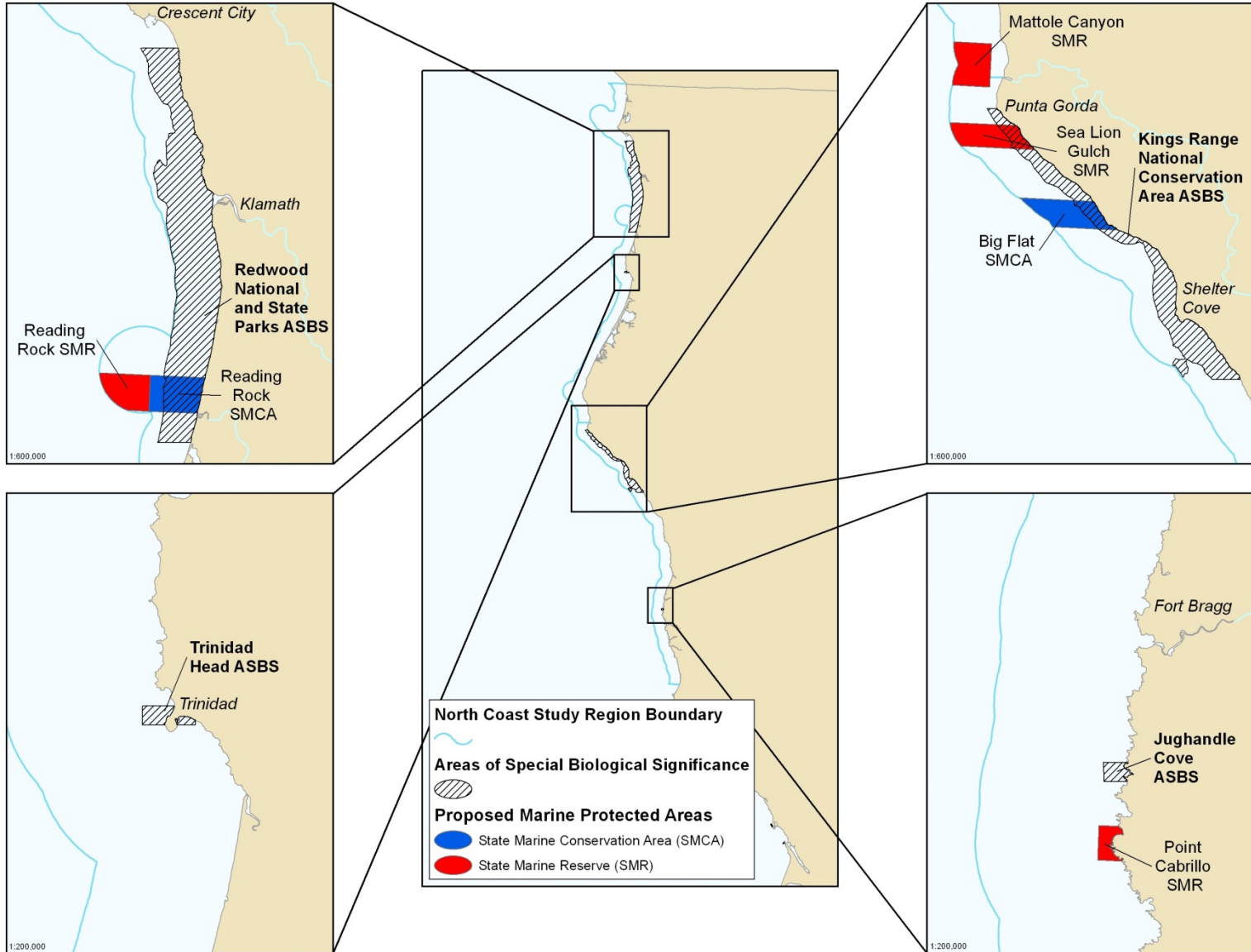
# Water Quality Considerations

## **SAT Recommended:**

- Co-location, where possible, with State Water Quality Protection Areas (SWQPAs)
- Avoiding, where possible, areas of water quality concern:
  - Urban stormwater and nonpoint sources of pollution
  - Wastewater discharge sources
  - Other poor water quality sites specific to the region



# North Coast ASBSs and MPA Co-locations





# Water Quality Considerations

## State Water Quality Control Board Resolution

### Resolution NO. 2010-0057 – 2012

- Directed State Board staff to work with Regional Water Boards to develop recommendations for new SWQPAs in MPAs
- Ocean Plan was amended in 2012 to reflect contents of the resolution



