

Key Findings from Bight' 23 Regional Monitoring Program

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Commission Meeting, June 2026



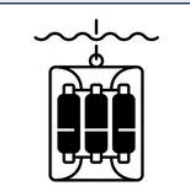
Bight Program is a national model

- Long-term large-scale marine monitoring program
 - Started in 1994
 - Offshore and coastal habitats
- Management-focused to address your needs
 - Evolving questions and study design
- Consensus-based with ~120 participating agencies across different sectors

Bight '23 is the most comprehensive



Sediment Quality



Water Quality



Estuaries



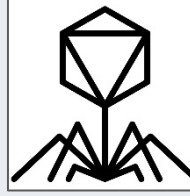
Submerged Aquatic
Vegetation



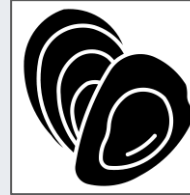
Trash & Microplastics



Harmful Algal Blooms



Microbiology



Risk Assessment

The Bight program supports your needs

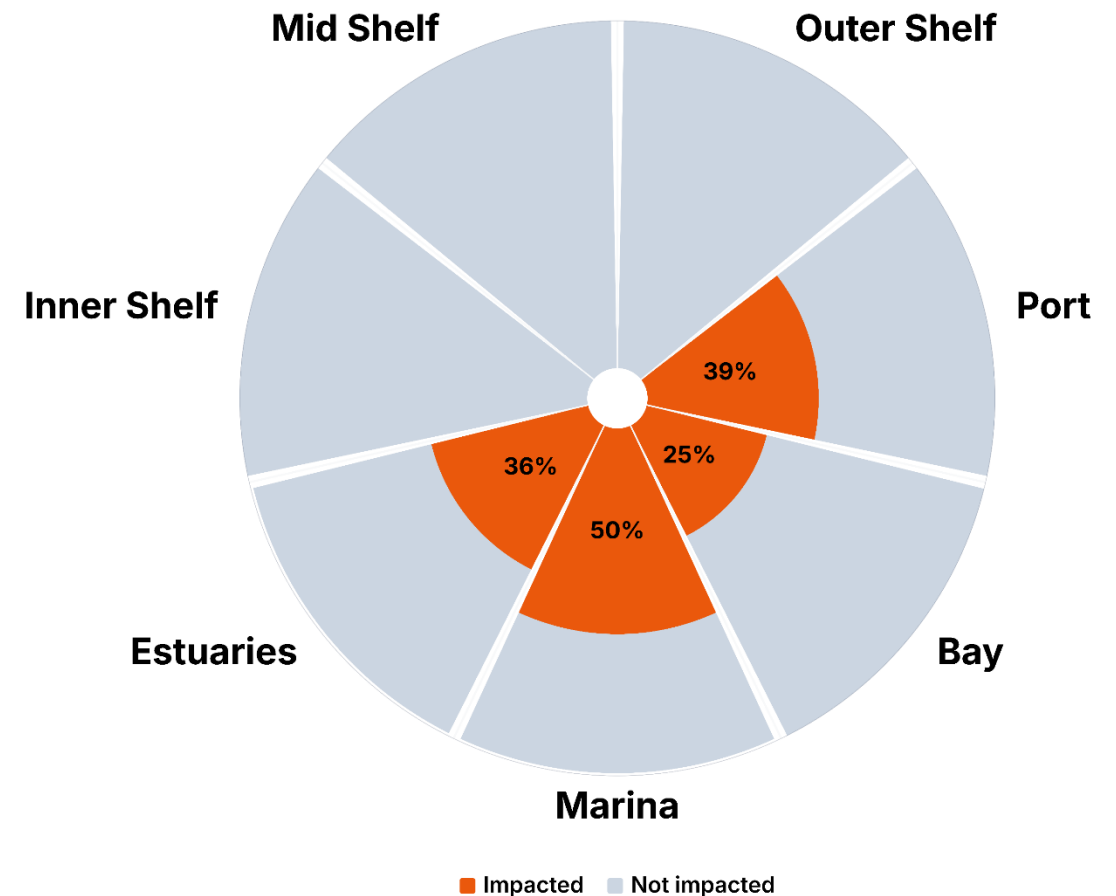
- **Address “big picture” status, context to local discharge monitoring**
- Address emerging issues without an NPDES permit requirement
- Evaluate success of management actions
- Evaluate and standardize new methods

