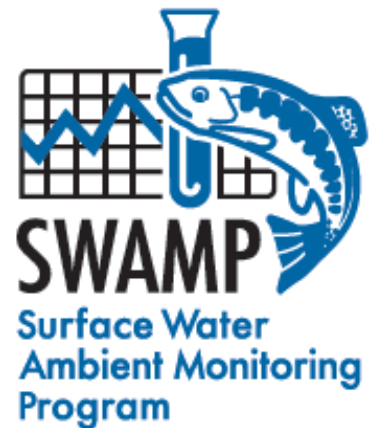


California's Surface Water Ambient Monitoring Program



Contaminants in Sport Fish from the California Coast, 2009



Background

- Problem
 - lack of statewide information on contaminant impacts on the fishing beneficial use
 - lack of safe eating guidelines
- New SWAMP monitoring began in 2007
- \$750,000 to \$1 million per year
- Significant partnerships and matching funds
- Five-year program to cover all water body types, beginning with lakes
- Initial focus on sport fish





SWAMP Bioaccumulation Monitoring

- Lakes – 2007-2008
- Coast – 2009-2010
- Rivers and Streams – 2011
- 2012? – BOG discussions underway



Coast Survey

- Questions
 1. Status?
 2. Spatial patterns?
 3. Candidates for additional sampling?
- Focus on screening of indicator species




Fact Sheet Contaminants in Fish

Contaminants in Sport Fish Two-Year Statewide Survey Begins with Focus on Urban Coastal Areas


Overview

The State Water Resources Control Board's Surface Water Ambient Monitoring Program (SWAMP) has released a report on results from the first year of a two-year statewide screening survey of contaminants in sport fish from California coastal waters. The report, *Contaminants in Sport Fish from the California Coast, 2009*, represents a major step forward in understanding the extent of chemical contamination in sport fish on the California coast. Monitoring in 2009 focused on areas near Los Angeles and San Francisco, including San Francisco Bay. The study has provided information that will be valuable in prioritizing areas in need of further study, support development of consumption guidelines and cleanup plans, and provide information the public can use to be better informed about the degree of contamination of their favorite fishing spots.

Information for locations included in the 2009-2010 Coast Survey and the 2007-2008 Lakes Survey can be obtained by clicking the link *Is It Safe to Eat Fish and Shellfish from Our Waters?* at the California Water Quality Monitoring Council's "My Water Quality" web portal at: www.CaWaterQuality.net



May 2011 www.waterboards.ca.gov/swamp



Coordination

Coordinated Efforts

- Bight '08 – contributing analysis of organics in 200 samples
- Region 4 augmentation - more species, zones
- RMP – covering San Francisco Bay with a similar approach, coordinated sampling and assessment

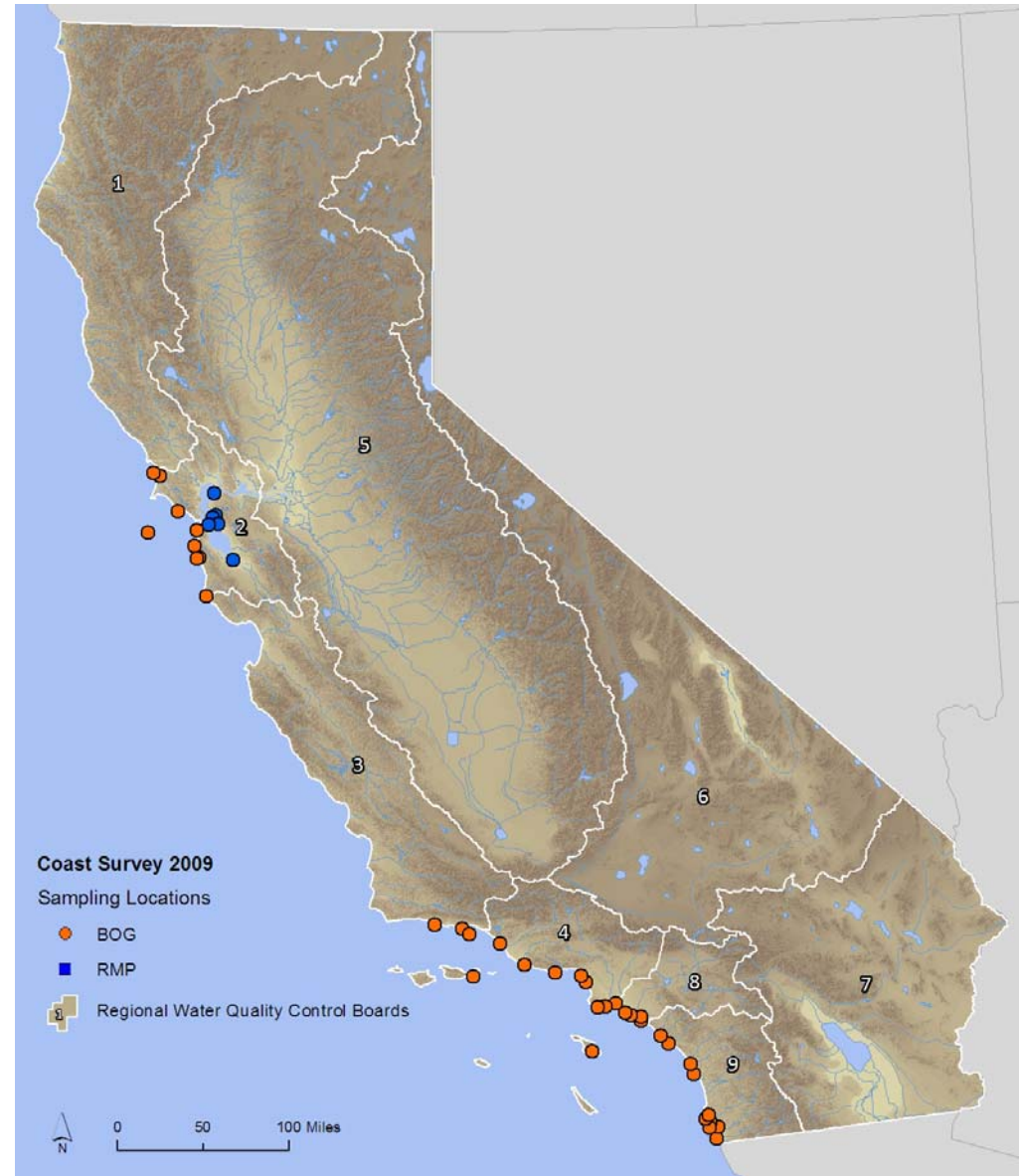
Benefits

- Overall **\$575K** of matching funds
- Budgetary efficiencies
- Joint assessment across programs
- SCCWRP labs benefit from intercalibration



Strategy for Phased Approach

- Two-year study
- Phasing
 - Year 1: Regions 4, 8, 9 (So Cal Bight); Region 2
 - Coordination with Bight group, RMP
 - Year 2: Regions 1 and 3, remaining gaps

