

MICROPLASTICS SAMPLE COLLECTION METHOD EVALUATION

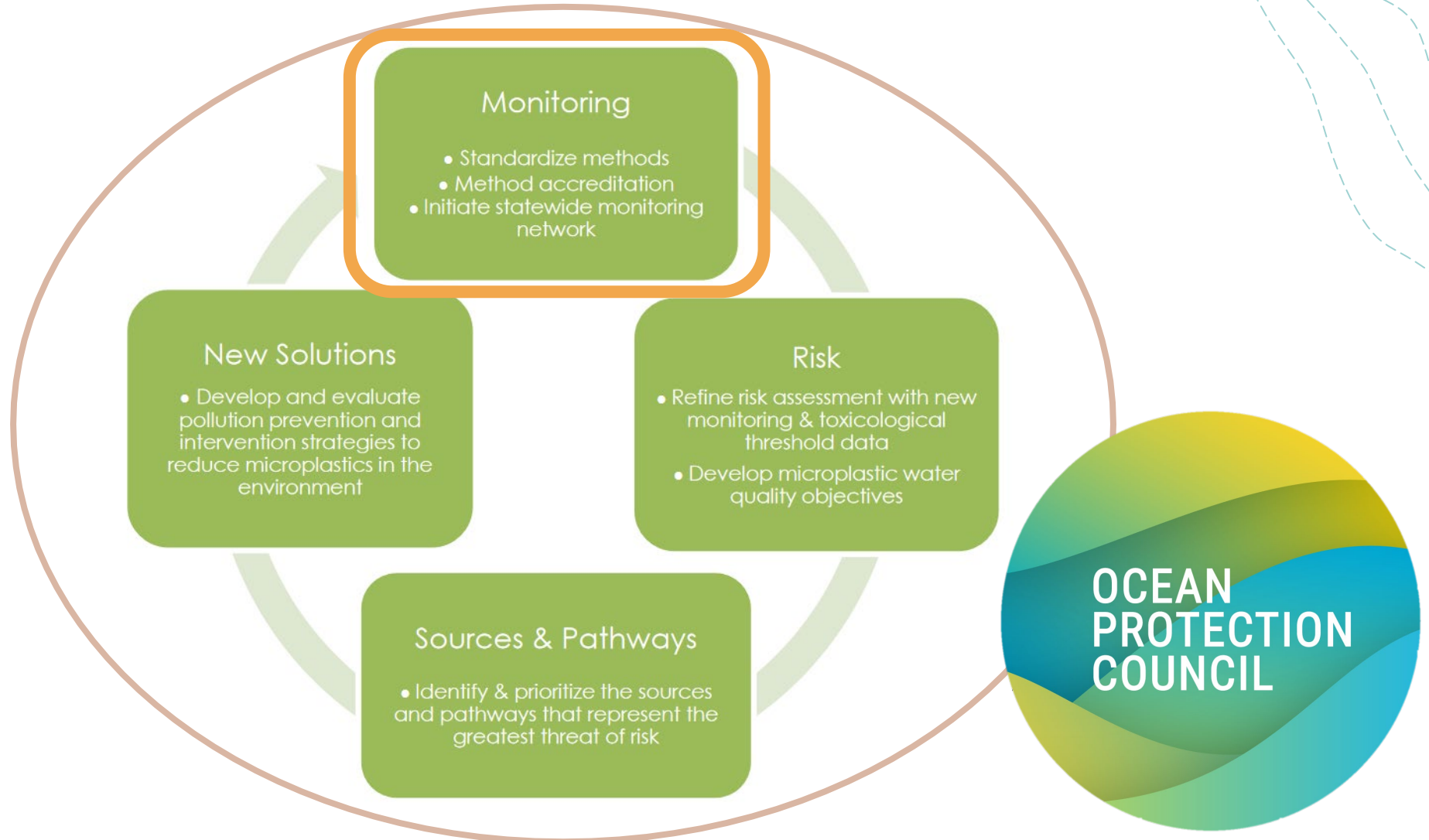
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Southern California Coastal Water Research Project Authority

