

# IOOS RA DMAC Workshop Briefing Guidance Document

## *Southern California Coastal Ocean Observing System (SCCOOS)*

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# IOOS RA Data Management Activities

- List up to 3 projects/activities in your RA that would be valuable in sharing.
  - Harmful Algal Bloom Partnership (SCCOOS & CeNCOOS -> + NANOOS (tbd))
    - Species type and methodology
    - Data format, reporting, listserv, and visualization
  - Water Quality: U.S./Mexico Beach Water Quality (SCCOOS & NOAA)
    - Merge trajectories from hf radar derived surface currents with alongshore currents from wave model to produce more accurate flow from contamination sources (TJ River, San Antonio de Los Buenos, South Bay Ocean Outfall)
  - Water Quality: Ocean Outfalls and Areas of Special Biological Significance (SCCOOS, CeNCOOS & State Water Resources Control Board)
    - Evaluation of exposure to nearby sources (e.g. River Inlets) based on HF radar derived surface currents.
    - Potential near real-time trajectories to view source influence
    - Reduce formatting conversion for Nonpoint Source Discharge Elimination System (NPDES) Permit (SWAMP – ambient waters; CIWQS – effluent; CEDEN – all water quality) => all different...
  - Ocean Acidification (SCCOOS, CeNCOOS, NANOOS\*)
    - West Coast Inventory

# HABs: SCCOOS and CeNCOOS



- Available Products**
- Automated Shore Stations
  - Bathymetry
  - CA ASBS System
  - Gliders
  - Harbors
  - Harmful Algae & Red Tides
  - Map View
  - About
  - HAB News
  - What are HABs?
  - HAB Species
  - Santa Cruz Wharf
  - Monterey Wharf
  - Cal Poly Pier
  - Goleta Pier
  - Stearns Wharf
  - Santa Monica Pier
  - Newport Pier
  - Scripps Pier
  - Manual Shore Stations
  - Meteorological Observations
  - Moorings
  - Plume Tracking
  - RCMSS Model Output
  - Satellite Imagery
  - Ship Tracking (AIS)
  - Ship Casts
  - Surface Current Mapping
  - Wave Conditions (CDIP)
  - Winds & Rainfall Forecasts
- Available Services**
- Grab Raw Data
  - Advanced Mapping Applications
  - KML Feeds
  - HERAPAS THREDDS Server
  - SCCOOS THREDDS Server

## Harmful Algae & Red Tide Regional Map

Map View About HAB News What Are HABs? HAB Species

Follow the links above to learn more about harmful algal blooms (HABs), HAB species, and collection procedures. Click a station on the map below to view data on potential harmful algal species and water conditions at regional stations.

**25 August 2012 - CDPH advises consumers not to eat shellfish, crustaceans and some fish from Ventura County** [read more ...](#)

click for Full Page View

Map Satellite Terrain

Map data ©2012 Google, NEGI - Terms

50 mi 100 km

create link for bookmark



note: harmful algal bloom data is collected for the purpose of scientific study and is not intended to be used as an indicator of health or safety. for information on quarantines and statewide hab updates, please visit the california department of public health website for information on water safety and beach closures, please visit the near the Day Beach Report card website at <http://www.healthsbay.org/> for official reports on water quality and beach

## LEGEND

- Data within last 7 days
- Data from 7 to 14 days old
- Data older than 14 days

## SITES

- Santa Cruz Wharf
- Monterey Wharf
- > Cal Poly Pier <
- Goleta Pier
- Stearns Wharf
- Santa Monica Pier
- Newport Pier
- Scripps Pier

## CAL POLY PIER

35° 10.20' N, 120° 44.46' W  
 Provider / PI: Cal Poly / Mark Moline

HAB Species	
SPECIES	CELLS/L
<span style="color: green;">●</span> <i>Akashiwo sanguinea</i>	0
<span style="color: green;">●</span> <i>Alexandrium spp.</i>	0
<span style="color: green;">●</span> <i>Dinocystis spp.</i>	0
<span style="color: green;">●</span> <i>Lincolnodinium polyedrum</i>	0
<span style="color: green;">●</span> <i>Prorocentrum spp.</i>	227,031
<span style="color: green;">●</span> <i>Pseudo-nitzschia delicatissima</i>	56,070
<span style="color: green;">●</span> <i>Pseudo-nitzschia seriata</i>	Scrup