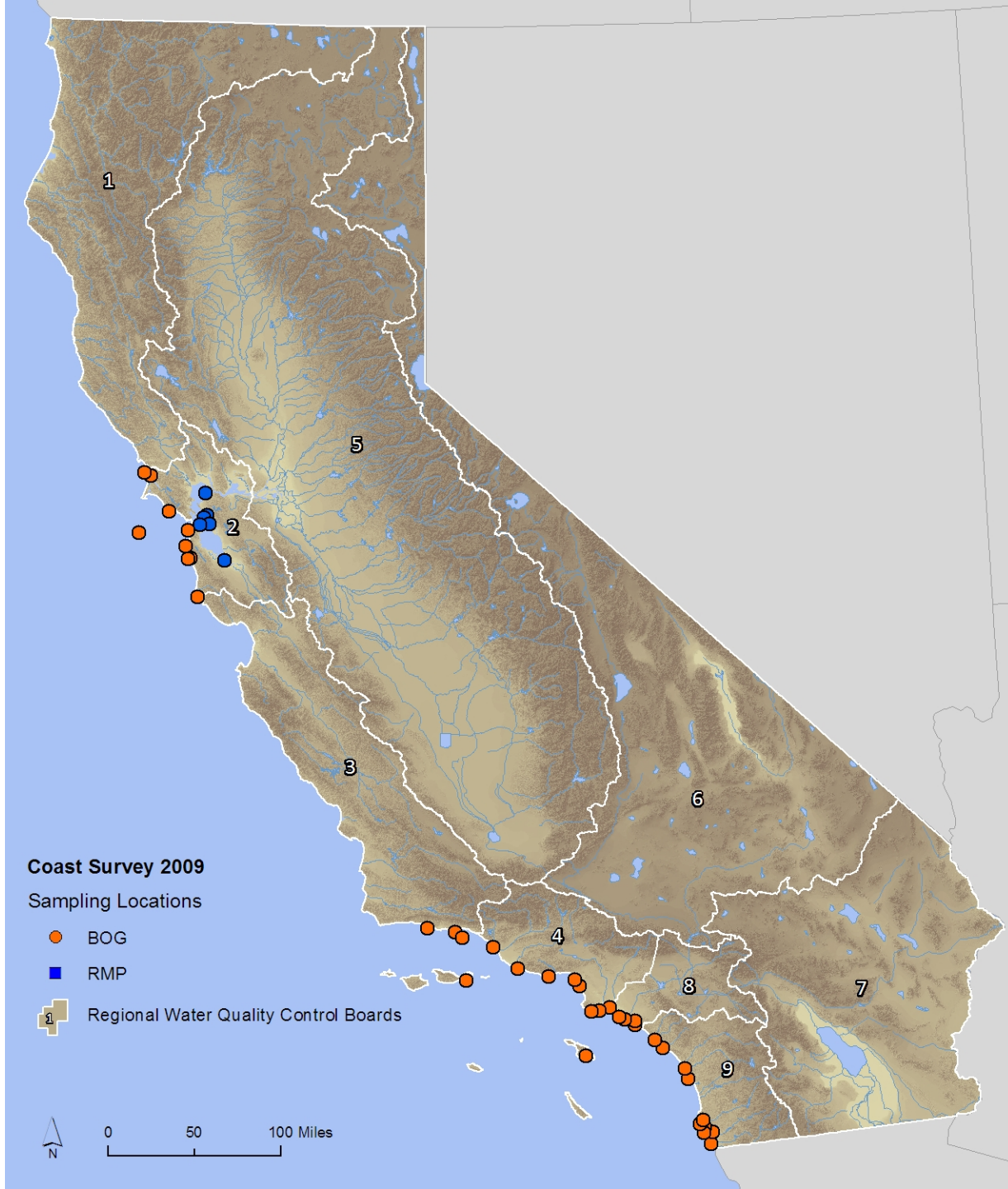


STATEWIDE ASSESSMENT

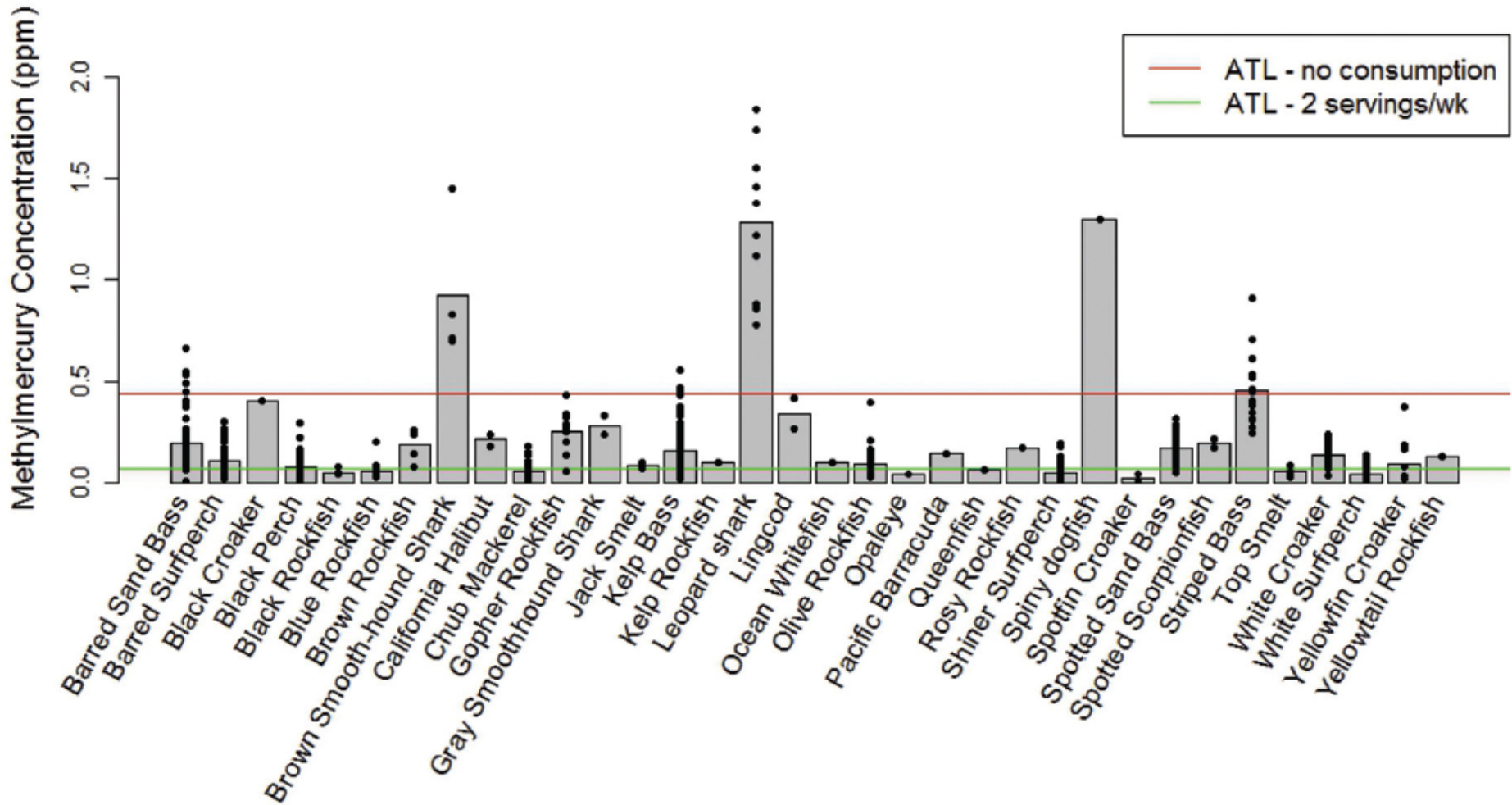


Year One Stats

- 42 locations
- 2291 fish
- 36 species
- Widespread moderate contamination
- No locations with all species below all thresholds
- Seven with at least one species below all thresholds
- Species with low concentrations present at most locations

