

Southern California Bight Regional Marine Monitoring Program

*Commission Update
March 2025*



For Those That Are New...

- Southern California is the national model for coordinated, integrated regional monitoring
- We have regional monitoring programs for oceans, streams, beaches, stormwater BMPs, and others
- Regional monitoring at SCCWRP dates to our origins in the 1970's but "Bight" is the fully evolved program
 - Started in 1994 and goes in 5-year cycles

Why Is Bight Regional Monitoring The National Envy?

- Question-focused → *adaptable*
- Locally-driven → *monitoring trade-offs for local agencies*
- Effectively communicated → *has resulted in numerous consensus-driven management decisions/actions*

Why Is Bight Regional Monitoring The CTAG Favorite?

- Provides context to local discharge monitoring
- Training and education for your staff
- Independently test your agency's quality assurance
- Addresses emerging issues without an NPDES permit requirement
- Opportunity to test new technology, standardize methods
- Enhances communication with other agencies

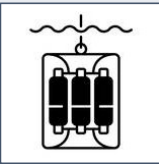
You Asked for a Bight '23 Update

- Bight '23 is the largest, most complex Regional Monitoring in its 30-year history
- Overall, it is progressing nicely and achieving the goals CTAG wants
- I expect to have final reports on individual elements starting in 2025

Eight Elements in Bight '23



Sediment Quality



Water Quality: Ocean
Acidification & Hypoxia



Harmful Algal Blooms



Microbiology



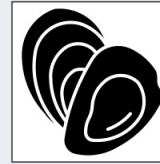
Trash & Microplastics



Estuaries



Submerged Aquatic
Vegetation



Shellfish
Bioaccumulation

Bight Element Status: March 2025

Program Elements	Study Design	Sample Collection	Sample Analysis	Data QA/QC	Data Analysis	Reporting
Water Quality/ OAH	Complete	Started this Winter				
HABs	Complete	Complete	75%			
Trash/Microplastics	Complete	Complete	70%			
Microbiology	Complete	75%	10%			
Estuaries	Complete	Complete	Complete	80%	10%	
SAV	Complete	Complete	95%	20%		
Sediment Quality	Complete	Complete	80%	50%	20%	10%
Shellfish	Complete	Complete	50%			

Sediment Quality Questions

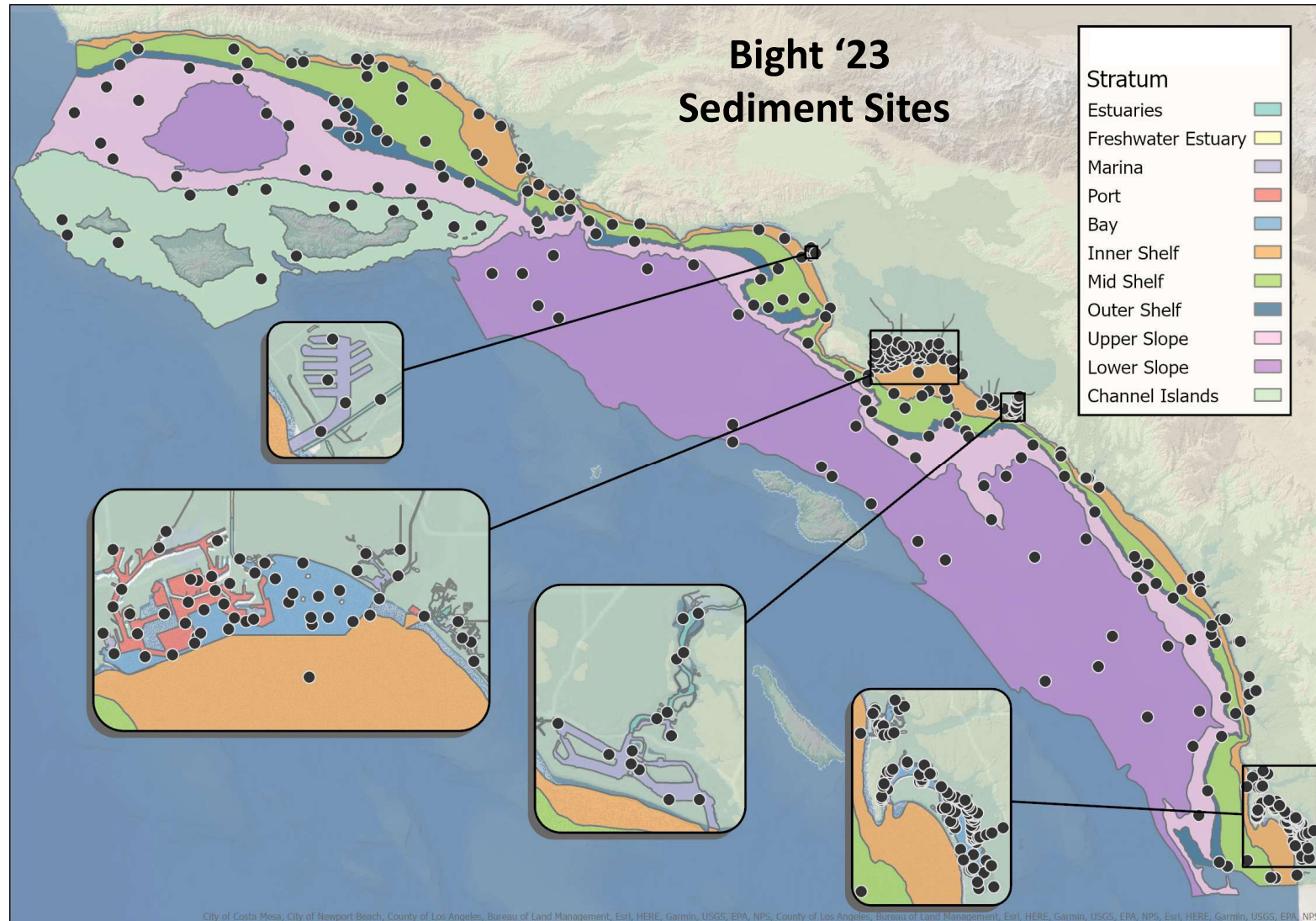
- What is the **extent and magnitude** of sediment quality impacts across southern California?
 - How does extent and magnitude compare across habitats?
- What is the **trend** in extent and magnitude of sediment quality impacts across southern California?
- Nearly 90 participating agencies in just this element