“Big picture” status for sediment quality

- Longest running element
- Uses standardized statewide method to facilitate comparisons
 - Consistent with your permit requirements
- Multiple lines of evidence assessed
 - Sediment toxicity
 - Sediment chemistry
 - Soft-bottom dwelling communities
 - Large, bottom-dwelling fish/invertebrate communities
 - Bioaccumulation

Most of the Bight seafloor is in good condition

- Nearly 99% of the Bight area is considered unimpacted
- Big picture has not changed since 2013
- Where we see impact, it is mostly in estuaries and marinas



The Bight program supports your needs

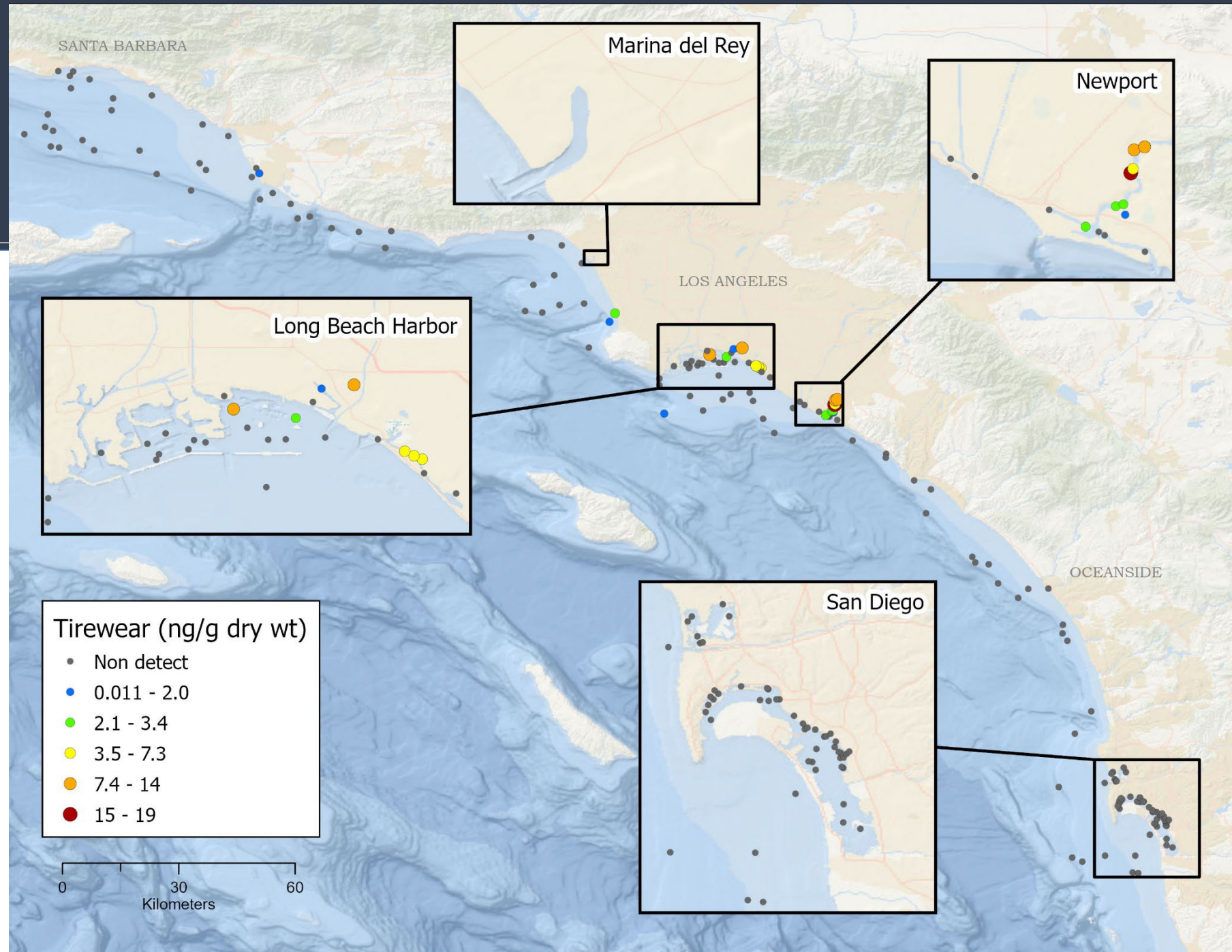
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Constituents of Emerging Concern (CECs)

