

Topics For Today

- **Brief overview of the Bight Program**
- **Compare and contrast with the RMP**
- **Potential linkages between north and south**
- **Timing**

Bight Marine Monitoring Is Growing and Evolving

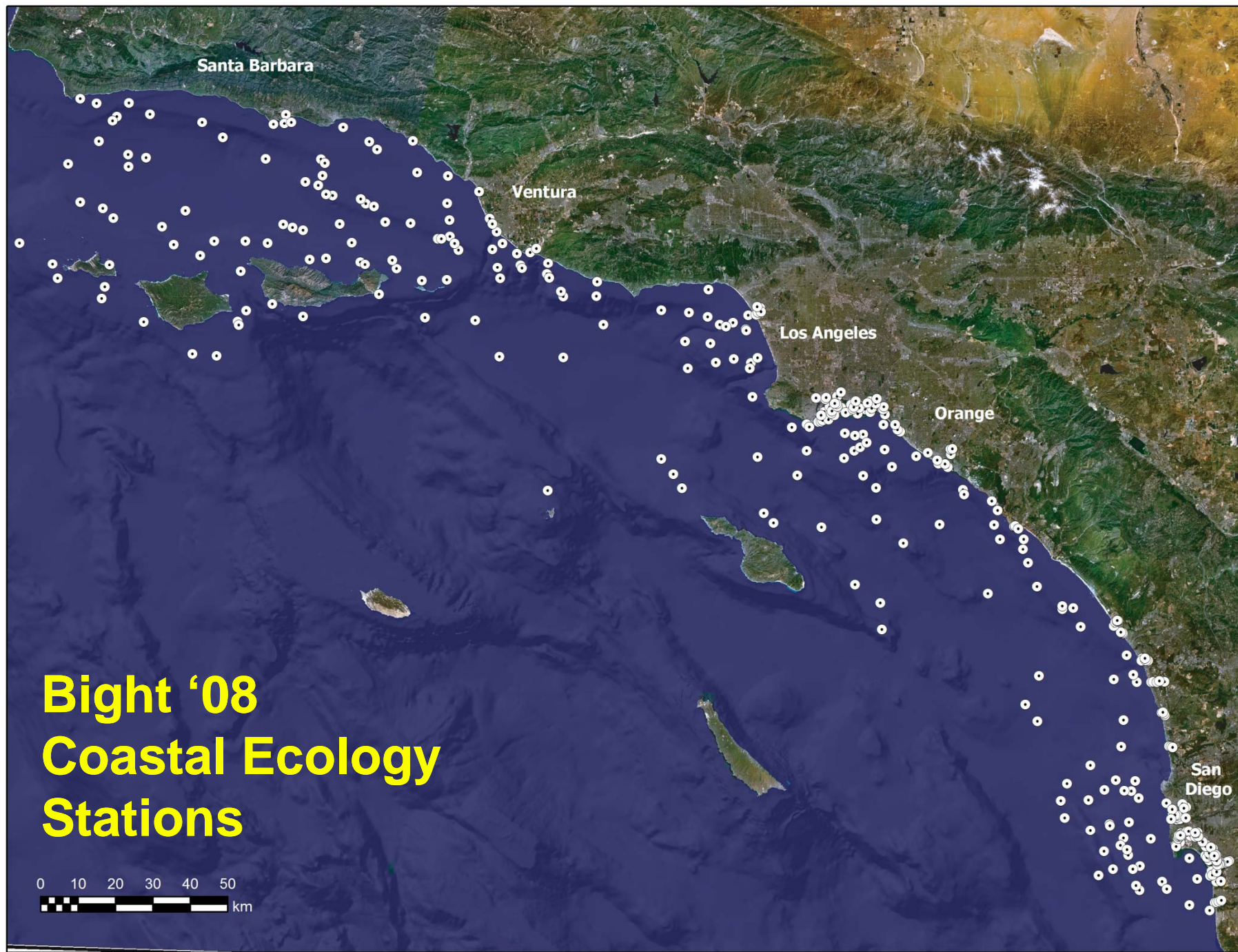
- **Four surveys about once every 5 years**
 - 1994, 1998, 2003, 2008
- **Increasing level of participation**
 - Started with 12, now over 100 different organizations
- **Increasing number of focus elements**
 - Grown to six in 2008