# MPA Management Program



Outreach and Education



Research and Monitoring



Enforcement and Compliance



Policy and Permitting



# MPA Management Program

## Partnerships

Department works with a large and diverse group of partners. Including but not limited to:

- Tribal governments
- Federal, State, and regional government agencies
- Non-governmental organizations
- Fishing industry groups
- Academic Researchers
- Collaborative Network
- Citizen science groups





# MPA Management Program

## Statewide MPA Leadership Team



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COMMISSION



CALIFORNIA STATE  
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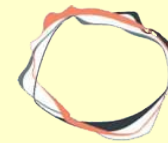


# MPA Management: Monitoring

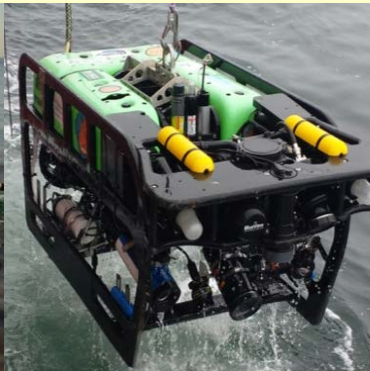
## ➤ Monitoring of the MPAs

- Collaboration
- Regional Baseline monitoring
  - Framework for Monitoring Plans

## ➤ Long-term monitoring



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# Monitoring California's Marine Protected Areas



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**Working across boundaries | Building trust & understanding in science**

## **LINKED TO THE STATE**

We're an independent non-profit, created through legislation.