Observations	
OBSERVATION	VAL UP
Chlorophyll	nd
Conc. Acid	nd
Water Temperature	11.0 °C 51.8 °F

Last Sampled: 2 weeks ago  
 2012-08-24 19:15 UTC : 2012-08-24 12:15 PDT

NaN: not analyzed nd/bd: below detection limit

[Previous Observations](#)



support [habmap.info](http://habmap.info)

# U.S./Mexico Border Beach Water Quality

## Stormwater Plume Tracking

UTC Time: 2010-04-28 21:19:39  
Local Time: 2010-04-28 14:19:39

### Tijuana River Flow Rate

Latest Observations	24hr Maximum	24hr Minimum
28.99 MGD	41.31 MGD	28.99 MGD
1.27 cm/s	1.81 cm/s	1.27 cm/s
2010-04-28 13:15:00 UTC	2010-04-27 20:15:00 UTC	2010-04-27 15:30:00 UTC

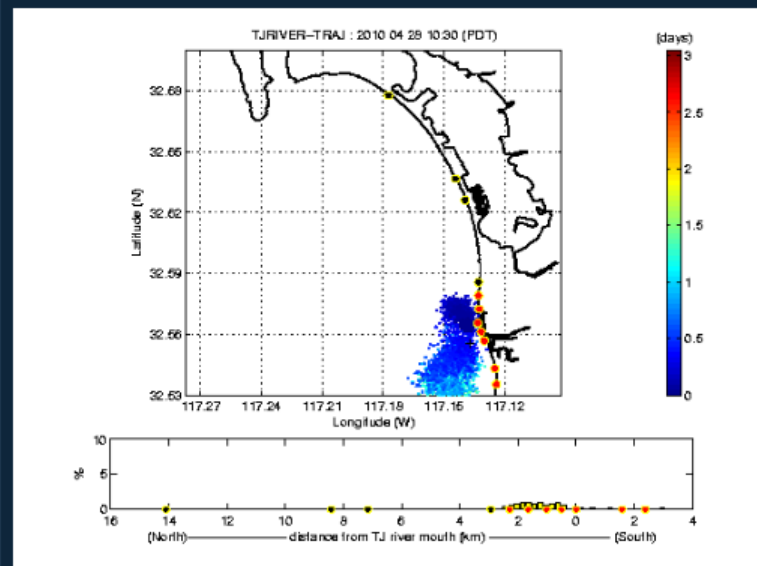
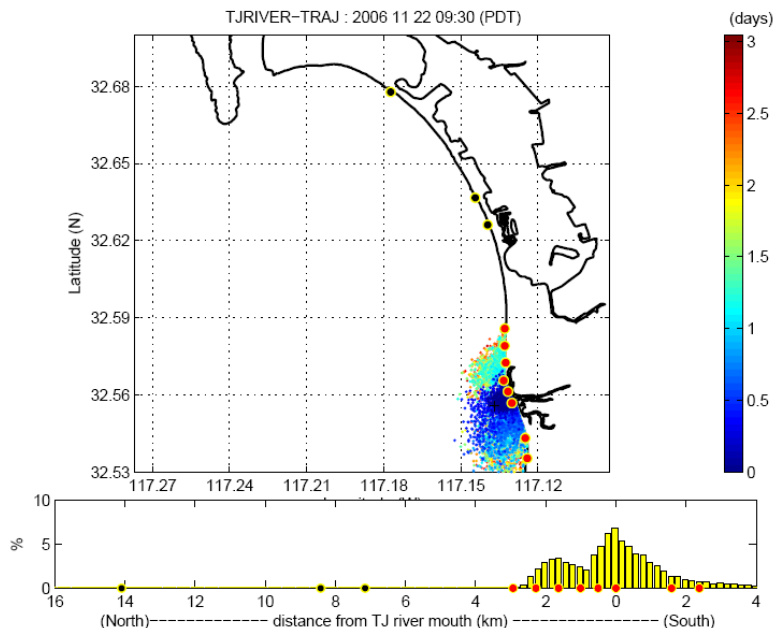
MGD = Millions of gallons per day. cm/s = Cubic meters per second.  
Values in red indicate the data is greater than 24 hours old. Otherwise values are displayed in black.