- Nobody wants to continuously monitor CECs unless they really are of concern
- You identified three classes of CECs to monitor
 - 6PPD-Q (tirewear compound)
 - Neonicotinoids (insecticides)
 - PFAS

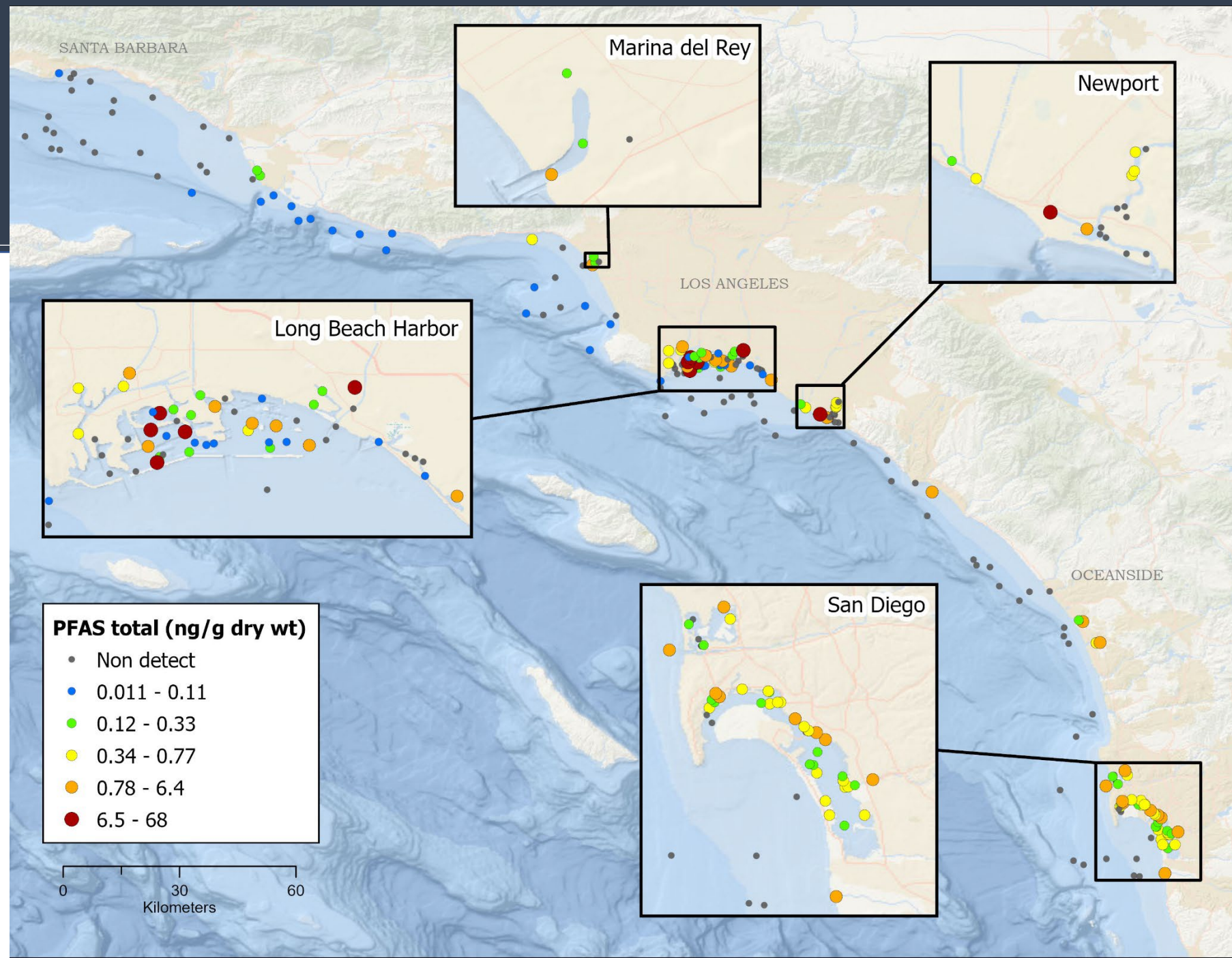
Tirewear compound

- Not detected in 89% of stations (154 out of 173)
- Not a concern in Bight sediment



PFOS & PFOA

Maximum concentrations	PFOS + PFAS (ng/g)
Melbourne (AUS)	7
Zhangjiang River Estuary (CHN)	62
SoCal Bight	68
Pearl River Delta (CHN)	69
Truckee River, NV	280
Las Vegas Wash, NV	350
Tampa Bay, FL	3000