Six Elements in Bight '08

- **Coastal Ecology**
 - Sediment and tissue chemistry, toxicity, infauna and fish
- **Water Quality**
 - Water column
- **Wetlands and Estuaries**
 - Eutrophication
- **Shoreline**
 - Microbiology
- **Water Quality Protected Areas**
 - Areas of Special Biological Significance (ASBS)
- **Rocky Reefs**

Bight and RMP Are Largely Similar

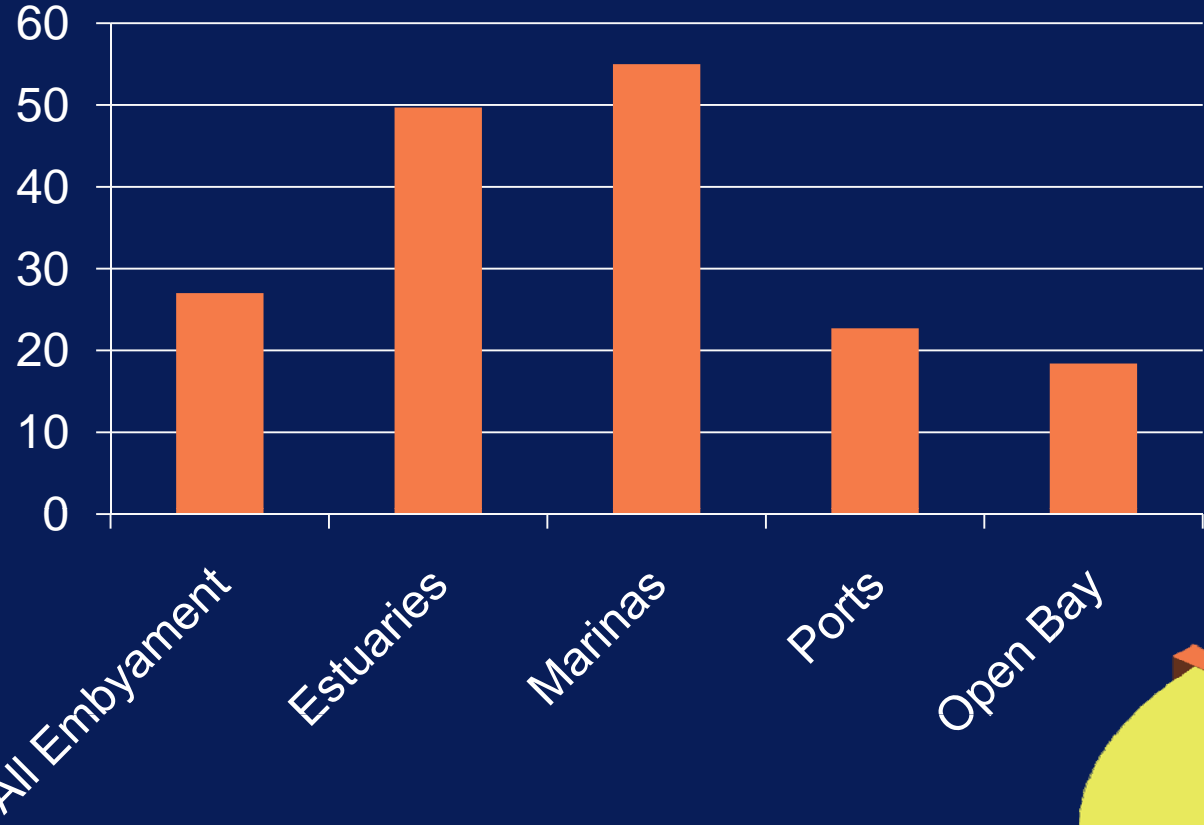
- **Ask comparable questions**
- **Parallel study designs**
- **Measure similar indicators**
- **Focus on Special Studies**
- **Demand high quality data**
 - **Delivery to key decision-makers**