Sediment Quality Approach

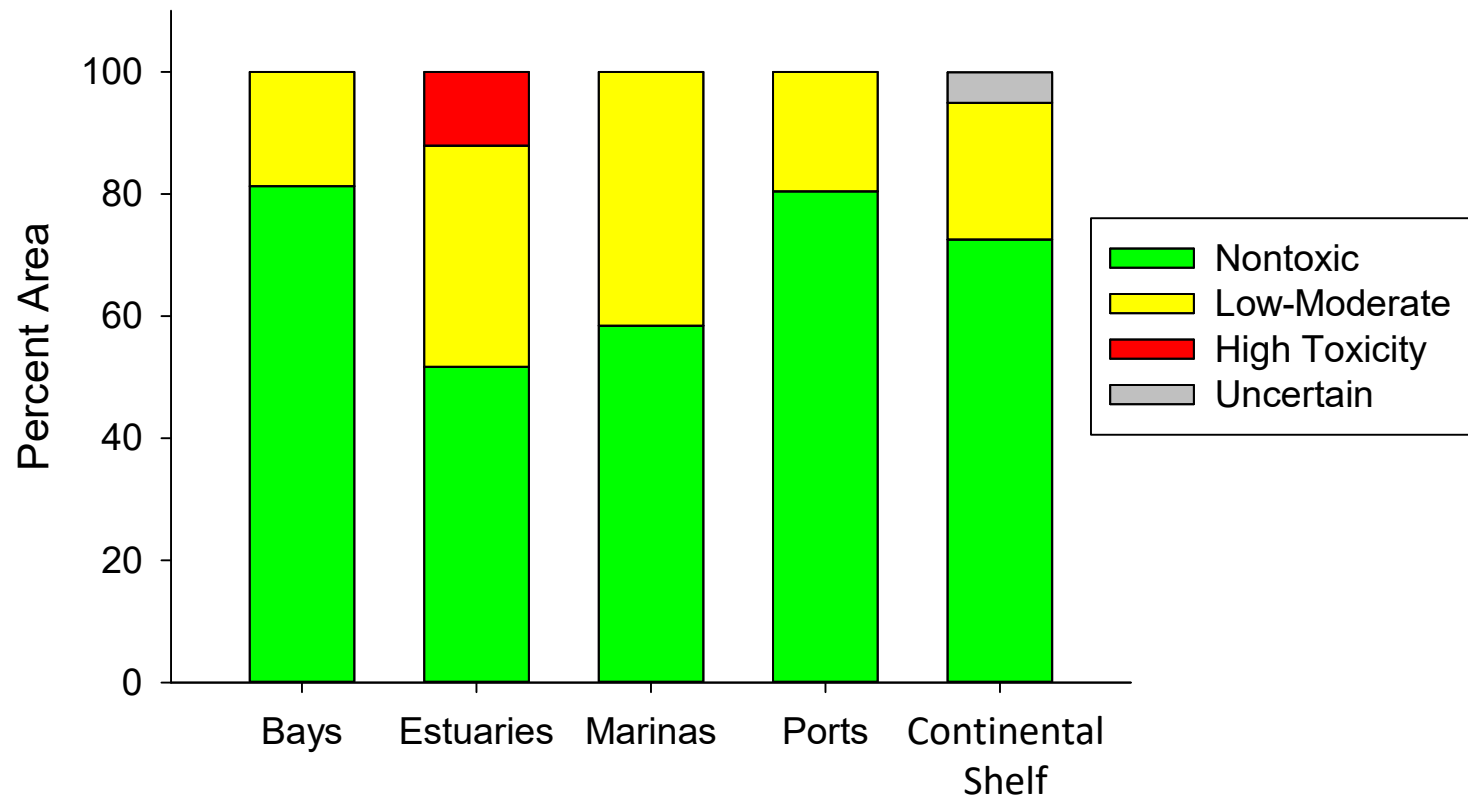
- Utilize a “probabilistic” study design, an unbiased way to sample multiple habitats
- Analyze multiple indicators: Chemistry, Toxicity, Benthic infauna, Trawl caught fish and invertebrates
- Use the State’s Sediment Quality Objectives as our primary assessment tool

