



Sediment Quality Assessment Collaboration Update

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SFEI: Regional Monitoring Program for Water Quality (RMP)

*UC Davis: Marine Pollution Studies Laboratory (Granite Canyon)

⁺SCCWRP: Sediment Quality Objectives Phase II Study & Other Resources



Overview

Two Efforts

- Benthic index development
- Sediment TIEs

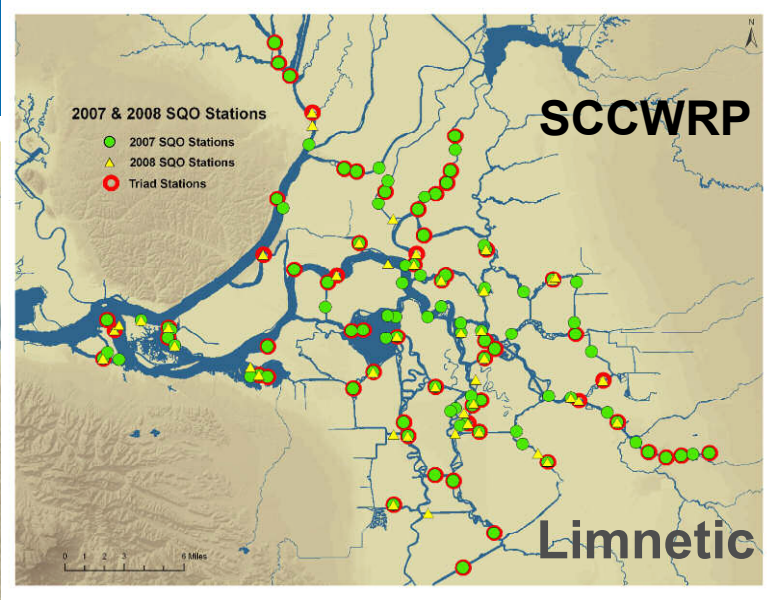
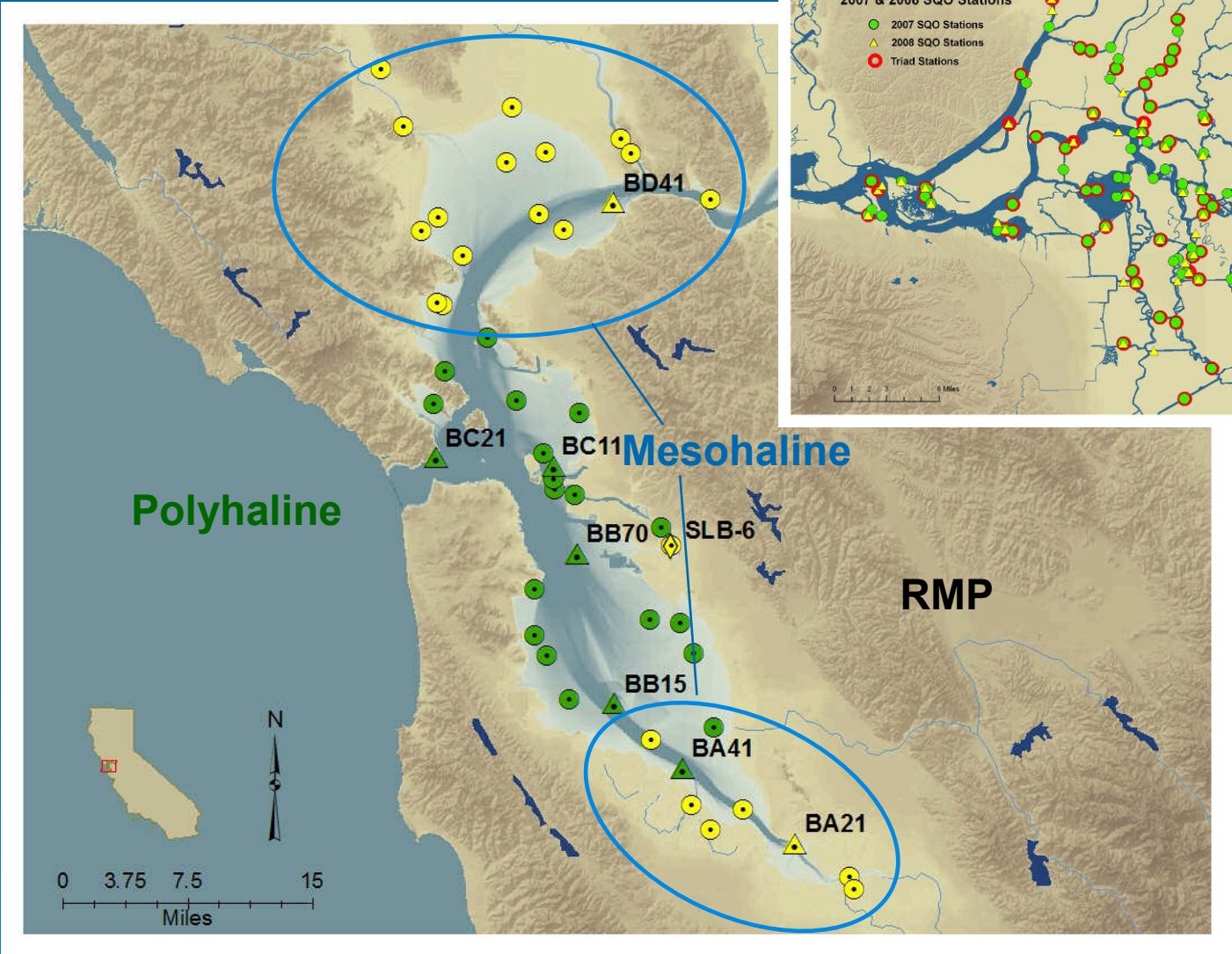
Good Progress