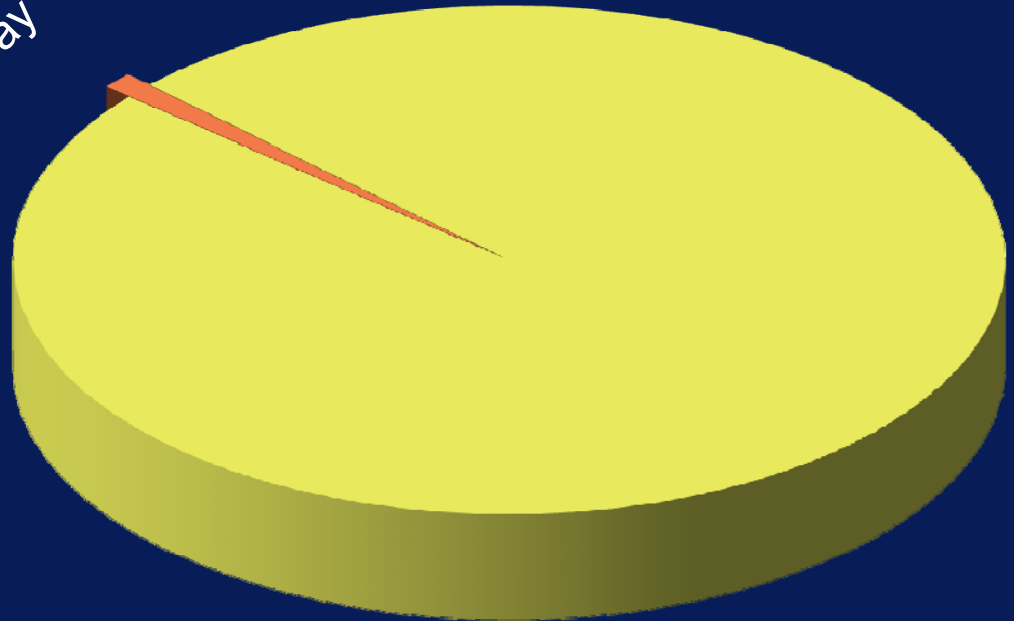
Bight '08 Coastal Ecology Stations

0 10 20 30 40 50
km

Area Impacted (Relative %)

