



# Biofouling Management Regulations & Ocean Planning

California State Lands Commission

*Sacramento, CA* | October 16, 2018

**MIACC**

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California State Lands Commission

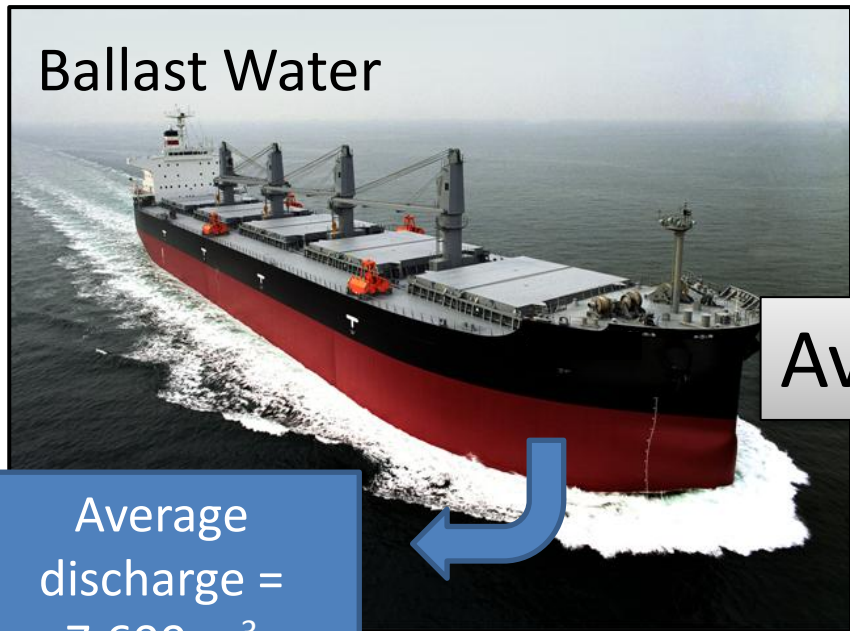
California State  
Lands Commission



# Why Regulate Biofouling Management?

## What's the Risk?

Ballast Water



Average  
discharge =  
7,600 m<sup>3</sup>  
76,000  
invertebrates

Biofouling



Average niche area 1160 m<sup>2</sup>



100,000  
invertebrates

# Why Regulate Biofouling Management?

## What's the Risk?

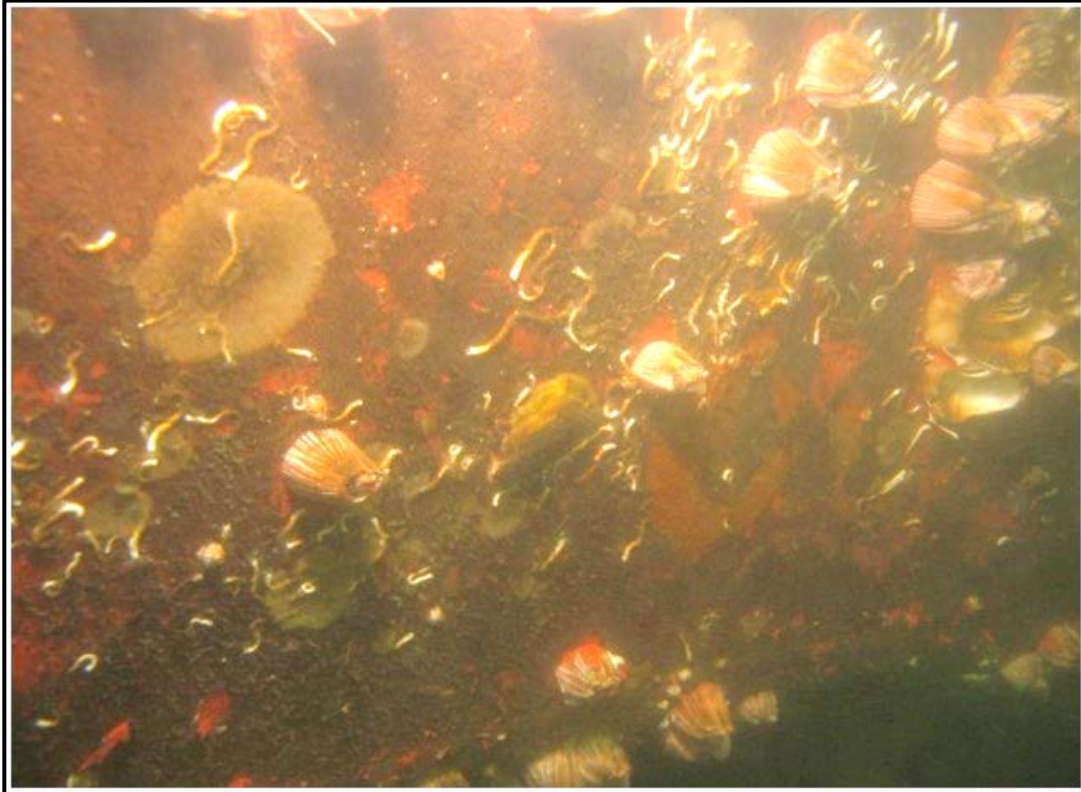
Davidson et al. 2013: Richness, extent, condition, **reproductive status**, and parasitism of fouling communities on commercial vessels

