

Southern California Bight



Regional Monitoring Program

Bight '13 Is the Largest Survey To Date

- Contaminant Impact Assessment
- Nutrient Impact
- Debris Assessment
- Microbiology
- Marine Protected Area/Rocky Reef



Bight Program Has Some Exciting Elements

- **In some ways, Bight has become routine**
 - Important for trends monitoring
- **In other ways, Bight is more unique than ever**
- **Perhaps the most special studies of any survey to date**
 - Great opportunities for some terrific science

Chemicals of Emerging Concern

- **Measuring four classes of new chemicals**
 - Pesticides, alkylphenols, Perflourinated compounds, flame retardants
- **Testing the new bioanalytical screening tool for toxicity**
- **Opportunity to evaluate a risk based approach to CECs**
 - occurrence vs. toxicity



Causal Diagnosis

- **Molecular Toxicity Identification Evaluation (TIEs) are the new frontier**
 - Gene regulation, protein synthesis
- **Bight'13 covers the full range of toxicant exposure**
- **Opportunity to link molecular with organismal levels**
 - Standard toxicity tests, Sediment TIEs
 - Biological community analysis

Unprecedented Bioaccumulation Survey



- **First bightwide survey of bioaccumulation in bird eggs**
 - Wildlife risk
- **Coupled trophic transfer studies**
- **Opportunity to bring all dischargers together**
 - Model monitoring recommendation

Unique Indicators

- **Linking debris between land and sea**

- Identify sources and fate for different types of plastic

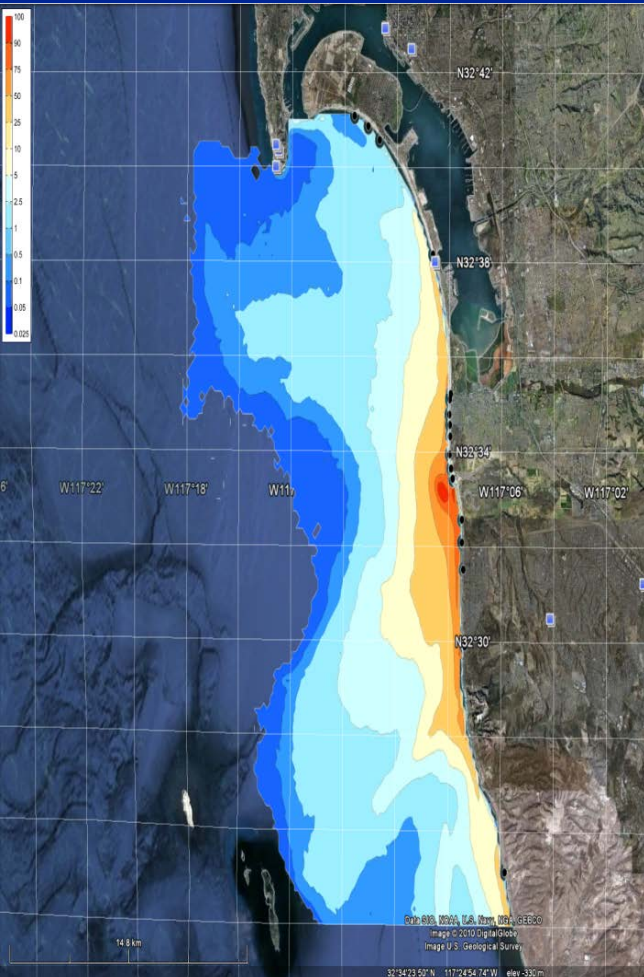
- **Examine biological effects**

- Plastic ingestion by fish



- **Leveraging opportunities of scale**

Novel Data Utilization



- **Creating an index of water quality pressure**
 - Stormwater plume probability maps
- **Creating an index of fishing pressure**
 - aerial overflights
- **Creating a rocky reef biological integrity index**

Summary of Sample Initiation

- **Contaminant Impact Assessment – Summer 2013**
- **Nutrient Impact – Spring 2014**
- **Debris Assessment – Summer 2013**
- **Microbiology – Summer 2013**
- **Marine Protected Areas – Sampling completed**

Bight'13 Provides Unparalleled Opportunities

- **Investigate issues without modifying your permit**
- **Evaluate new technology and test novel methods**
- **Develop new assessment tools**
- **Tie all of these to the SCCWRP Research Plan**
 - Perfect mechanism for fostering interaction with our member agencies