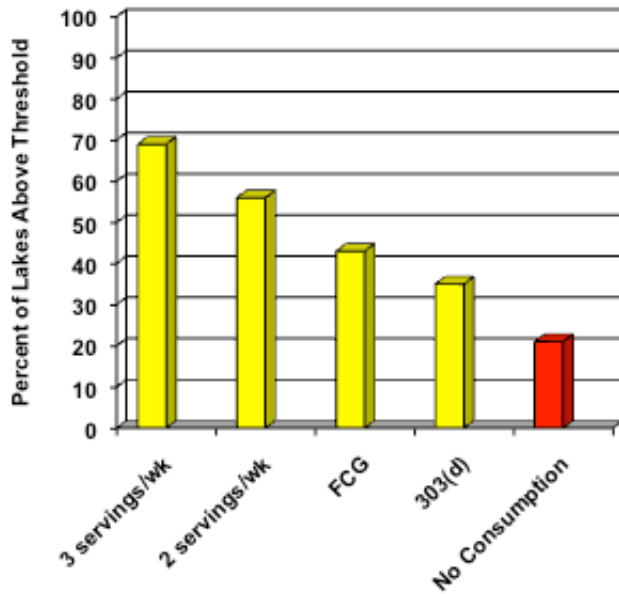


Methylmercury

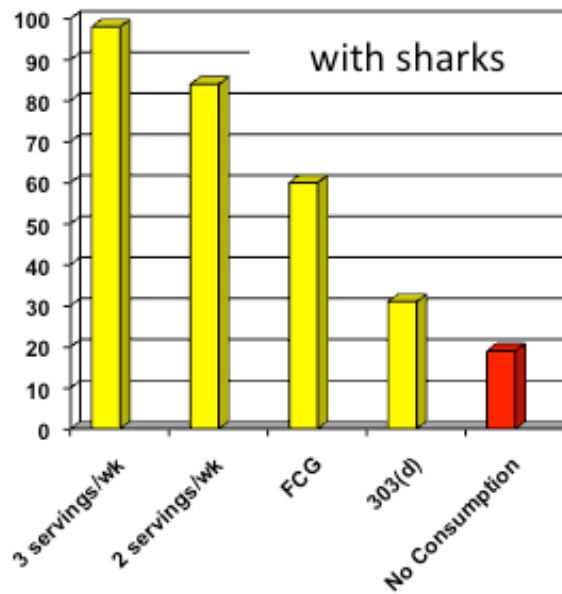


Methylmercury

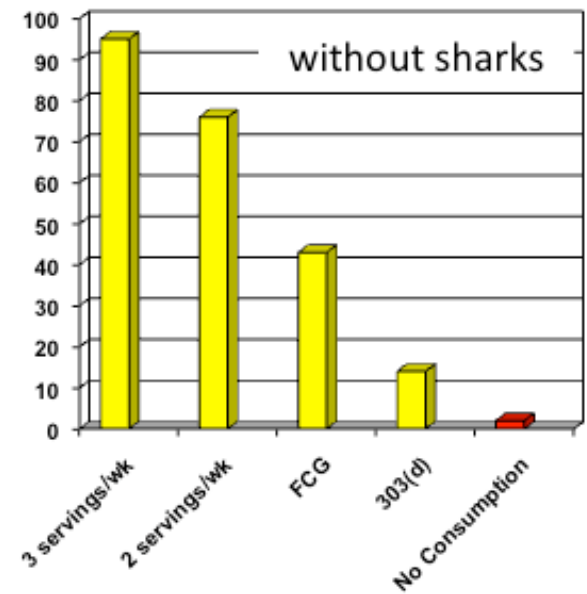
California Lakes



California Coast (2009) with sharks

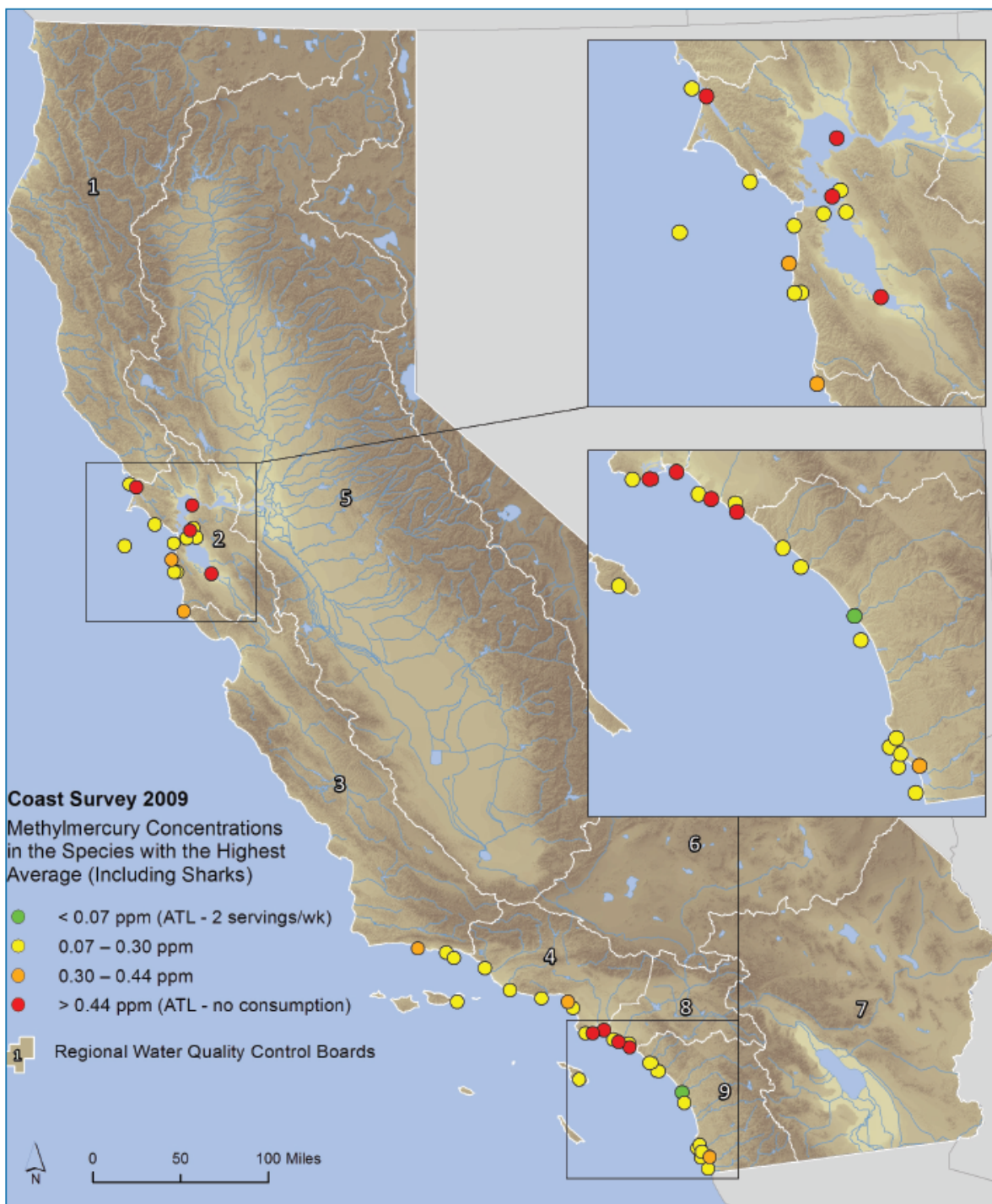