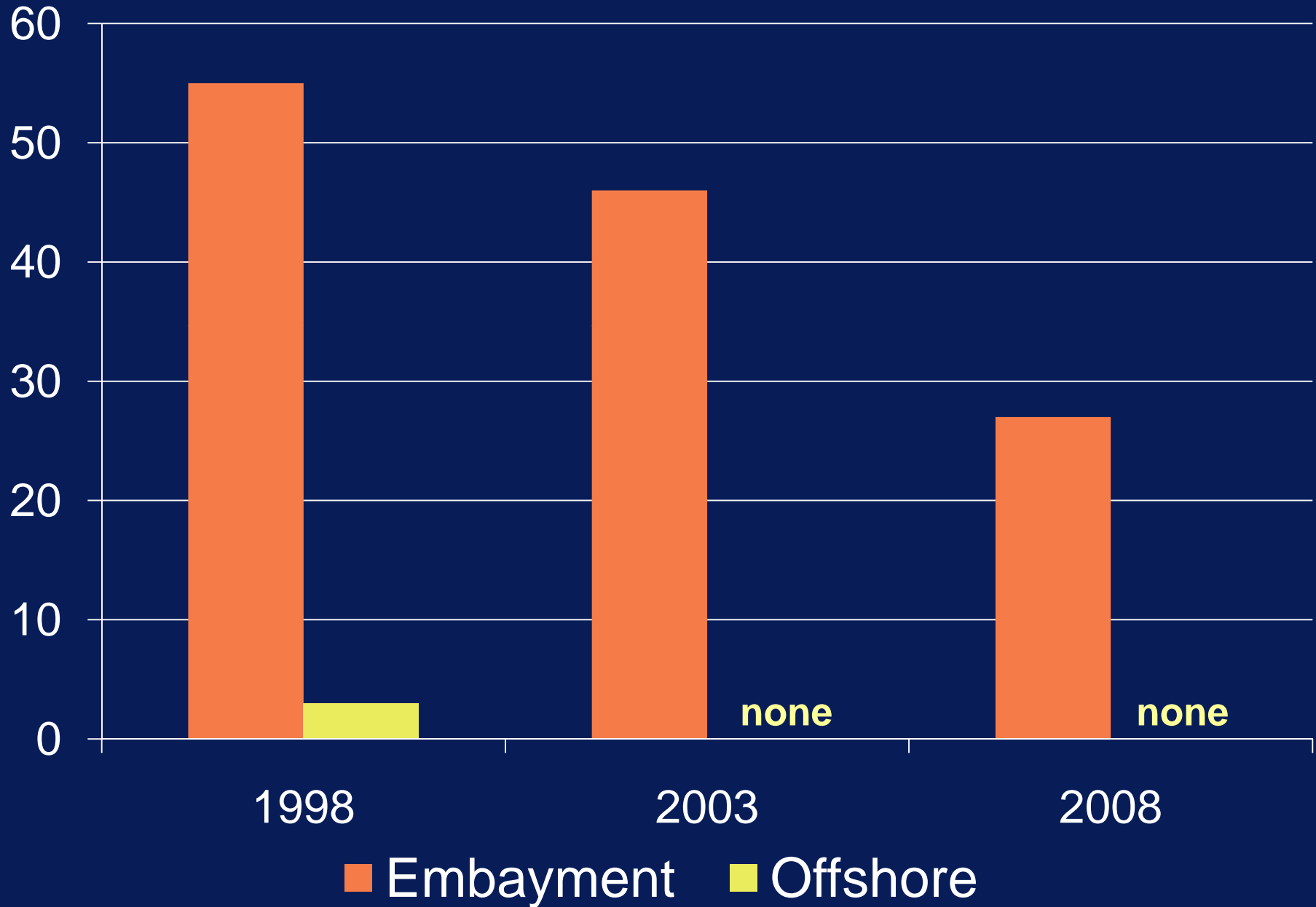


Entire SCB Area



Impacted Not Impacted

Area Impacted (Relative %)



Bight and RMP Have Some Differences

- **Implementation approach**
- **Technical details**
 - **Constituent lists, methods, QA/QC, information management**
- **Subset of Indicators**
- **Special studies**