- 95.4% of organisms were alive
- > 91% of mussels had well-developed gonads
- 25% of barnacles had developed egg masses





# California's Biofouling Management Regulations



Approved  
20 April 2017

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Effective  
1 October 2017

# Implementation

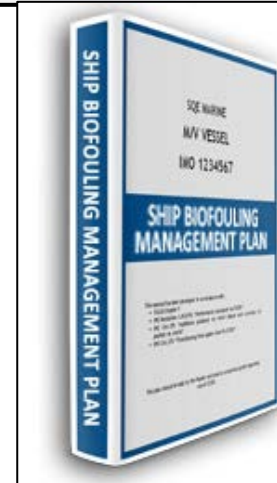
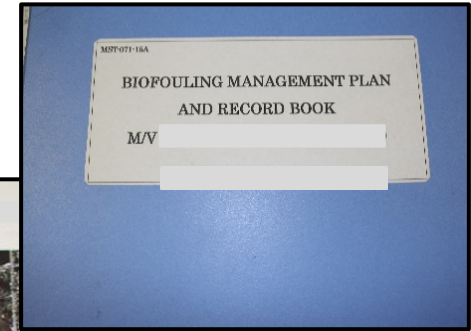
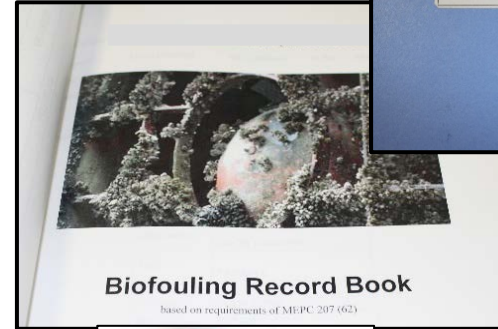
## Last dry dock/delivery on or after 1 January 2018

- Phased-in implementation based on regularly scheduled dry docking (or delivery)
- Why phased-in?  
Effective biofouling management is dependent on Biofouling Management Plans and preventive practices best implemented in dry dock



# Main Components

- Biofouling Management Plan and Biofouling Record Book
- Annual Vessel Reporting Form
  - Anti-fouling coatings, management actions, vessel profile, residency periods...
- Biofouling management for wetted surfaces
  - Hull and niche areas
- Effective lifespan of coatings applied



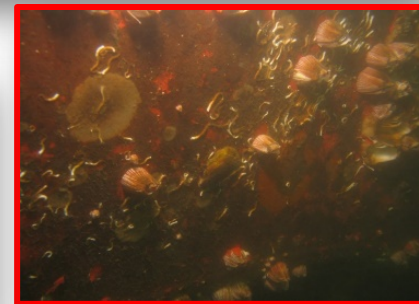
# Inspection and Enforcement

**Prioritization:** Initially all BF vessels – 1<sup>st</sup> arrival

## Outreach!

- Soon: **Weighted risk assessment**  
(based on Annual Vessel Reporting Form)

- + or – risk scores
- **High Risk**
- **Medium Risk**
- **Low Risk**
- No Priority





# Inspections

- Focused on Biofouling Management Plan and Biofouling Record Book
- Outreach opportunity
- Assess industry knowledge
- 60-day grace periods





# Preliminary results and lessons learned

- ~45 biofouling inspections since August 2018
- ~30 grace periods issued

## Most common deficiencies:

- Niche area management description
- Effective coating lifespan

## Less common deficiencies

- No Biofouling Management Plan
- No Biofouling Record Book

# Lessons Learned – Areas of improvement

Where are the knowledge gaps?