CEC Prioritization Framework

Recommended Actions *(still in development)*

Very High	<i>Develop source control measures</i>
High	<i>Implement pollution prevention measures</i>
Moderate	<i>Investigate pathways</i>
Low	<i>Reduce frequency or discontinue monitoring</i>

Possible
Concern

Insufficient data
available

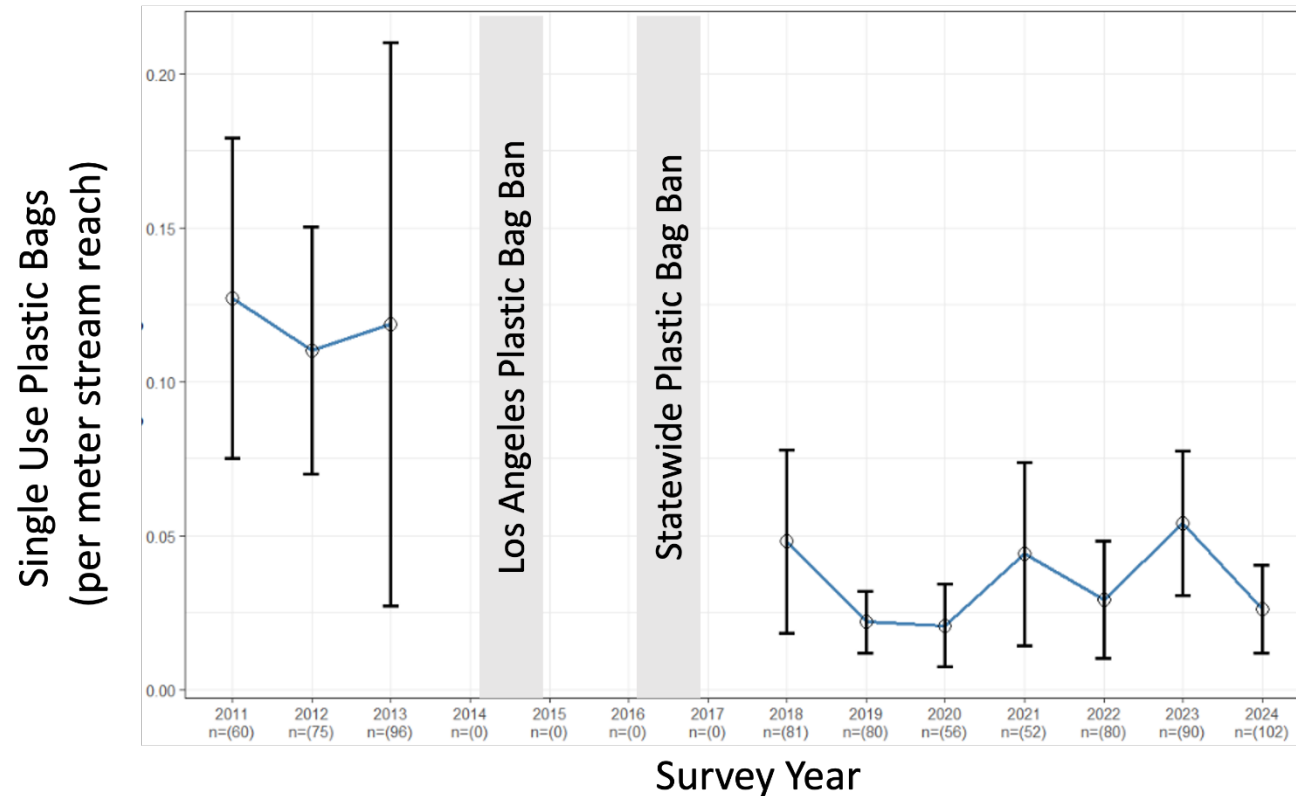
The Bight program supports your needs

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Trash remains pervasive

- Widespread occurrence on the seafloor and stream reaches
- Urbanized areas have the greatest amount of trash
 - Bays, streams in densely populated areas
- Plastic makes up at least half of the trash observed