California Coast (2009) without sharks



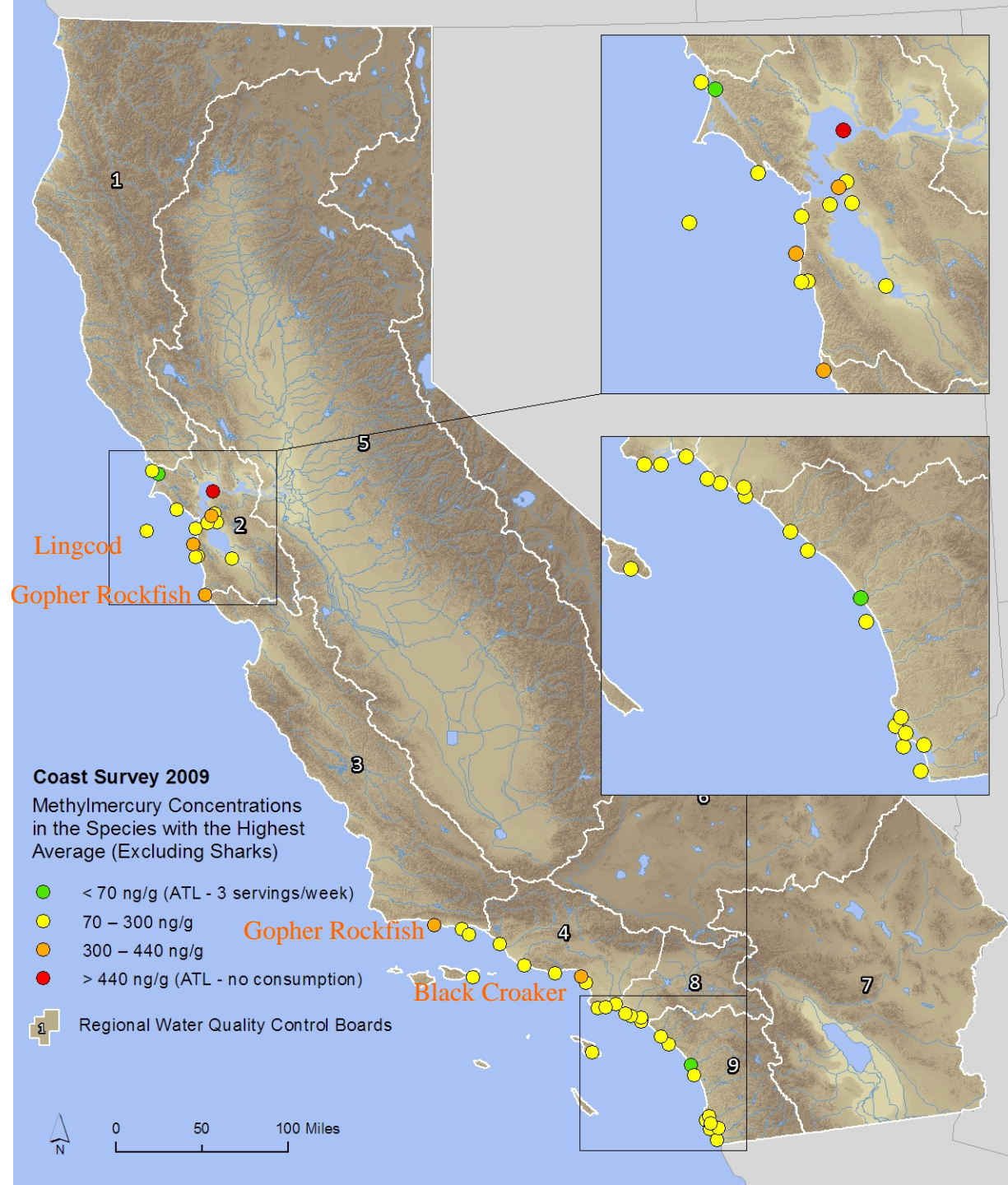
Methylmercury

- With sharks
- Six red

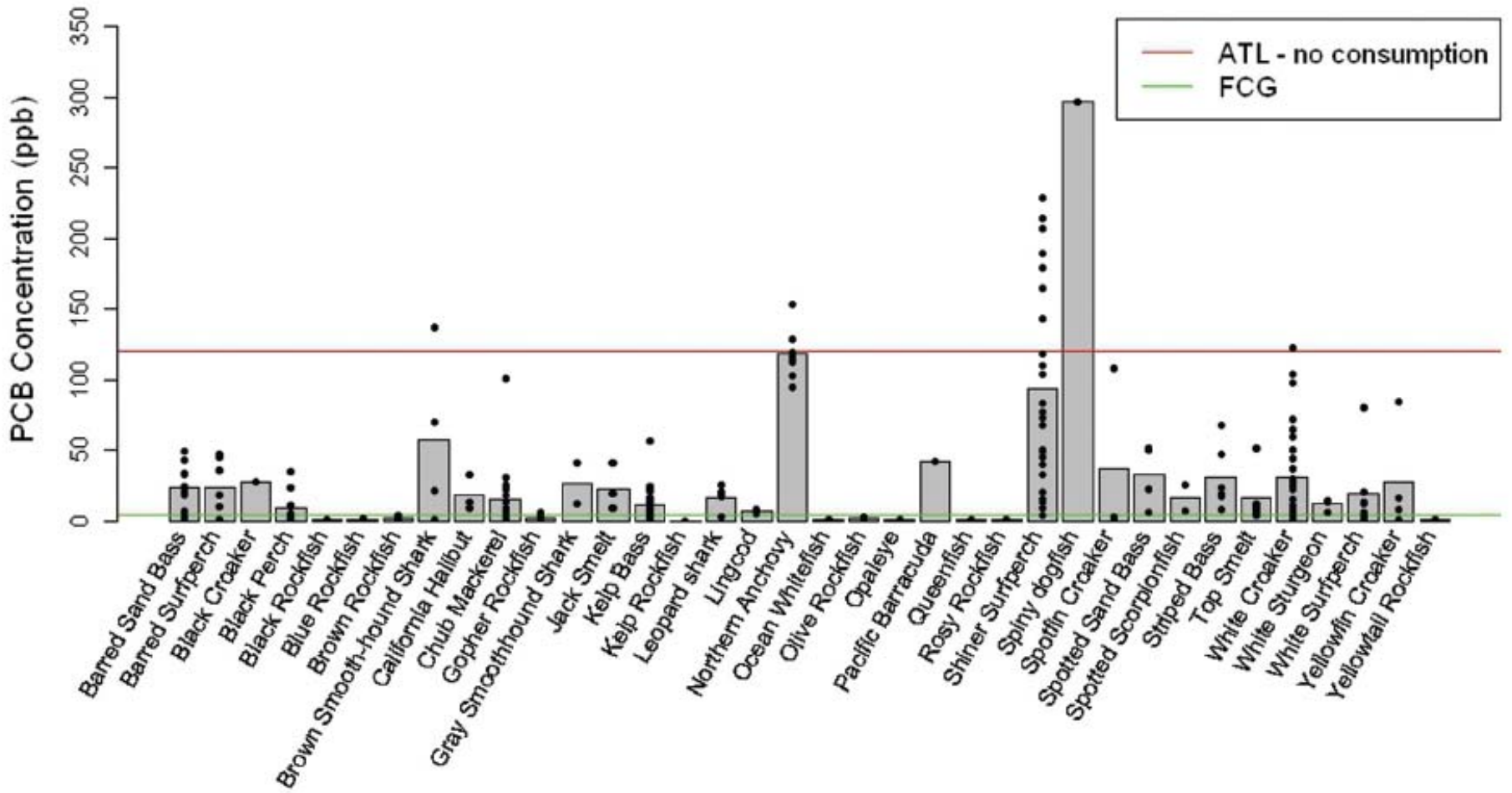


Methylmercury

- No sharks
- One red
- Few green
- North and South pretty similar

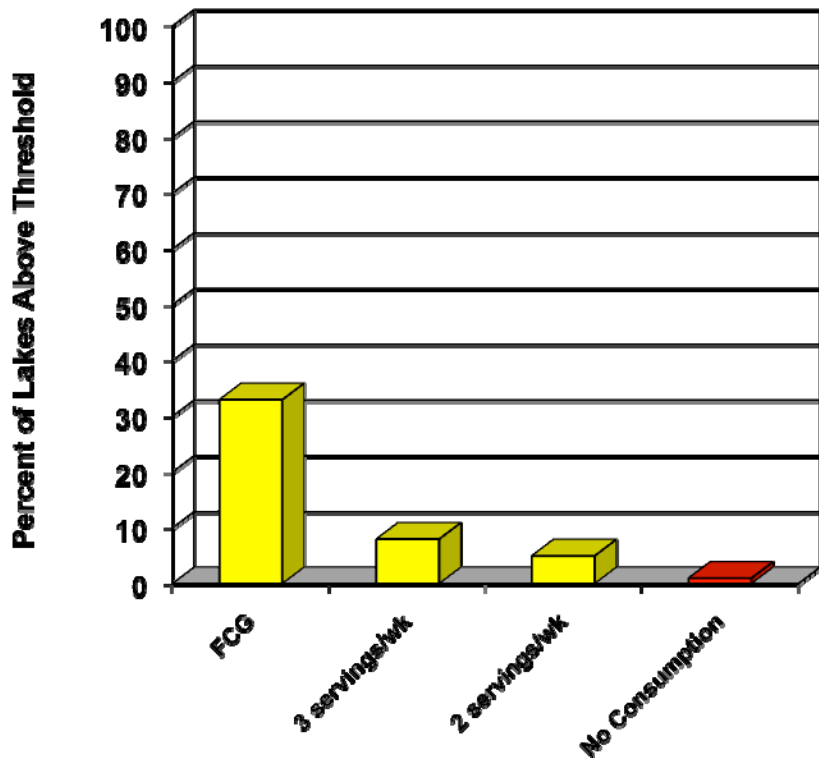