- Expected coating lifespan
- Out-of-water support strips (dry dock support blocks)

Follow-up with targeted outreach



# Lessons Learned

Different approach than ballast water

- Ballast Water:

Crew is responsible for BW Management actions

- Biofouling

Ownership/management is responsible for developing BF Management Plan





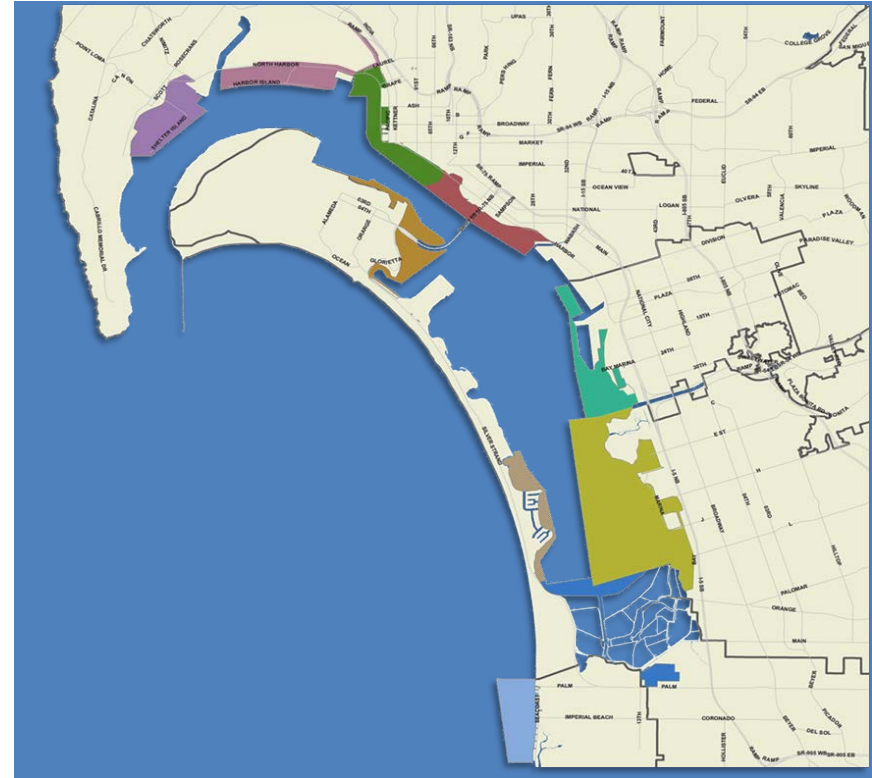
# San Diego Ocean Planning Partnership



# San Diego Ocean Planning Partnership

A collaborative partnership between the Port of San Diego and State Lands Commission

- Commitment to transparent, robust public engagement
- Reduce the potential for conflict among Public Trust uses
- Consider ways to effectively and responsibly inform decision-making



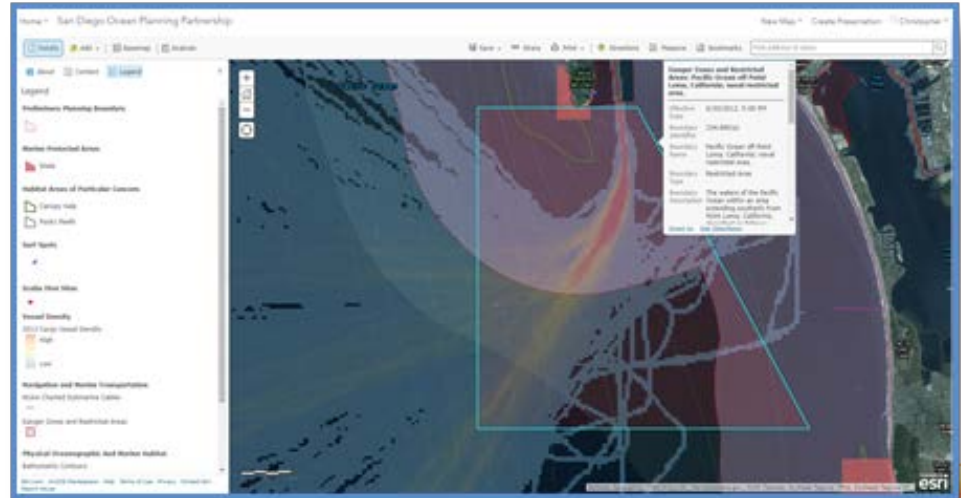
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## Understanding Ocean Uses Offshore San Diego County