- Successful workgroups
- Useful feedback
- Improved study designs

Next Steps

- Continued coordination and collaboration

Benthic Index Development



Benthic Index Development: Collaboration

Benthic Workgroup provides guidance for
RMP – Mesohaline benthic Index refinement
SQO Delta Survey – Limnetic benthic Index

Workgroup participants:

SFEI , SCCWRP, UC-Davis,

CCSF, MLML, USGS, and DWR

The bottom of the slide features a decorative graphic of several concentric circles, resembling ripples on water, in a lighter shade of blue against the dark blue background.

Benthic Index Development:

Workgroup Tasks

1. Cluster analysis
2. Best professional judgment exercise

Benthic Index Development:

Workgroup Tasks

1. Cluster Analysis

Validate estuarine assemblages

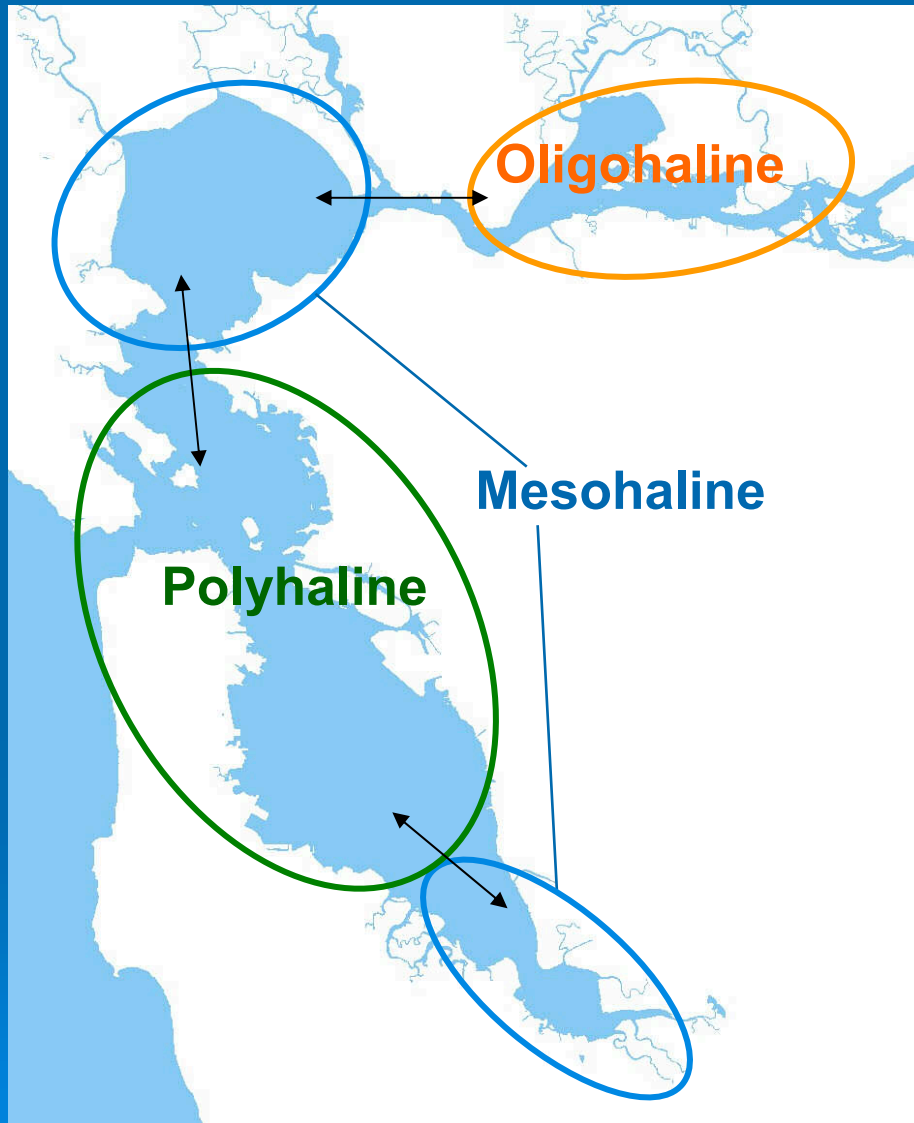
Investigate the limnetic assemblages



Data compilation: SFEI

Analysis: SCCWRP

Results



RMP Study:

Confirmed distribution of assemblages with new data

Assemblages shift geographically with season but are stable

Report later this year

SQO Delta Survey:

Three initial assemblages but not sure

Working on results from a second analysis

Benthic Index Development:

Workgroup Tasks

2. Best Professional Judgment Exercises

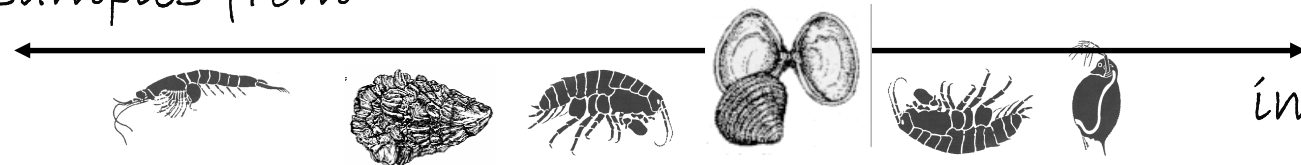
Coordination & execution: SFEI

Assist w/ participant selection: SCCWRP



Rank 20 samples from

reference



impacted

Refining Sediment Quality Assessment Methods

Sediment Toxicity Identification & Evaluation Tools

What's the SF Bay issue?