By the Numbers:

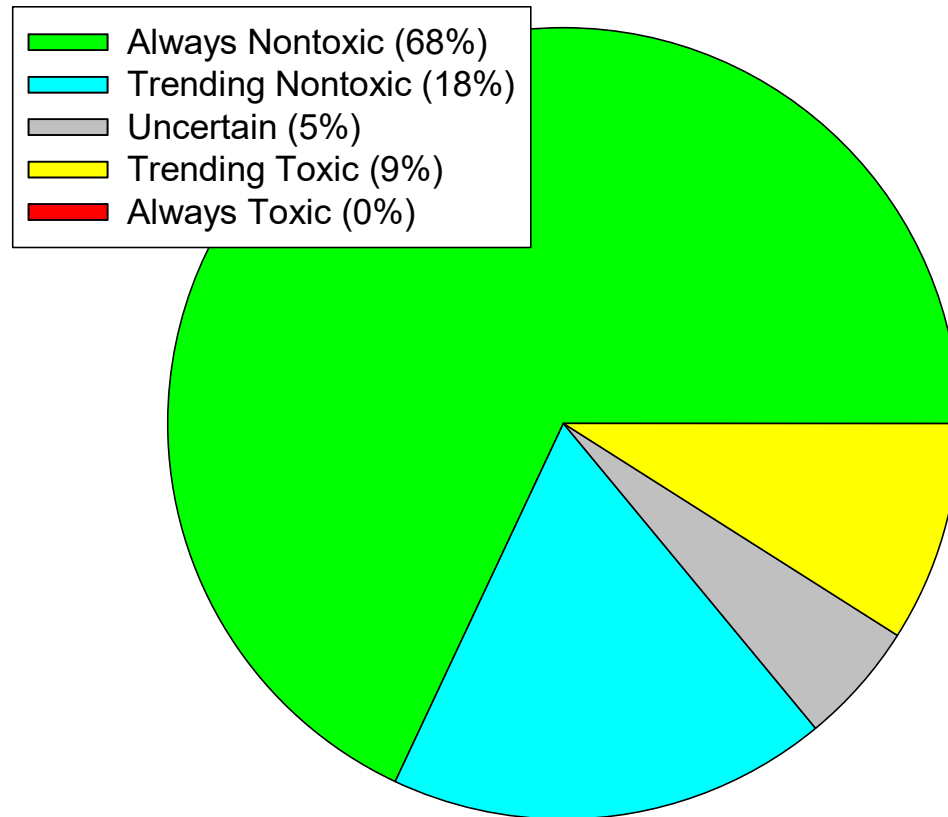
- 11 Habitats (strata)
- 340 sediment samples
- 120 trawl samples
- 148 chemicals measured
- 9 Vessels on the water
- 15 Laboratories analyzing samples
- 100% pre-survey intercalibration QA/QC pass rate
 - Field teams
 - Chemistry labs
 - Toxicity labs



Example Bight '23 Results: Sediment Toxicity



Example Bight '23 Results: Toxicity Trends



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Regional Monitoring Measures New Chemicals

- PFAS
- Tire wear compounds (6-PPDQ)
- Neonicotinoid pesticides
- ~~Fipronyl pesticides~~

Testing New Tech, Standardizing Methods

- Microplastic field sampling and laboratory analysis
- eDNA
- Droplet Digital PCR
- Ocean alkalinity and pH

Bight '23 Is Not Without It's Challenges

- We had a hurricane in the middle of our summer sampling window
- More complexity means we need more leveraged effort if you want to continue the old AND add the new
- Dedicated education and training to keep up with unusually high staff turnover at member agencies
- Partnership monitoring from the federal government

Summarizing Your '23 Update

- Bight '23 is the largest, most complex Regional Monitoring in its 30-year history
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What else can Bight
do for your agency?

[Bight Web Page](#)

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