Two Potential Linkages

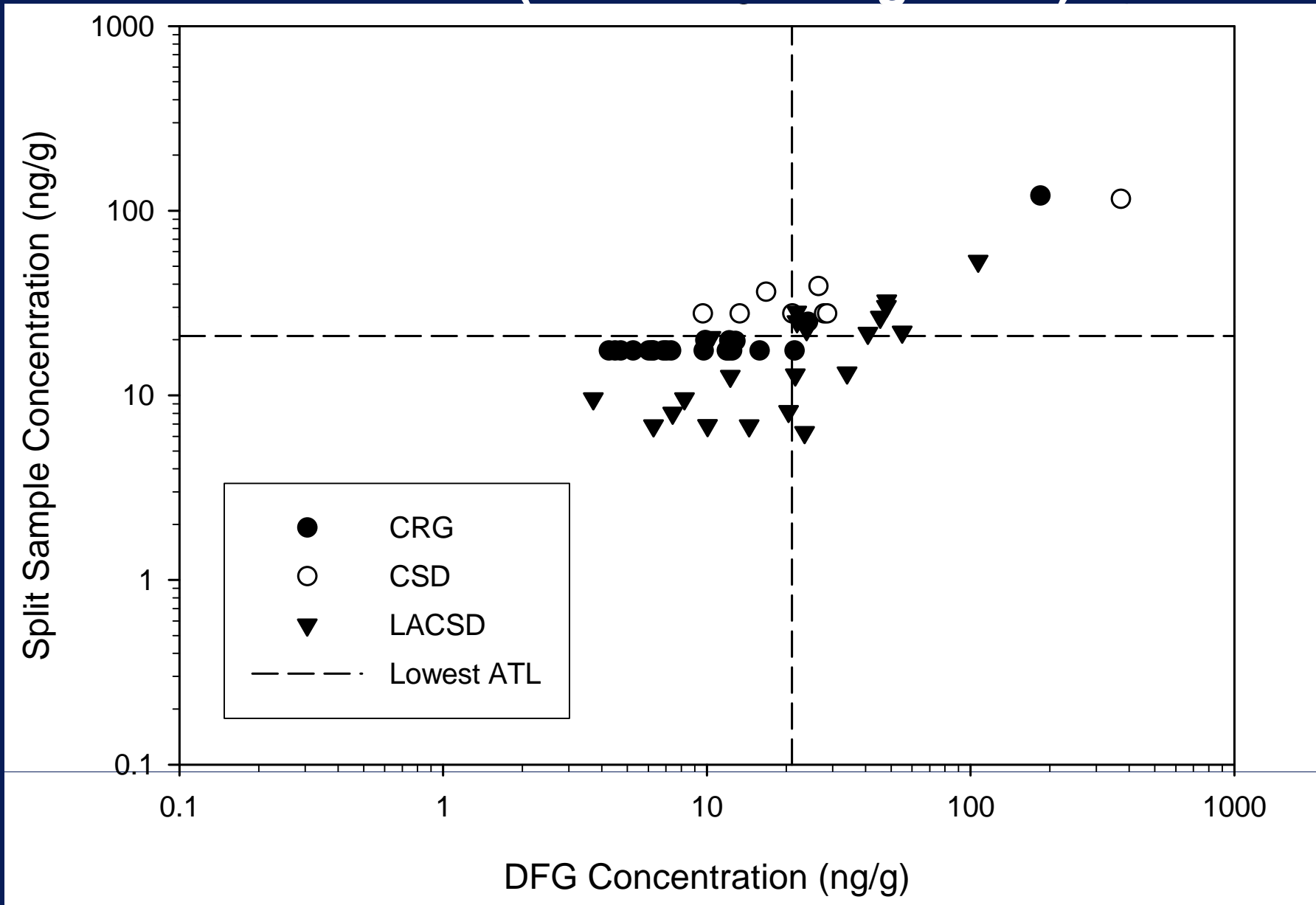
- **Method standardization**
- **Special studies**

Potential Areas of Standardization and QA/QC

- **Sediment, water column, or tissue chemistry**
 - Analyte lists, comparability of results
- **Data quality objectives**
 - chemistry, biology, toxicity
- **Methods**
 - Toxicity identification evaluations