PCBs

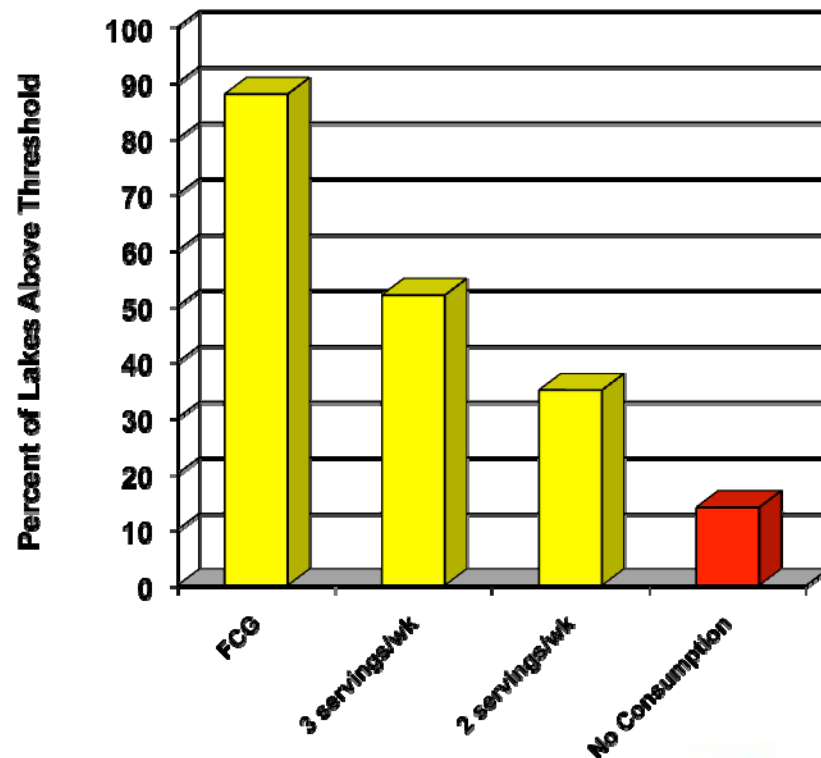


PCBs

California Lakes

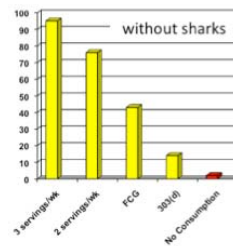
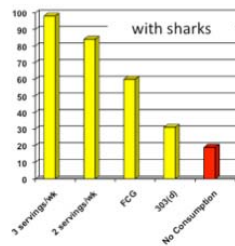


California Coast (2009)



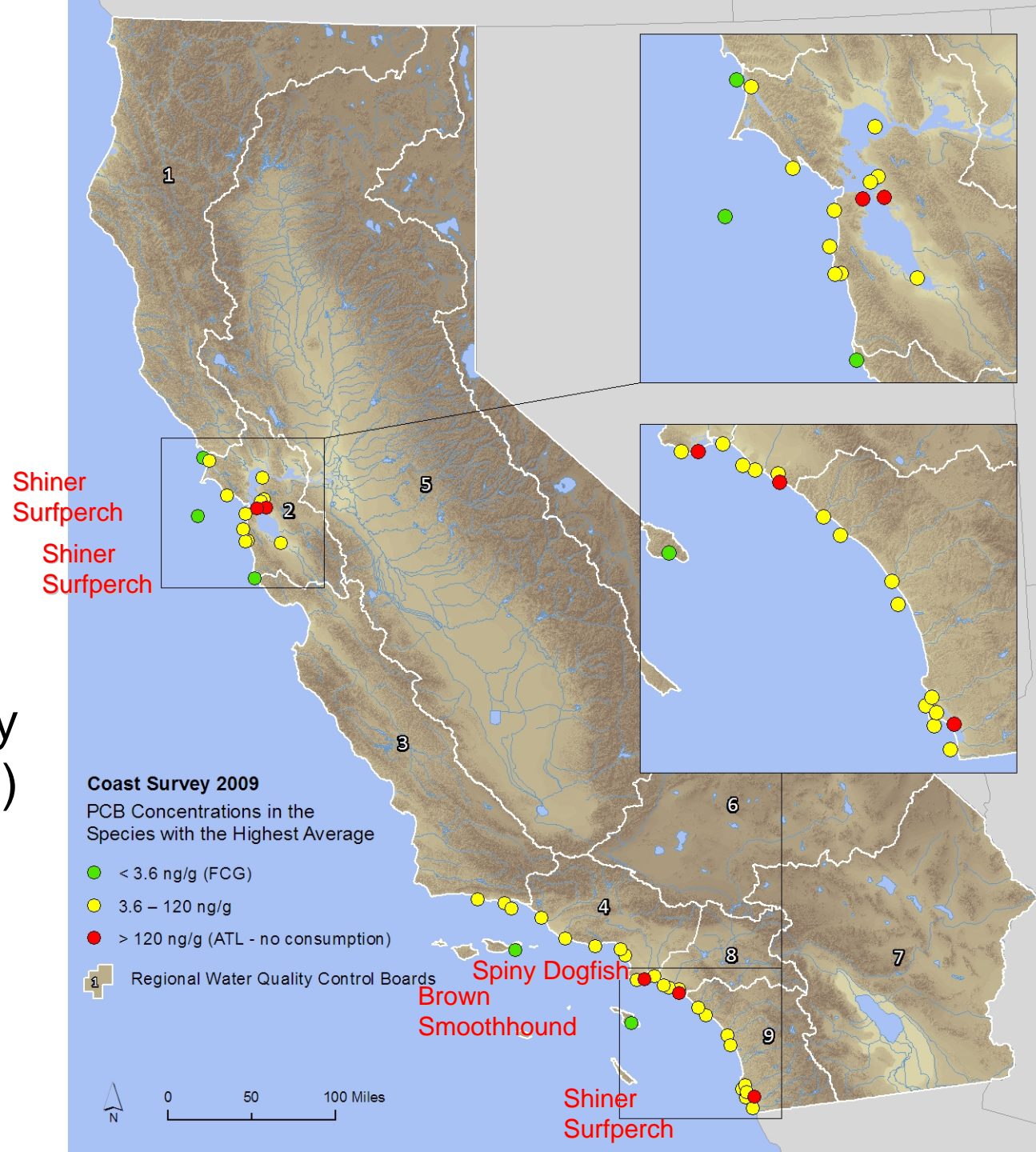
California Coast (2009)

California Coast (2009)