Quarterly Commission Meeting, 3 March 2023



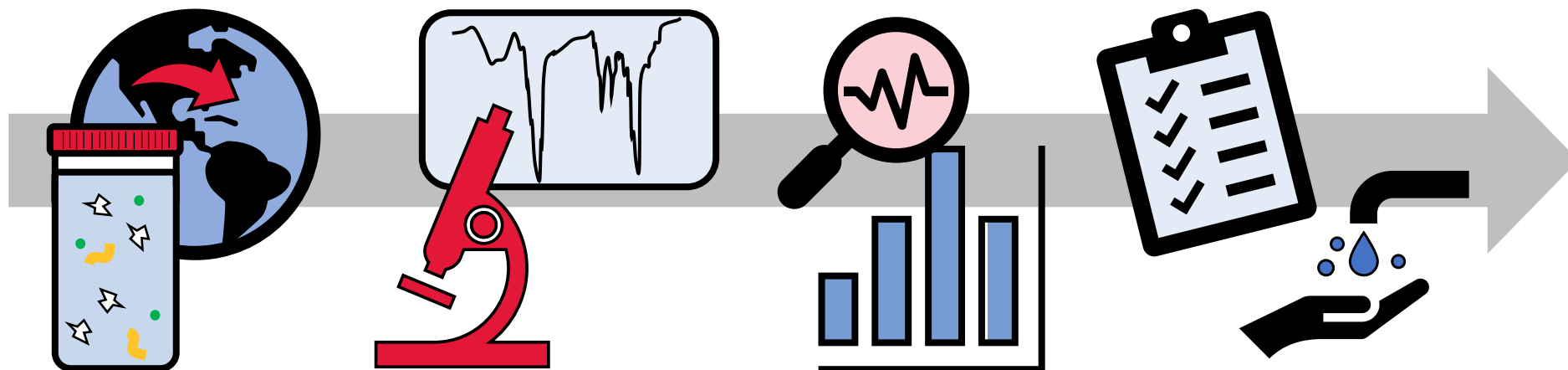
Microplastics Statewide Strategy



Measuring Microplastics

Sample Processing and Analysis Methods

SCCWRP Interlaboratory Method Comparison Study



Sample Creation
& Distribution

Processing &
Analysis

Performance
Evaluation

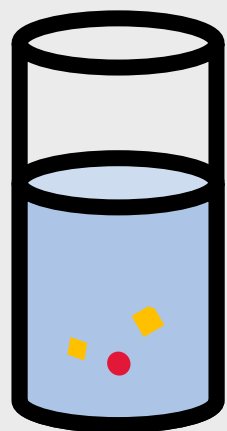
Monitoring Method
Recommendations

Standardized processing and analysis methods and laboratory accreditation program for measuring microplastics

Measuring Microplastics

Sample Processing and Analysis Methods

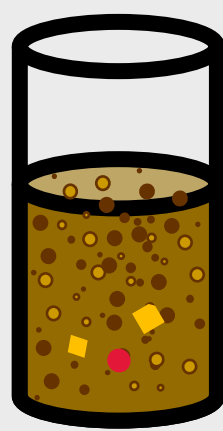
Coming this fall...



Drinking
Water



Surface
Water



Sediment



Tissue

Standardized processing and analysis methods and laboratory accreditation program for measuring microplastics

Collecting Microplastics

Sample Collection Methods

- **Sample collection methods have not been evaluated or standardized**
- Different approaches can lead to results orders of magnitude different
- No mechanism to compare or translate results from different sampling approaches

Microplastics Sample Collection Method Evaluation



Manta
Trawl

Missing small
particles, fibers



Grab
Samples



Low volume
sampled



Goal & Outcomes

Microplastics Sample Collection Method Evaluation

Overall Goal: Evaluate sample collection methods for monitoring

Outcomes:

- Standardized operating procedures
- Understand advantages and disadvantages
- Understand comparability