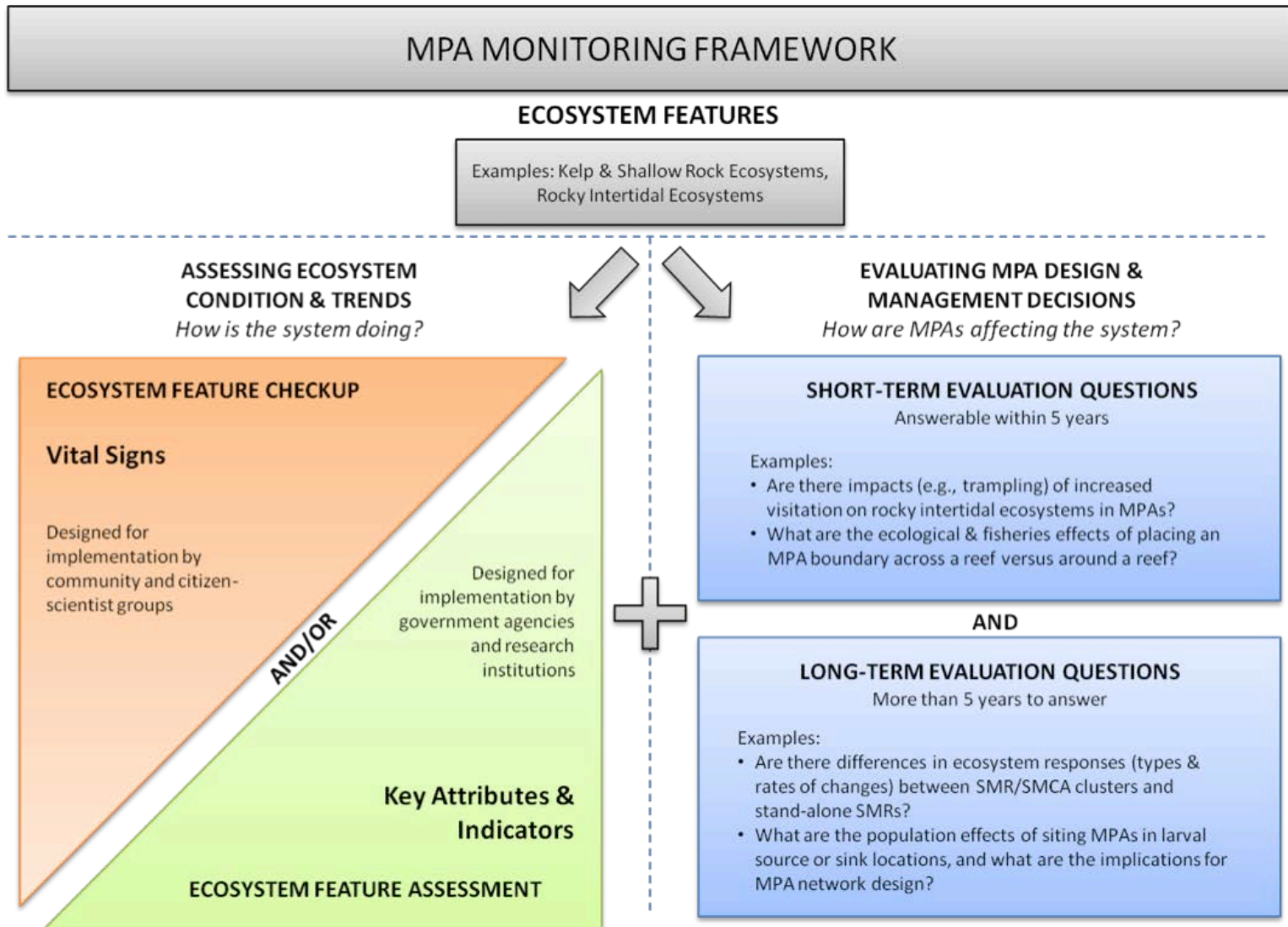
## **MAKING SCIENCE USEFUL**

We empower broad participation in management with useful science and knowledge.

## **PARTNERS IN GOOD GOVERNANCE**

We're independent of academia and the state, but linked to both.

# A new framework for monitoring



# Implemented across the state

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Statewide MPA Monitoring Framework

Statewide Action Plan  
*(underway in 2017)*

Regional MPA Monitoring Plans

MPA Monitoring

Baseline Monitoring

Sharing Results

Management Review

Long-term Monitoring

# Establishing a reference point

## Regional MPA Baseline Programs

### *Objectives*

- Establish a baseline of ecological & socioeconomic conditions
- Assess any initial changes following MPA implementation