### Tijuana River Plume Tracking

Start Animation  ▾

-119	-118	-117	-116	-115	-114	-113	-112	-111	-110	-109	-108
-107	-106	-105	-104	-103	-102	-101	-100	-99	-98	-97	-96
-95	-94	-93	-92	-91	-90	-89	-88	-87	-86	-85	-84
-83	-82	-81	-80	-79	-78	-77	-76	-75	-74	-73	-72
-71	-70	-69	-68	-67	-66	-65	-64	-63	-62	-61	-60
-59	-58	-57	-56	-55	-54	-53	-52	-51	-50	-49	-48
-47	-46	-45	-44	-43	-42	-41	-40	-39	-38	-37	-36
-35	-34	-33	-32	-31	-30	-29	-28	-27	-26	-25	-24
-23	-22	-21	-20	-19	-18	-17	-16	-15	-14	-13	-12
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	NOW

An [animated gif](#) has been created as an alternative to this animation sequence.



# PUNTA BANDERA – PLUME MODELING

**INTERMITTENT SIGNAL –  
APPROXIMATELY 10%  
OVER 4 YEARS.**

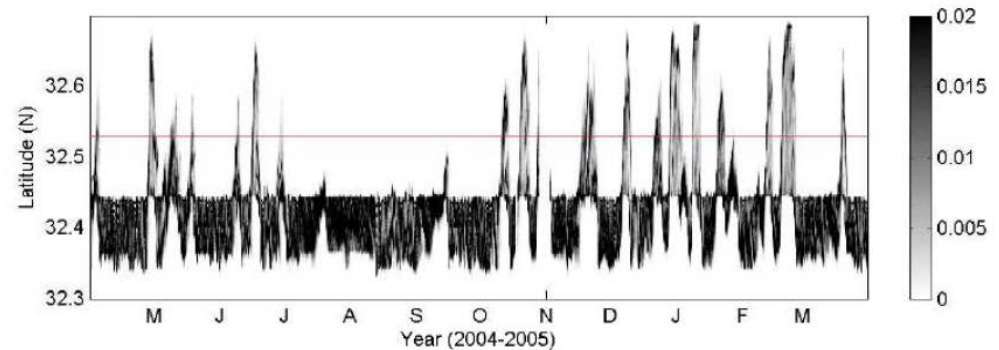
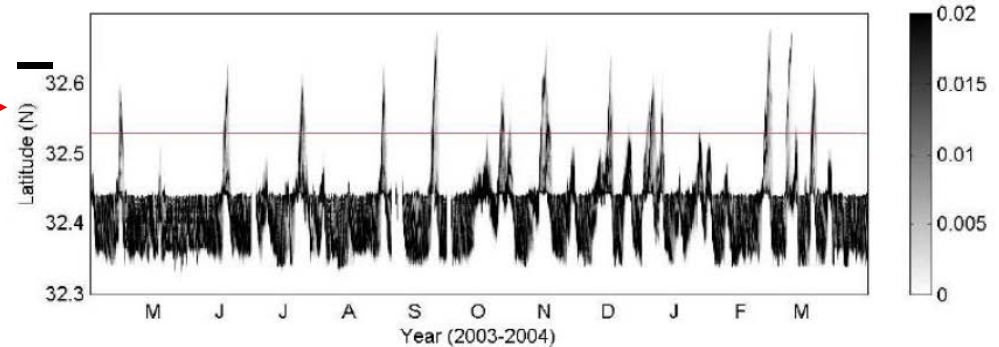
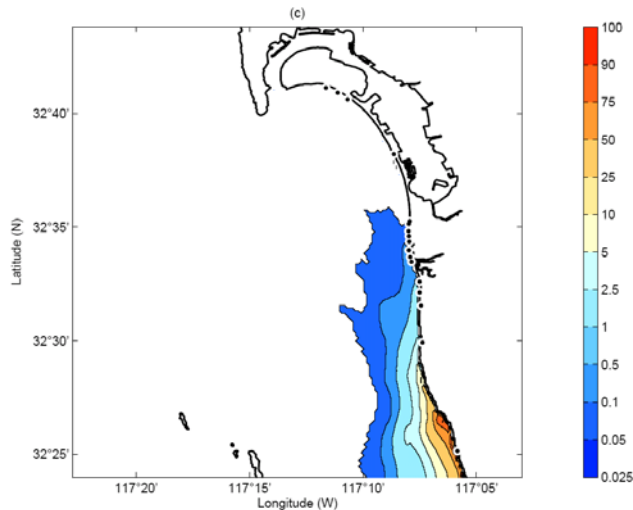
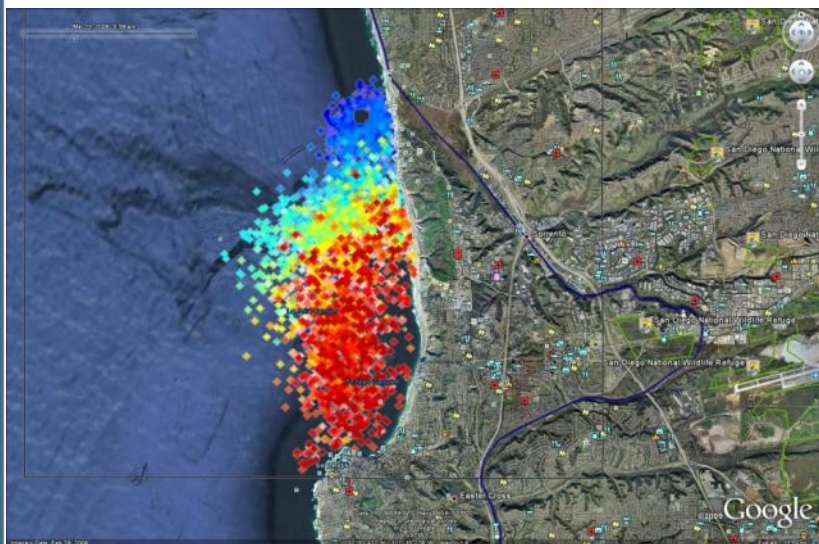