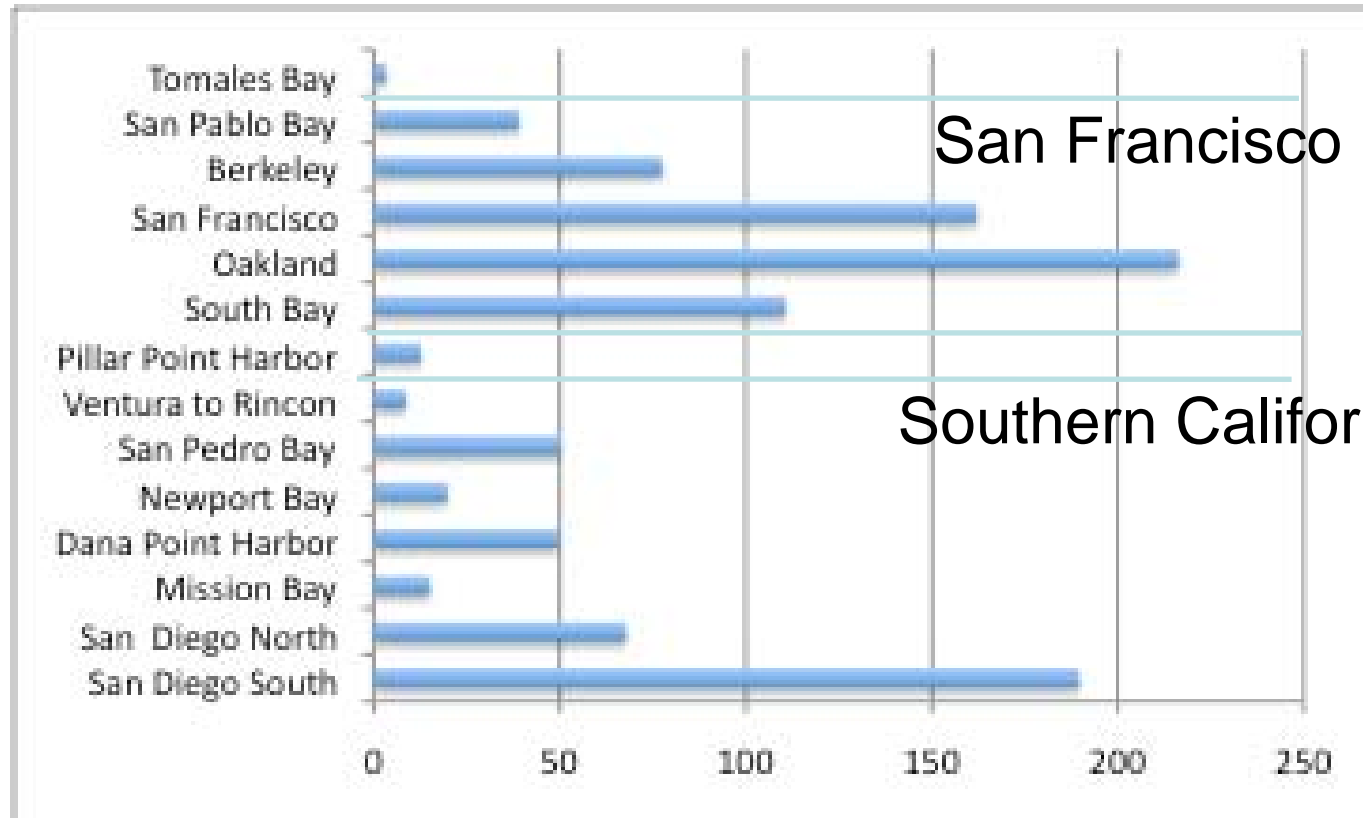


PCBs

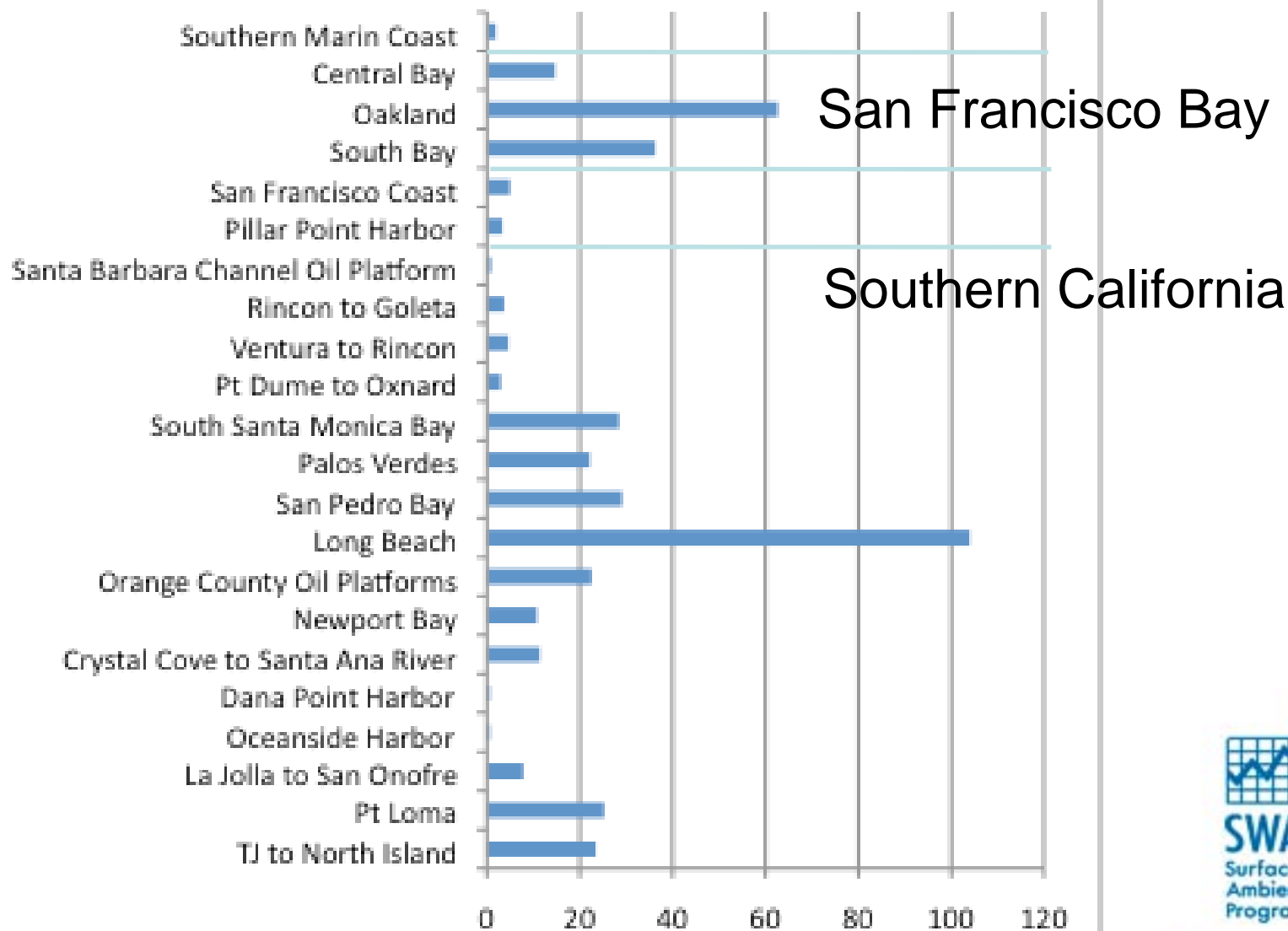
- Five locations had a species averaging more than 120 ppb
 - SD South Bay
 - Crystal Cove to Santa Ana River (other species low)
 - San Pedro Bay (shiner 50 ppb)
 - Oakland
 - SF Waterfront
- Green zones all in remote areas



PCBs (ppb) in Shiner Surfperch



PCBs (ppb) in White Croaker



San Francisco Bay Highlights

- New Safe Eating Guidelines from OEHHA
- PBDEs well below new OEHHA thresholds
- Dioxins a concern
- Selenium and PFOS
- No long-term trends
- Distinct spatial variation
- Skin removal very beneficial



Southern California Bight Highlights

- First comprehensive regional sport fish survey
- Moderate methylmercury
- DDT concentrations low
- PCBs high in San Diego Bay
- Chub mackerel low
- LA Times article



“Safe to Eat” Portal Highlights

- 2009 data are loaded
- Connected to CEDEN
- Assorted datasets added
- Enhanced downloading
- Links to advisories
- Other enhancements and debugging
- Updated portal web pages
- No funding for 2011/2012



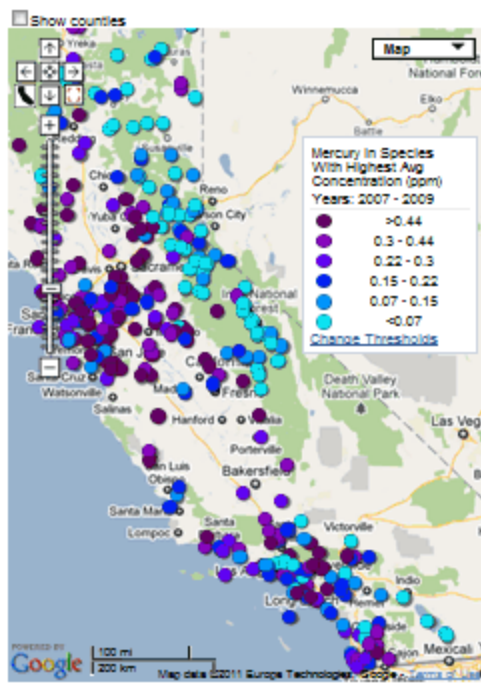


Home -> Safe To Eat -> Data And Trends

What are the Levels and Long-Term Trends in My Lake, Stream, or Ocean Location?