*Supported by \$16M state investment*

*Program Management Team:*



# A partnerships-based approach

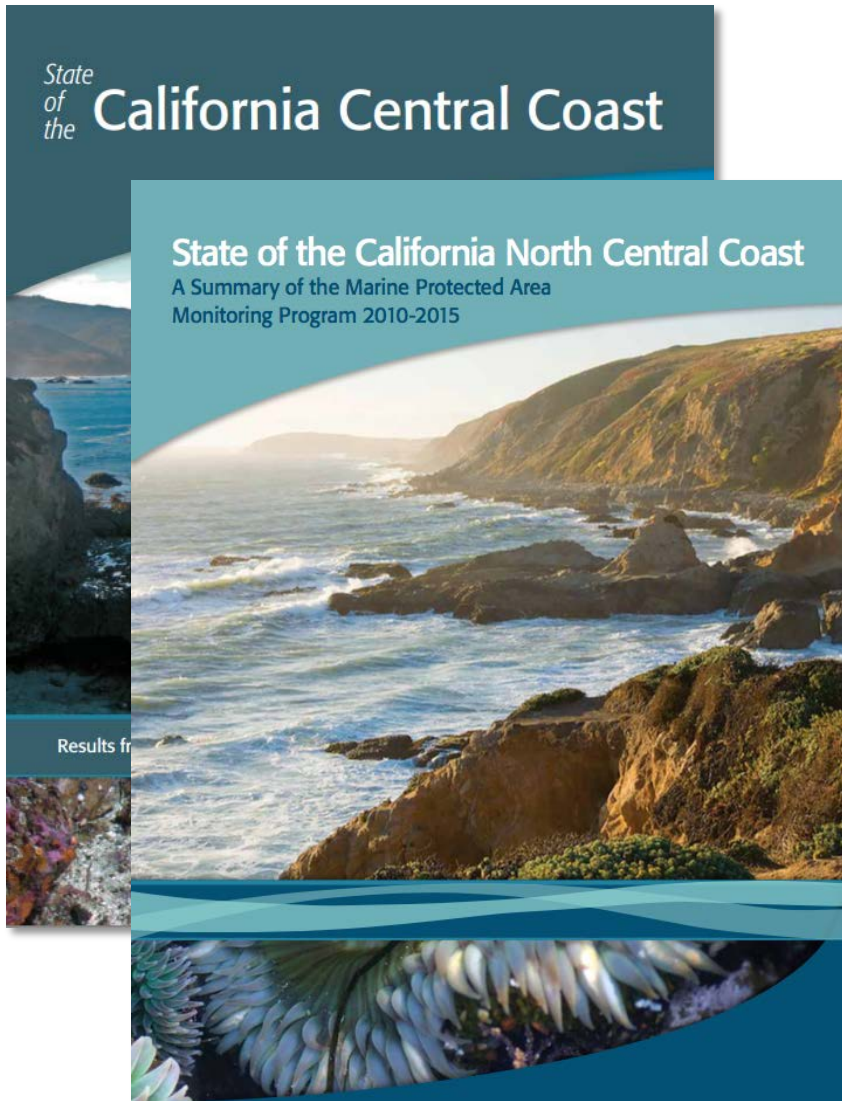


# Initial results are encouraging.



State of the California Central Coast

## State of the California North Central Coast

A Summary of the Marine Protected Area Monitoring Program 2010-2015



Results from



## California North Central Coast

A Regional Snapshot



### Baseline Highlights from California's South Coast Kelp and Shallow Rock Ecosystems

#### Monitoring Life Under the Canopy

**About This Snapshot Report**  
This report highlights some key projects in California's South Coast at the time of marine protected peer-reviewed technical reports.

### Baseline Highlights from California's South Coast Rocky Intertidal Ecosystems

#### Monitoring Life at the Interface

**About This Snapshot Report**  
This report highlights some key scientific findings from the rocky intertidal monitoring project, one of ten baseline projects in California's South Coast region! Included facts and figures are derived from the project's peer-reviewed technical reports, which can be found, along with associated data, at [OceanSpaces.org](http://OceanSpaces.org).

Snapshot Report Vol 1

#### LIFE AT THE INTERFACE

Rocky intertidal ecosystems exist where the rocky shore meets the ocean, and are home to familiar species such as sea stars, limpets, mussels, anemones, snails, crabs, and seaweeds. In the South Coast region, these ecosystems cover approximately one-quarter of the coastline, including rocky cliffs, boulder rubble, and wave-cut platforms.

By occupying the space between land and sea, rocky intertidal ecosystems are vulnerable to a wide range of threats, including sea level rise, increasing water and air temperatures, ocean acidification, oil spills, coastal development, and the impacts of daily visitors. Along with sandy beaches, the rocky intertidal is one of the most easily accessible marine environments for people. These visitors are attracted to the rocky intertidal for a variety of activities such as tidepooling, scientific study, and harvesting organisms. People also pass through the rocky intertidal to pursue recreational activities in other habitats.



#### Easily Accessible, Easily Impacted

The large number of visitors to the rocky intertidal inevitably leads to impacts, whether through physical disturbance or extraction. Researchers determined that the species and sizes of individuals present at particular sites were influenced by the degree of human access. For example, owl limpets were smaller at sites with high human access, regardless of whether the sites were inside or outside marine protected areas (MPAs).



# Baseline data serve the state broadly

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## **North Central Coast MPA baseline data + CDFW data**

*informed abalone fishery management response*

## **South Coast MPA baseline data**

*informing damage assessments following the Refugio oil spill*

## **Statewide MPA baseline data**

*informing impact assessments of sea star wasting syndrome*



# And extend beyond the data.

## Broadening participation

- tribal governments
- fishermen

## Bringing together multiple sources of knowledge

- traditional knowledge
- fishermen's knowledge
- citizen science



# Bridging water quality & MPA monitoring

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## Examples from the South region

- Regional Water Quality Monitoring Program (Bight '13) incorporates MPA questions.
- New Fellow builds shared capacity between Ocean Science Trust & SCCWRP.
- New research begins to parse the effects of water quality impairment & fishing on reef fish communities.

# Bridging water quality & MPA monitoring

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## MPA Statewide Leadership Team Work Plan (2015-2018)

Action 2.1: *“align marine & water quality protected area monitoring programs to leverage resources, capacity and expertise across mandates and jurisdictions”*