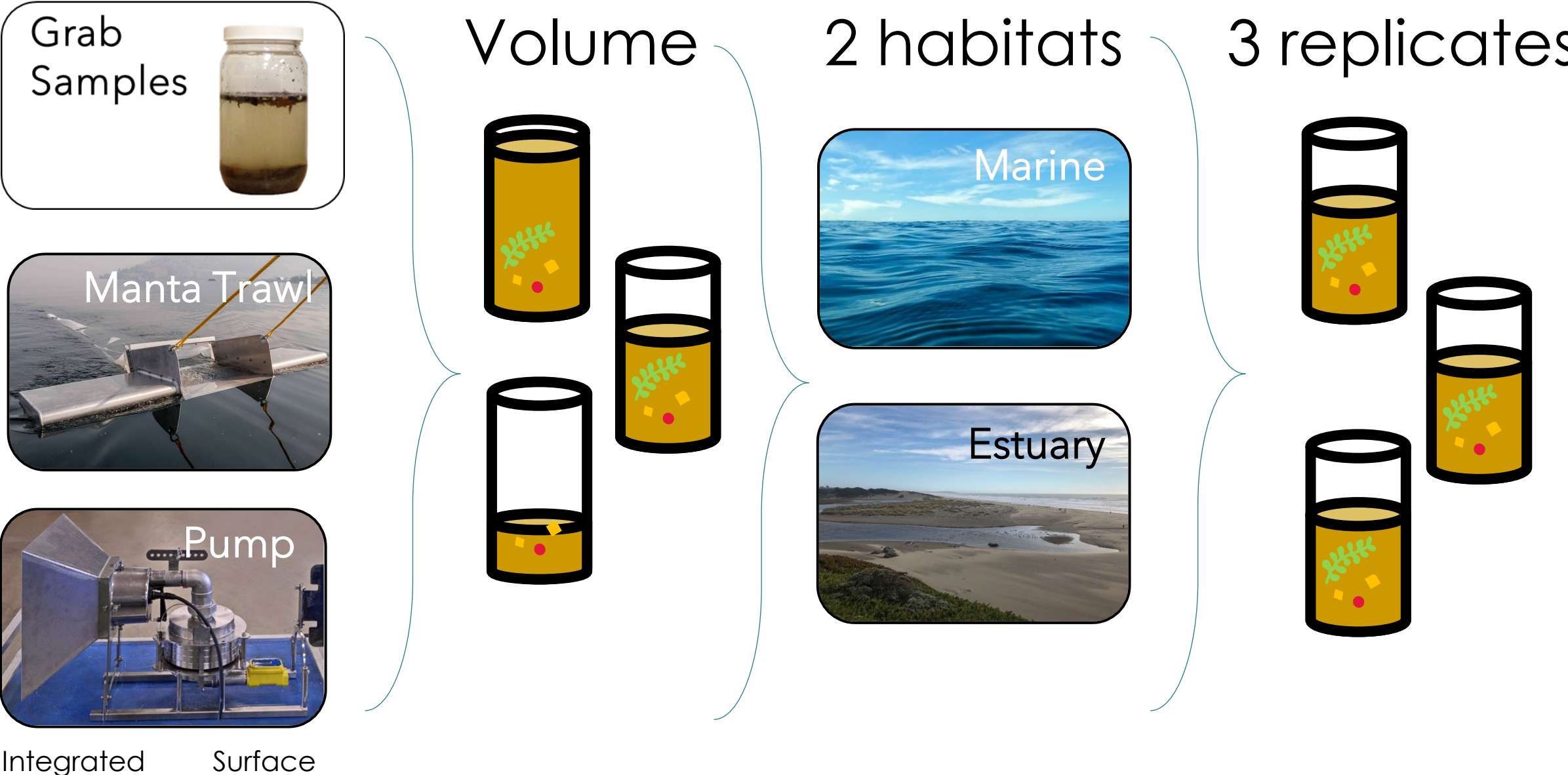


Approach

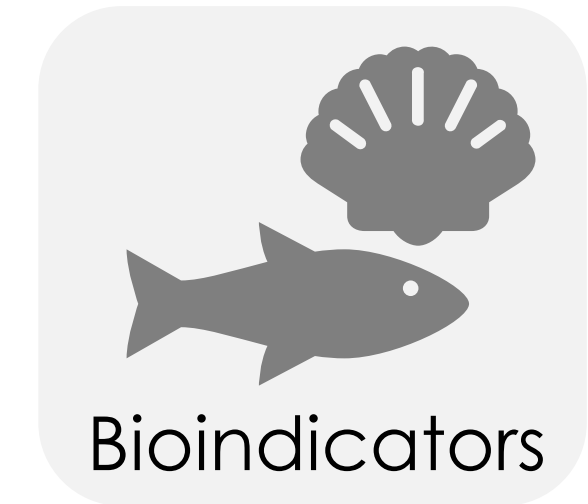
Microplastics Sample Collection Method Evaluation