Select location from list: [dropdown]

Zoom to county: [dropdown]



Contaminant Data

This interactive map allows you to explore fish contaminant data for your fishing locations. Data are available from extensive monitoring by SWAMP of lakes and reservoirs in 2007 and shown by default.

- > Select parameters of interest from the menus below and click on the "Go" button. The map will display average concentrations for the selected water bodies.
- > To view data for all species at your water body, trends, or comparisons with nearby water bodies, click on a map location or select a water body from the menu above the map.
- > Enter your own threshold or modify thresholds displayed on the map by clicking the Change Thresholds link in the map legend.
- > Dots are general representations of sampling locations, not the precise locations where fish were caught.

Select Species:

Species With Highest Avg Concentration [dropdown]

Select Contaminant:

Mercury [dropdown]

Select Start Date:

2007 [dropdown]

Select End Date:

2009 [dropdown]

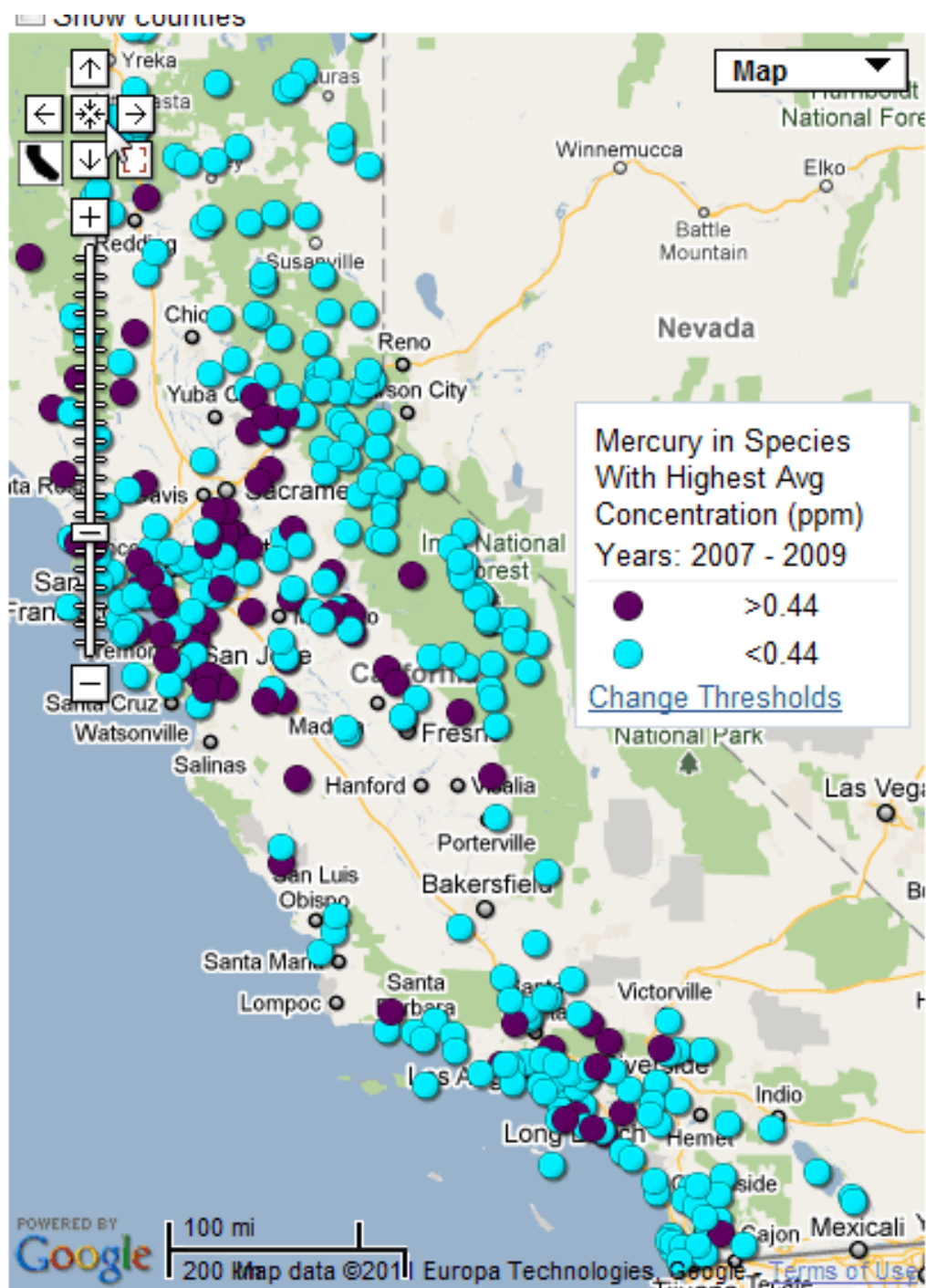
Go [button] Reset [button]

More information

- > [Monitoring programs and reports](#)
- > [Access Complete Datasets from CEDEN](#)
- > [Assessment thresholds](#)

This map shows data generated by:





- Select parameters of interest from the menus to display average concentrations for the selected water bodies.
- To view data for all species at your water body, click on a map location or select a water body from the list.
- Enter your own threshold or modify thresholds displayed in the map legend. [Thresholds](#) link in the map legend.
- Dots are general representations of sampling locations where were caught.

Select Species:

Species With Highest Avg Concentration

Select Contaminant:

Mercury

Select Start Date:

2004

Select End Date:

2009

Go

Reset

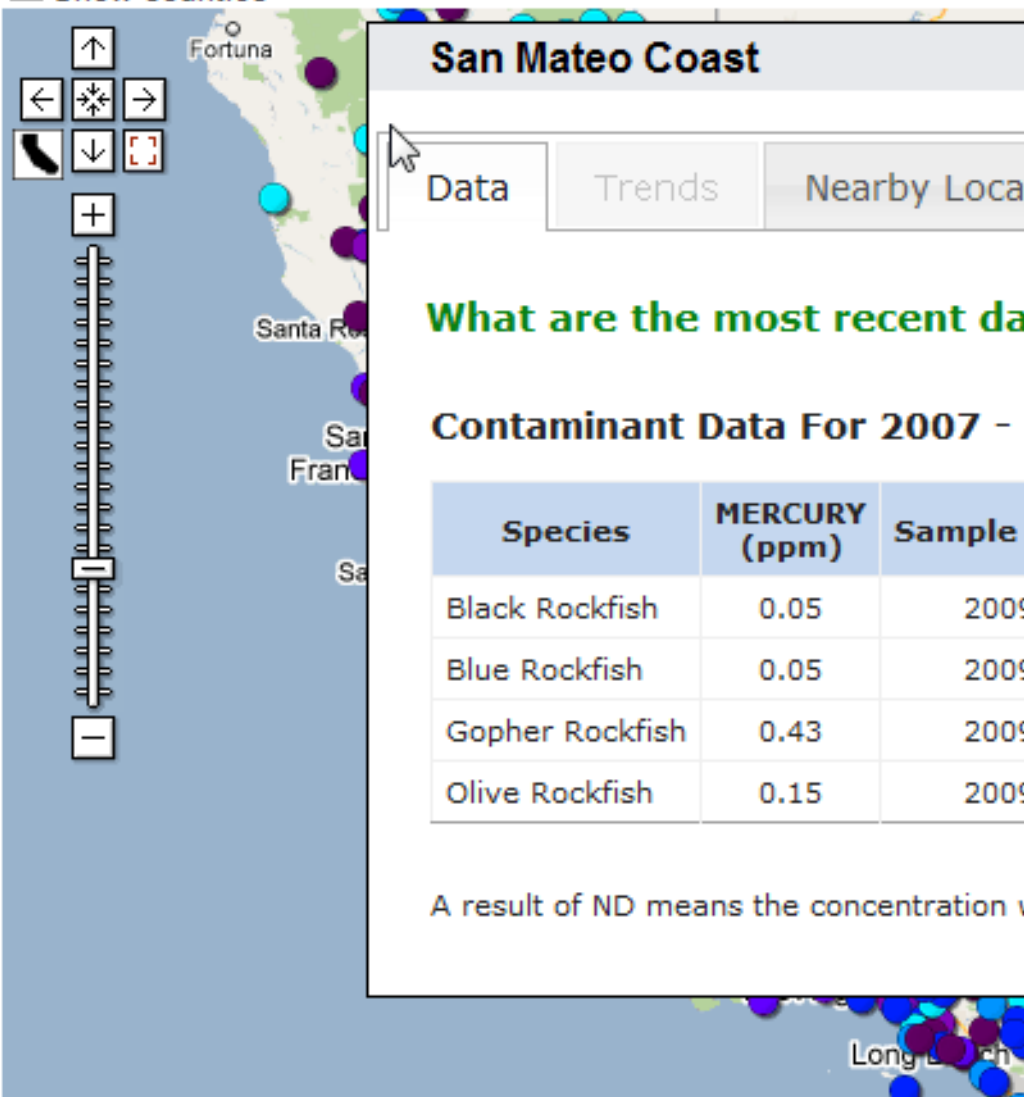
[More Information](#)