IN-STUDY SPLIT TISSUE SAMPLES

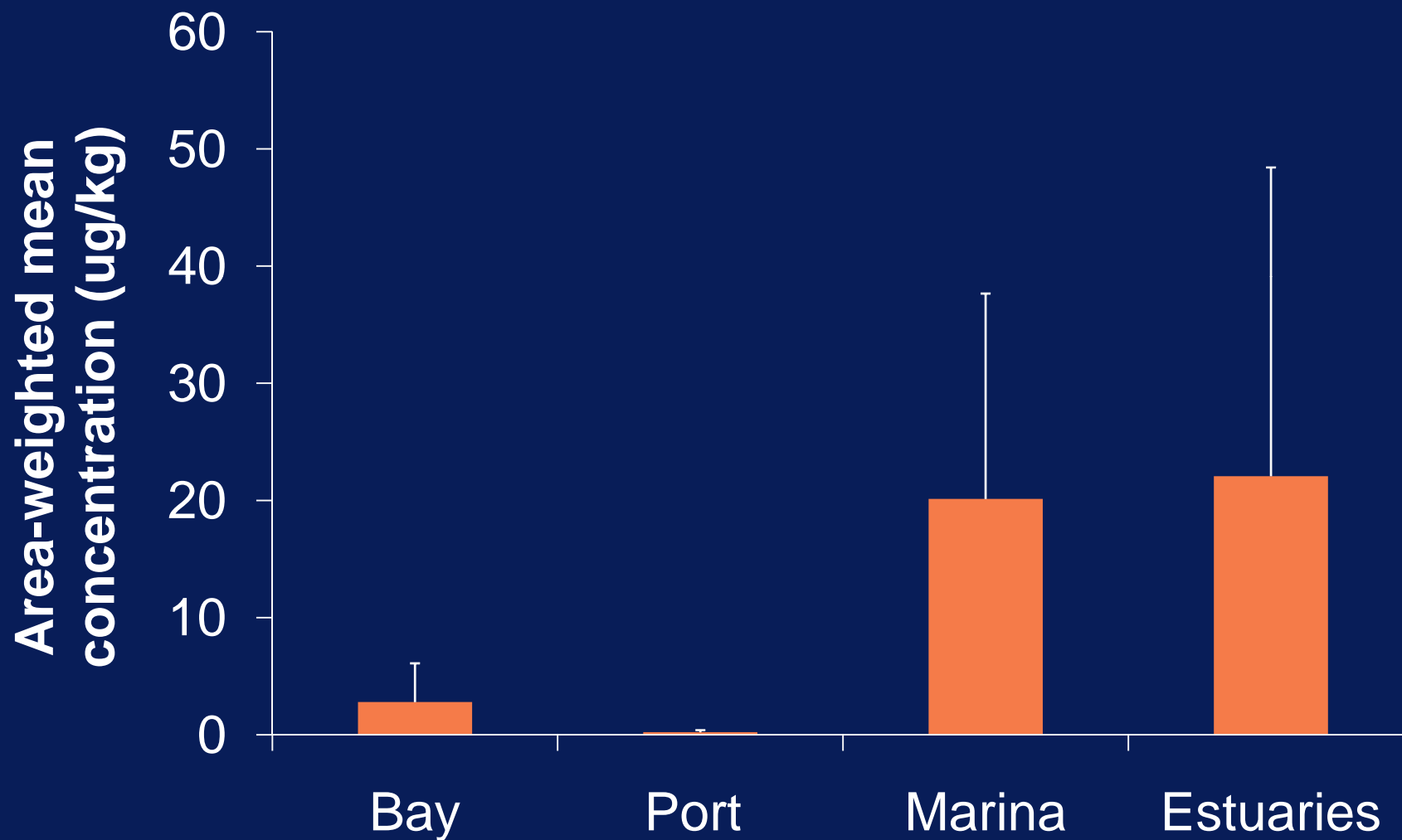
Total PCBs (common congeners)



B'08 Special Studies For Coastal Ecology

- PBDEs
- Pyrethroid pesticides
- Pharmaceuticals and Personal Care Products
- Antifouling paint algaecides (Irgarol and M1)
- Sediment profile imaging
- Determining optimal sample area for infaunal analysis
- Using genetic barcoding for taxonomic identification
- Sediment toxicity identification evaluations
- Evaluation of AVS-SEM partitioning for predicting toxicity
- Endocrine disruption indicators in fish from reference areas
- Foraminifera as indicators of ecosystem health

TOTAL PYRETHROID IN SEDIMENTS



What's next for Bight?

- **Bight '13 kickoff in 6 months**
 - Define questions, create design
 - Select indicators and special studies
- **Method development, intercalibrations, IM start around January 2013**
- **Field season starts July 2013**

Southern California Bight



2008

Regional Monitoring Program

B'08 Special Studies

- **Water Quality**

- Fate and transport model
- Using isotopes for source attribution
- Testing new sensor technology
- Domoic acid test kits
- Autonomous underwater vehicles (AUVs)

- **Microbiology**

- Molecular methods
- Human markers for source tracking
- Sand methods

- **ASBS and Rocky Reef**

- Developing assessment tools for chemistry and biology