Erick Burres



Sean Craig



Scott Martin

# Building a durable long-term program

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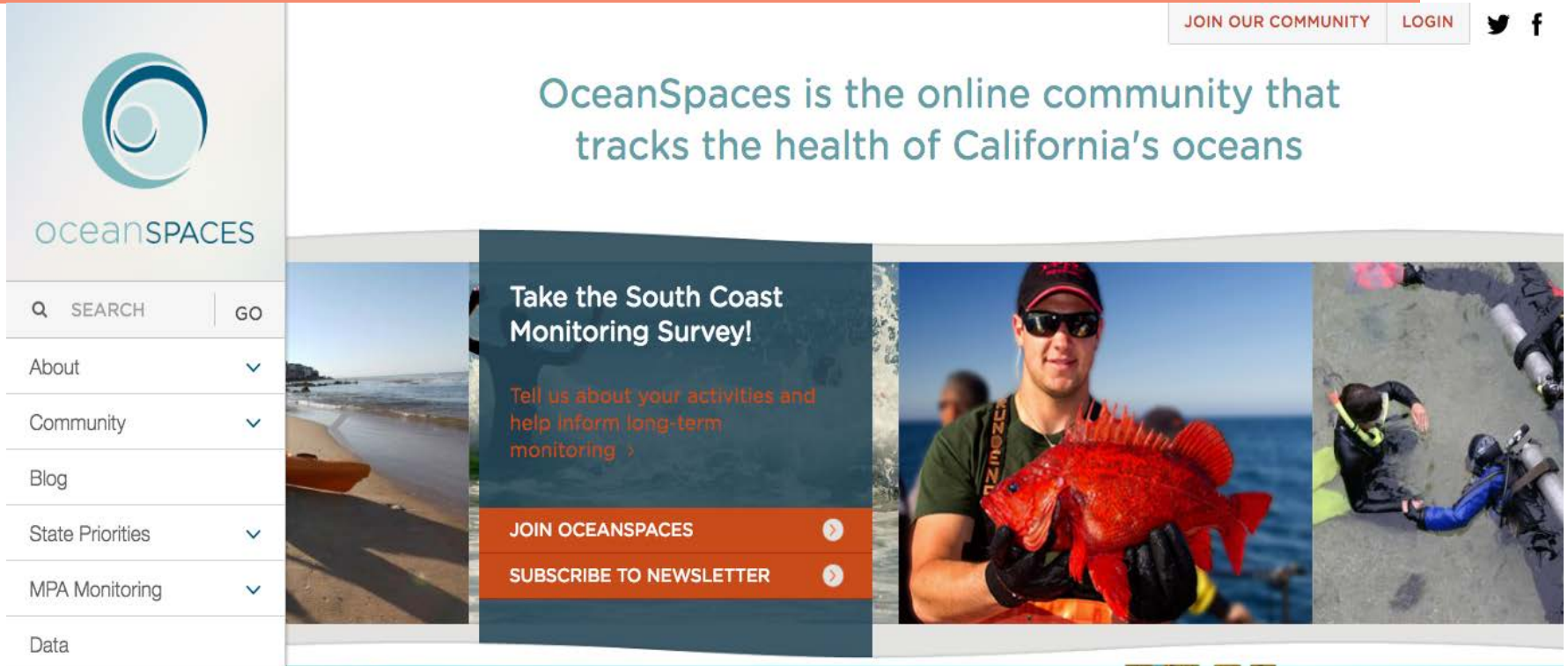
## Monitoring informs MPA management

- Initial, regional management reviews (*after 5 years*)
- Network management reviews on a 10-year cycle (*first in 2022*)
- Annual MPA Management updates (*starting in 2017*)

## Documents developed to guide MPA monitoring

- MPA Monitoring Framework (2010)
- Regional Monitoring Plans (NCC 2010; SC 2012; CC 2014; NC 2018)
- Statewide MPA Monitoring Action Plan (2017-2018)

# Investing in a rigorous foundation



oceanSPACES

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- Community
- Blog
- State Priorities
- MPA Monitoring
- Data

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OceanSpaces is the online community that tracks the health of California's oceans

**Take the South Coast Monitoring Survey!**

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A PROGRAM OF CALIFORNIA OCEAN SCIENCE TRUST

**New Report: South Coast Kelp Forest Snapshot now available!**

Visit the new South Coast State of the Region page to learn more >



# Putting the MPAs to work!

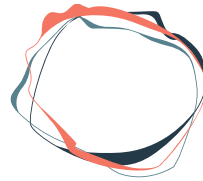
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## In a changing climate we need to evaluate...

- Are MPAs a precautionary, no-regrets strategy for ecosystem protection?
- Do habitats in MPAs (e.g., seagrasses, kelp beds) ameliorate ocean acidification & hypoxia impacts? Do they store carbon?
- Can MPAs serve as effective mitigation for industrial development (e.g., desalination, once-through cooling)?

# Encouraging multi-jurisdictional action

A partnerships approach to deliver the science needed to address our shared challenges



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COMMISSION



CALIFORNIA  
COASTAL  
COMMISSION



COLLABORATIVE  
NETWORK



California Ocean Protection Council

OPC-SAT  
Science Advisory Team

# *North Coast Regional Water Quality Control Board*

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## Thank you - Questions?

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[www.wildlife.ca.gov/marine/mpa](http://www.wildlife.ca.gov/marine/mpa)

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