Figure 3: Concentration of the particles in latitude based on random walk model. 50 particles are released at every hour, and each particle has 3 days life time. extended border line (red line)

Along-Coast plume potential modeled for 4 years.

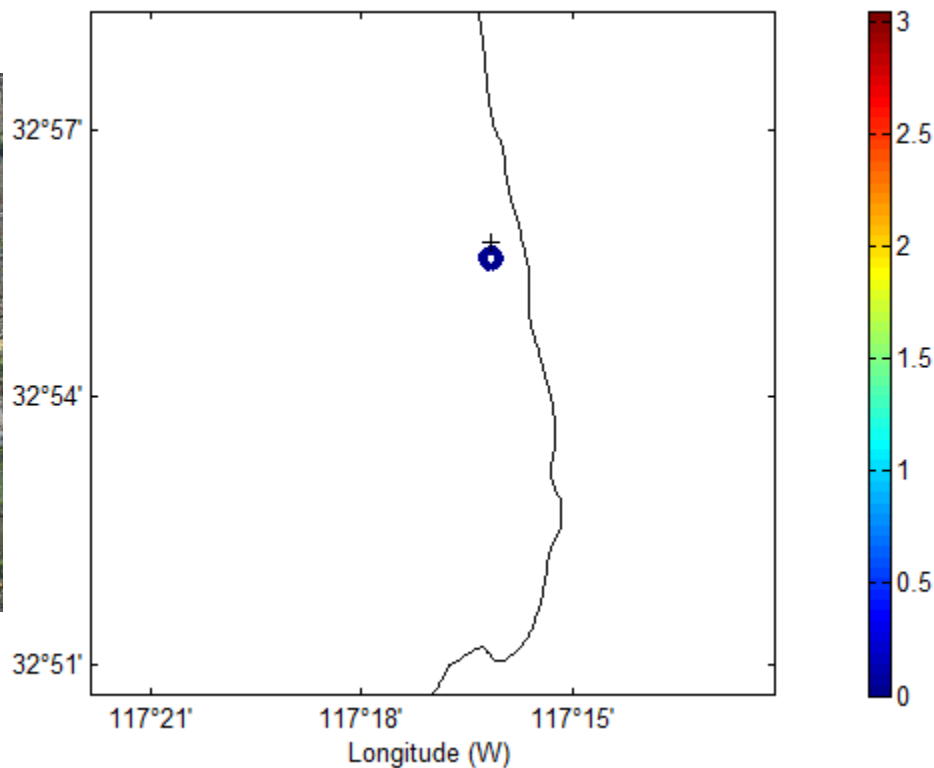
# Water Quality Areas of Special Biological Significance