1. Host a **workshop** (March 8 & 9) to develop standardized sample collection methods and design a method evaluation study
 - Scientific consensus building
2. Implement a **sample collection method evaluation study** to understand performance, uncertainties, and limitations
 - Leverage existing monitoring efforts (e.g., Bight '23)
3. Refine sample collection methods based on evaluation study results and generate **formal guidance documents**

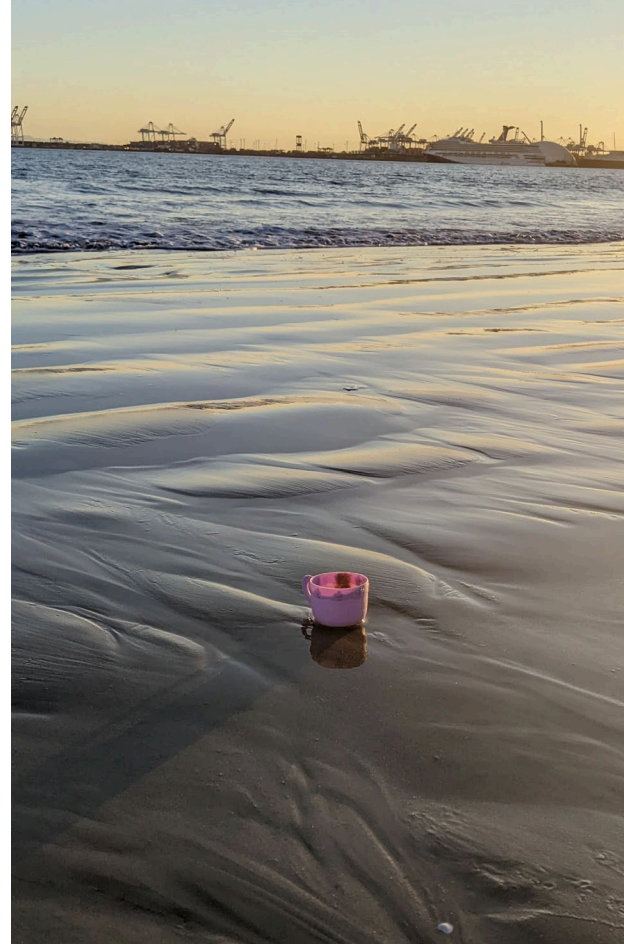
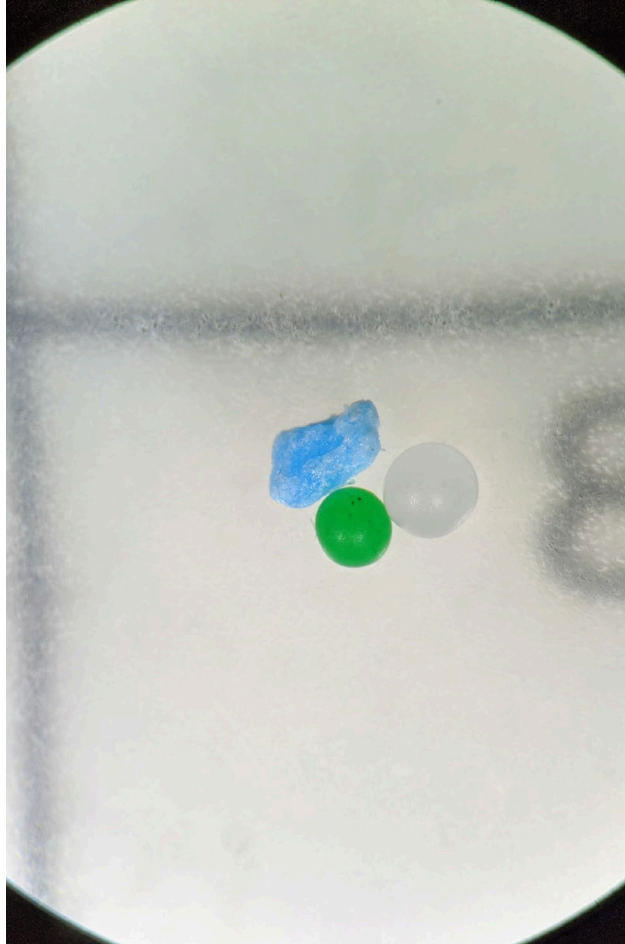
Sample Collection Method Evaluation – **Ambient Water**



MONITORING TOOLBOX



**Risk
Characterization**



THANK YOU!

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Southern California Coastal Water Research Project