Zoom to county:

This interactive map allows you to explore fish contaminant data available from extensive monitoring by SWAMP of lakes and streams along the coast in 2009, and from other studies. Data from 2007-2009

Show counties

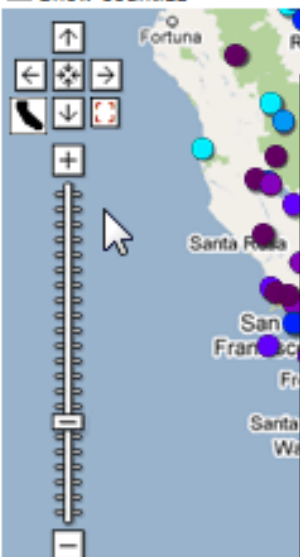
→ Select parameters of interest from the menus below



Select End Date:

Zoom to county:

Show counties



San Mateo Coast

Data

Trends

Nearby Locations

How does my location compare to nearby water bodies?

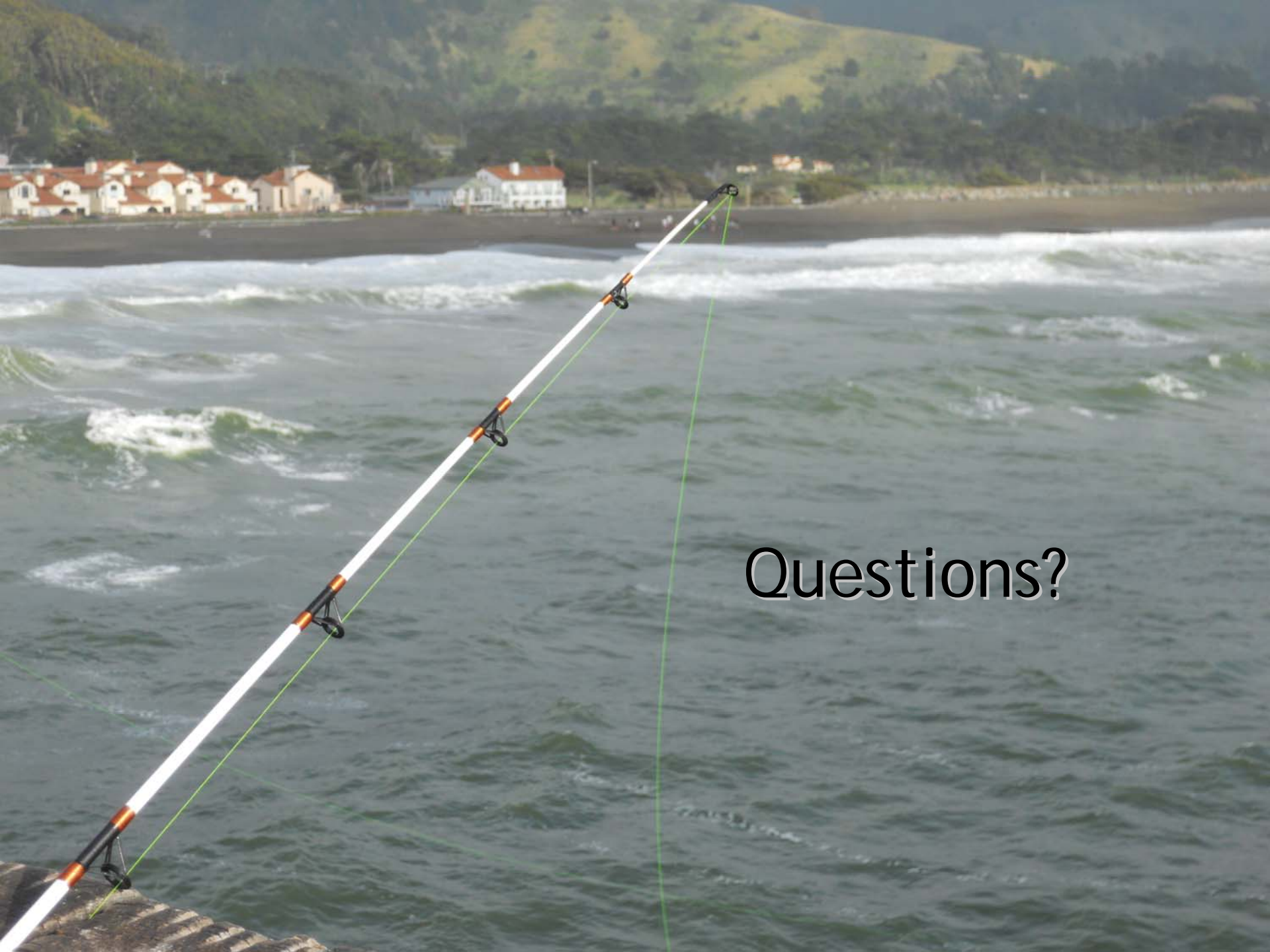
Change search parameters:

Nearby Water Body	Distance (mi)	Species With Highest Average Concentration	MERCURY (ppm)	Sample Year	Prep Code	Sample Type
Loch Lomond Reservoir	19	Largemouth Bass	0.11	2008	Skin off	Average of 350 mm Standardized Size
Stevens Creek Reservoir	19	Largemouth Bass	0.7	2007	Skin off	Average of 350 mm Standardized Size
Half Moon Bay Coast	23	Lingcod	0.27	2009	Skin off	Composite
Pillar Point Harbor	23	White Croaker	0.1	2009	Skin off	Composite
Lake Vasona	24	Largemouth Bass	0.16	2008	Skin off	Average of 350 mm Standardized Size
Lower Crystal Springs Reservoir	24	Largemouth Bass	0.85	2007	Skin off	Average of 350 mm Standardized Size
South Bay (1)	26	Leopard shark	1.15	2009	Skin off	Average of Individuals
Pilarcitos Lake	26	Rainbow Trout	0.26	2007	Skin off	Average of Location Composites
Almaden Lake	29	Largemouth Bass	2.15	2008	Skin off	Average of 350 mm Standardized Size
Pacific Coast	30	Lingcod	0.42	2009	Skin off	Composite

A result of ND means the concentration was below detection limits.

This interactive map allows you to explore fish contaminant data for your fishing locations. Data are available from 2007 and 2008, from the coast in 2009, and from other studies. Data from 2007-2009 are shown by default.

- Select parameters of interest from the menus below and click on the "Go" button. The map will display the results.
- To view data for all species at your water body, trends, or comparisons with nearby water bodies, click on the "Data", "Trends", or "Nearby Locations" tabs.
- Enter your own threshold or modify thresholds displayed on the map by clicking the Change Thresholds button.



Questions?