But product ban is effective in reducing trash



The Bight program supports your needs

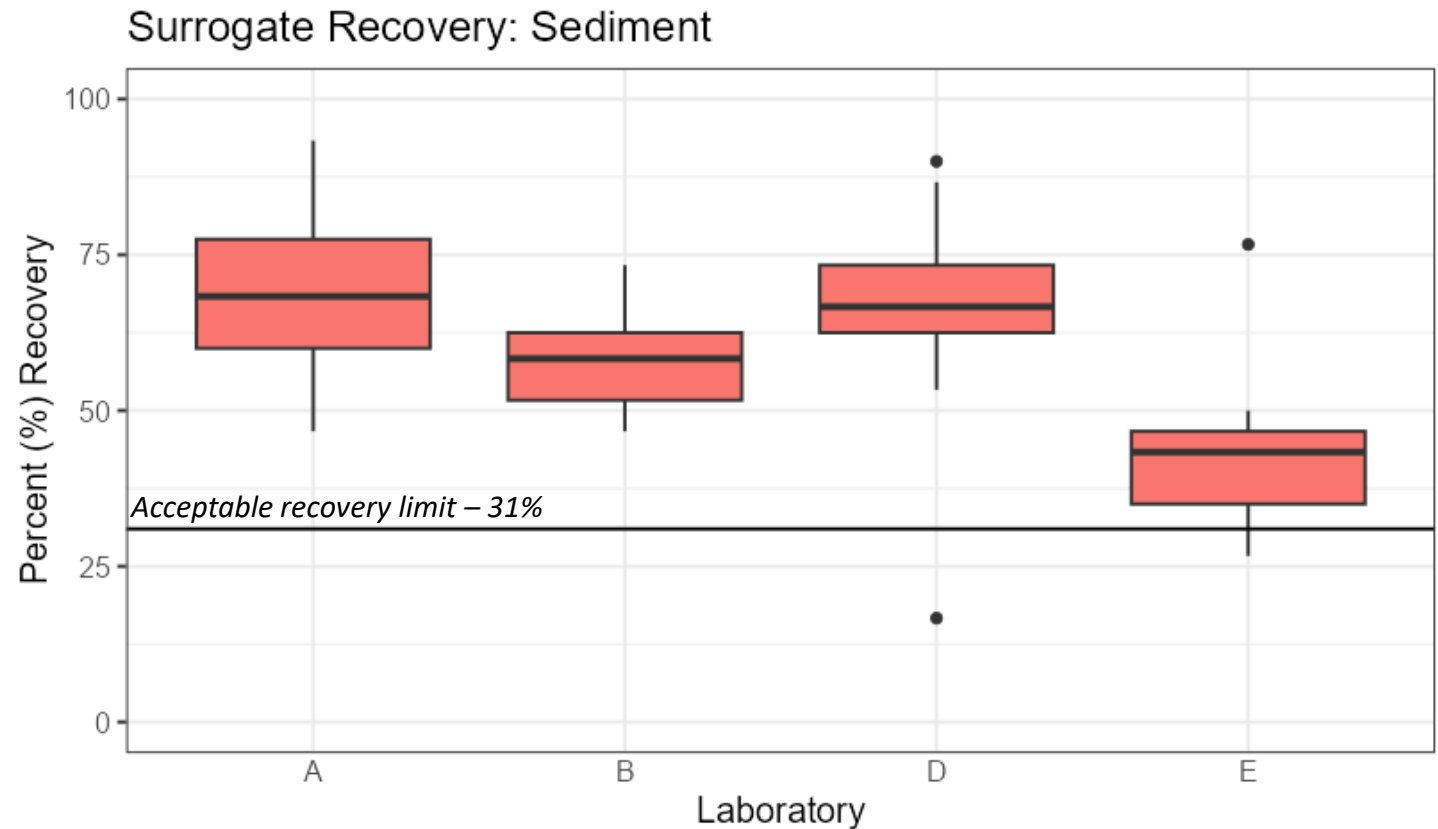
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- **Evaluate and standardize new methods**

Microplastics measurements

- Back in 2018, you were concerned about comparability of microplastics measurements between labs
- Since then, we have standardized sampling and analytical methods, and trained laboratories
- Bight'23 was designed to evaluate the protocols in sediment and bivalves

Tools are now available for sediment monitoring

- Successfully tested by five laboratories
 - Recovery above 50% for most labs
 - Limited background contamination



Comparing among multiple stressors

- One of your biggest challenge is prioritizing stressors of greatest impact to aquatic environments
- Risk assessment is part of Bight'23 for the first time
 - Priority chemicals
 - CECs
 - Algal toxins
 - Pathogens
 - Microplastics

Value of the Bight program

- Address “big picture” status, context to local discharge monitoring
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And there are many more examples



Sediment quality synthesis has a new format!

- Interactive web-based report
- High-level summary of key findings and implications