### Public Engagement



### Data Collection



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## Navigation



### Examples of datasets

- Navigational aids
- Wrecks and obstructions



## Commerce



### Examples of datasets

- Alternative & renewable energy
- Oil & gas



## Fisheries



### Examples of datasets

- Fishing piers and Jetties
- Fishing vessel density



## Recreation



### Examples of datasets

- SCUBA dive sites
- Boat launch sites



## Environmental Stewardship



### Examples of datasets

- Canopy forming kelp
- National wetland inventory

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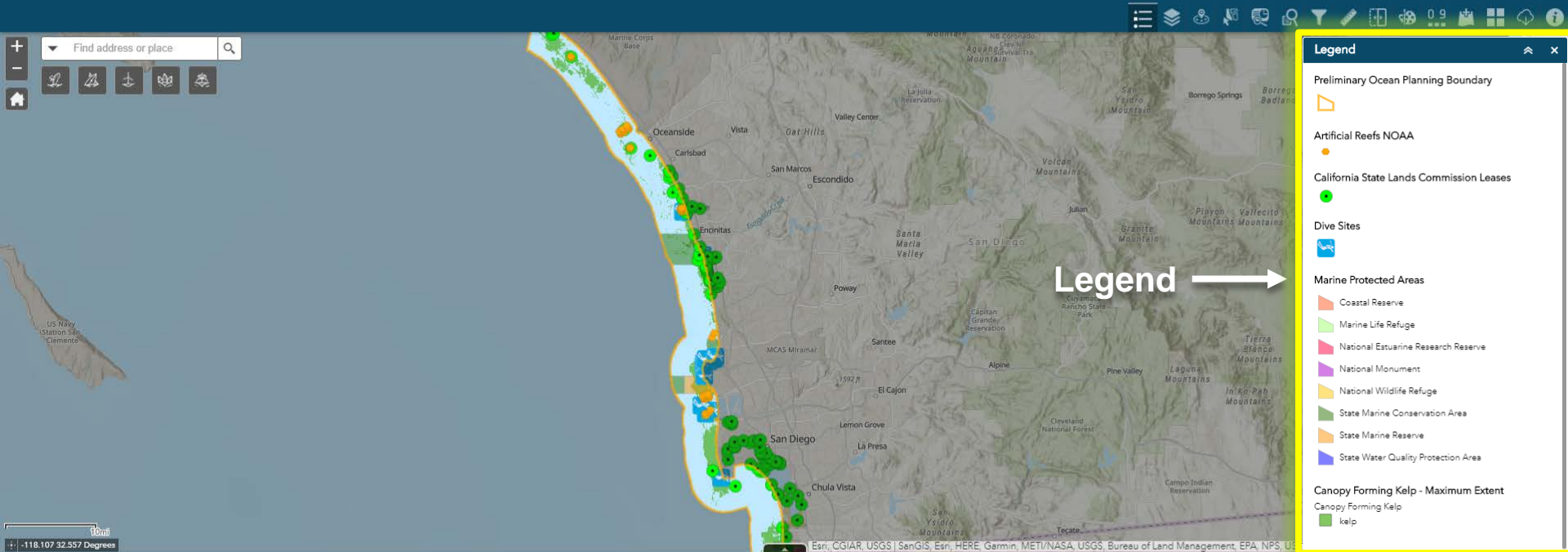
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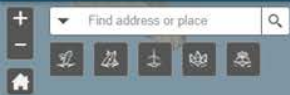
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Toolbar

Legend

- Preliminary Ocean Planning Boundary
- Artificial Reefs NOAA
- California State Lands Commission Leases
- Dive Sites
- Marine Protected Areas
  - Coastal Reserve
  - Marine Life Refuge
  - National Estuarine Research Reserve
  - National Monument
  - National Wildlife Refuge
  - State Marine Conservation Area
  - State Marine Reserve
  - State Water Quality Protection Area
- Canopy Forming Kelp - Maximum Extent
  - Canopy Forming Kelp
  - kelp