3 day lifetime used to replicate efficacy of FIB



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cordc.ucsd.edu  
Technical Director, SCCOOS [sccoos.org](http://sccoos.org)

ASBS: TRAJ : 2008 03 10 17:00 (PDT) [1]

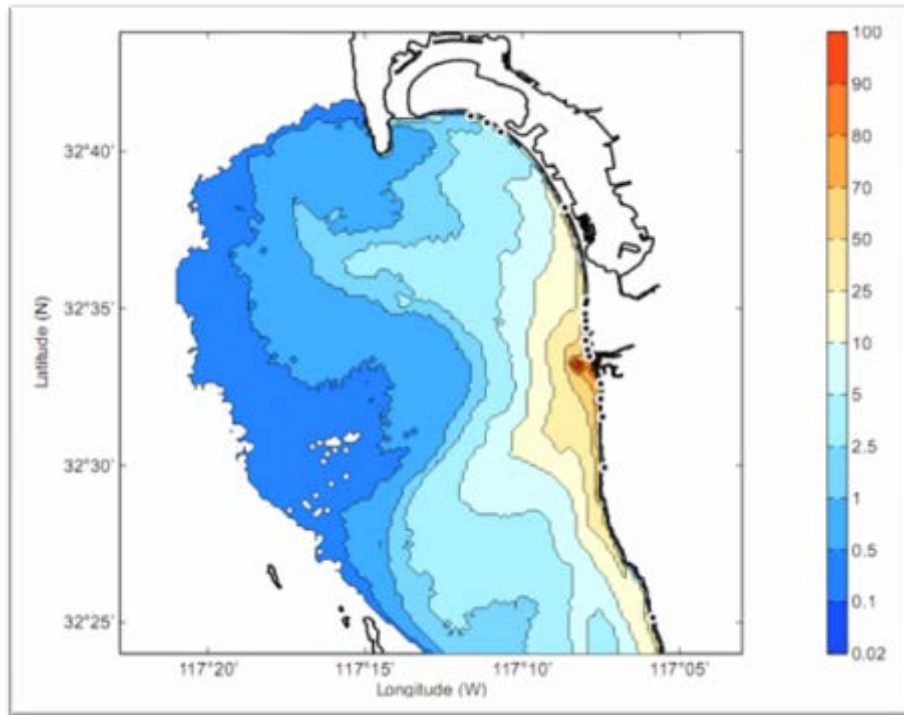


Trajectories from Los Penasquitos  
River Inlet. 5-day discharge.

# Water Quality

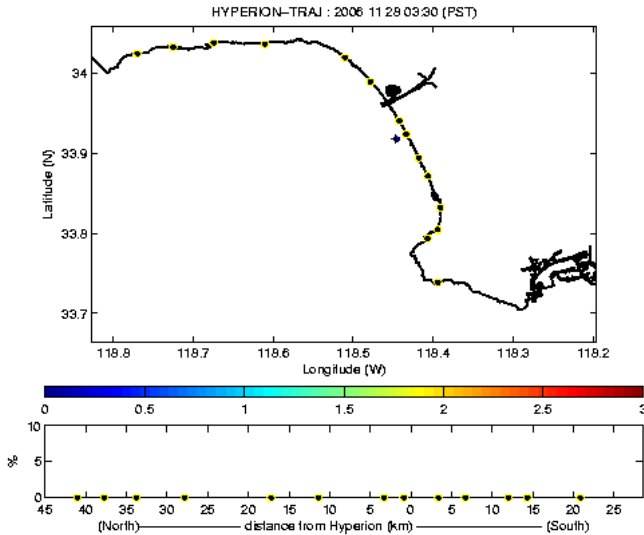
## Areas of Special Biological Significance