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Public Trust Icons

**Legend**

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# San Diego Ocean Planning Partnership



## Screening Report

### Area of Interest (AOI) Information

Area : 3,688.32 acres

Oct 4 2018 11:3:56 Pacific Daylight Time



- Preliminary Ocean Planning Boundary
- Outside of Planning Boundary
- California State Lands Commission Leases
- Coastal Access Locations

Source: Esri, (2018), NOAA, National Geographic, Google, (2018), GeoNames, and other contributors. San Diego, (2018), NOAA, (2018), and other contributors. Bureau of Ocean Energy Management (2018). Department of the Interior. Geospatial Data for the State of California.

## Summary

Name	Count	Area(acres)	Length(mi)
Marine Protected Areas	3	749.42	N/A
Coastal Access Locations	3	N/A	N/A
California State Lands Commission Leases	2	N/A	N/A
Artificial Reefs NOAA	0	N/A	N/A

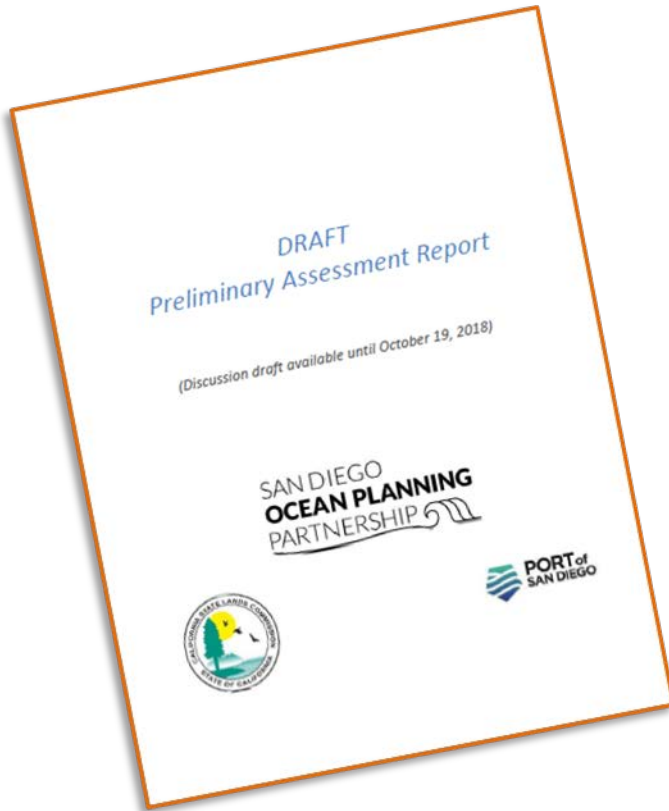
## Marine Protected Areas

#	Site ID	Site Name	Level of Government	State	National System Status
1	NWR115	Tijuana Slough National Wildlife Refuge	Federal	National Wildlife Refuge System	Eligible
2	NER22	Tijuana River National Estuarine Research Reserve	Partnership	National Estuarine Research Reserve System	Eligible
3	CA300	Tijuana River Mouth State Marine Conservation Area	State	California	Member

#	Level of Protection	Management Plan	Management Agency	Fishing Restrictions	Primary Conservation Focus
1	Uniform Multiple Use	Site-Specific Management Plan	U.S. Fish and Wildlife Service	Restrictions Unknown	Natural Heritage
2	Uniform Multiple Use	Site-Specific Management Plan	California Department of Parks and Recreation & National Oceanic and Atmospheric Administration	Commercial and Recreational Fishing Restricted	Natural Heritage
3	Uniform Multiple Use	MPA Programmatic Management Plan	California Department of Fish and Wildlife	Commercial and Recreational Fishing Restricted	Natural Heritage



# San Diego Ocean Planning Partnership



**Information on the Draft Preliminary Assessment Report:**

**[www.sdoceanplanning.org/draft-preliminary-assessment-report](http://www.sdoceanplanning.org/draft-preliminary-assessment-report)**

**Available for public feedback until Friday, October 19, 2018**



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

# THANK YOU & QUESTIONS

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