### Tijuana River Estuary plume exposure probability map

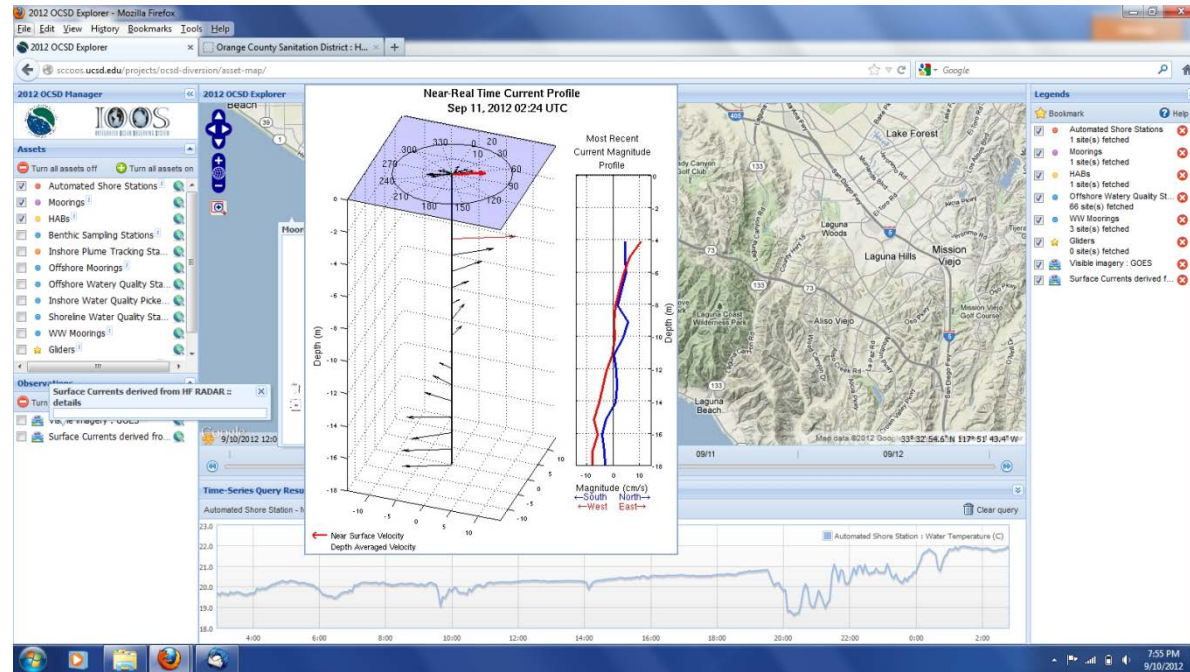


# Water Quality: Ocean Outfalls

Real-time tracking: Los Angeles Hyperion sewage outfall diversion



Asset Map and Visualization: Orange County Sanitation District





# IOOS RA Data Management Priorities

- List priorities for next 12 months
  - Maintenance and Support Product Development
    - **Maintain existing data feeds / visualizations**
      - Extend SCCOOS HAB visualization and support California HABMAP
      - Implement MARACOOS Asset Map for Sewage Outfall Diversion Support
      - Support NPDES permit submission for ASBS
      - Automated and manual shore stations (NetCDF and THREDDS)
  - Re-organization of website “About Section”
    - Partnerships, Documents, Acknowledgements
  - Proper acknowledgement of data feed/products
  - Implement Content Management System & Code Repository

Needed:

- Review of data feeds and backend
- Data dictionary
- Metadata
- Alert systems for when datafeeds/products go offline

# IOOS RA Data Management Challenges

- What are your challenges to implementing IOOS DMAC data standards, services, and functions?
  - Staffing (1.3 FTE programmer (and .3 DMAC Coordinator) *not full-time SCCOOS RA DMAC*)
  - Funding (additional funding for products and support not standards, services, and functions)
  - Incomplete knowledge of metadata
  - Inconsistent standards between data types
  - Complex data types or non standardization

# How can the IOOS Office Assist your RA?

- List 4 ways that IOOS Office could help facilitate DMAC advances in your RA?

1.) Draft liability language for all Regional Associations

2.) Support feedback on Asset Map visualization

- qty. 2+ Y-axis timeseries on plot
- support for alternate backend

3.) Continue to highlight most advanced/successful data management practices

- Services, Metadata, Vocabularies

4.) Continue to support collaboration and communications