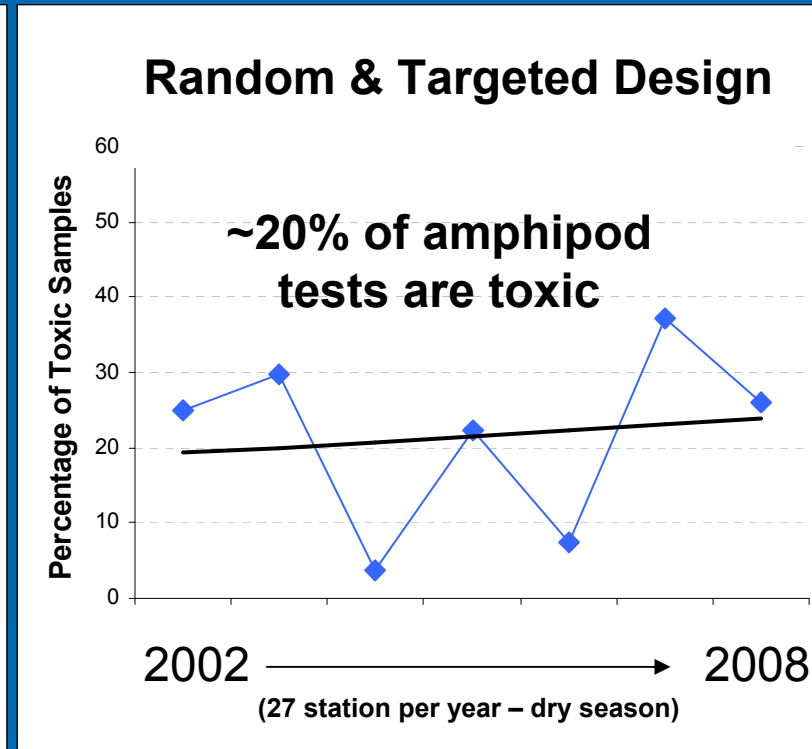
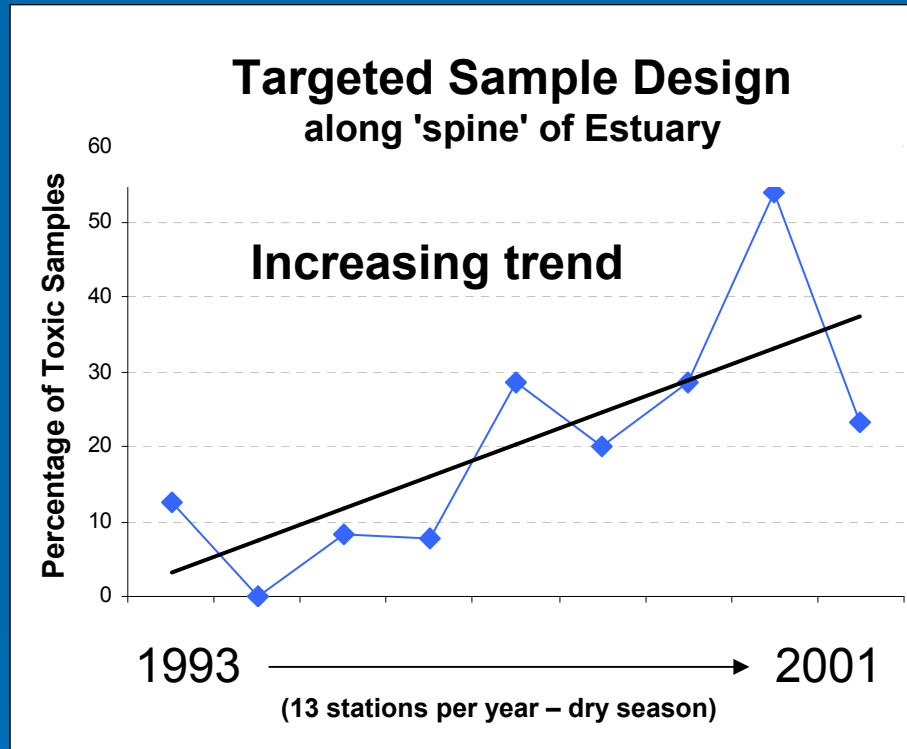


Estuarine
Amphipod
*Eohaustorius
estuarius*

Persistent Sediment Toxicity to Amphipods Since 1993.



E. estuarius



RMP (2009 – 2010):

Causes of Sediment Toxicity - TIE & LC50s

1. Dose-Response Studies (LC50s)
2. Further Develop Sediment TIE Procedures
3. Workshops on Stressor Identification Tools



RMP (2009 – 2010):

Causes of Sediment Toxicity - TIE & LC50s

1. Dose-Response Studies to Develop LC50s



SFEI and SCCWRP coordinated separate studies to:

Expand the study scope and efficiency

Provide validation

Share samples with other studies

List of Contaminants:

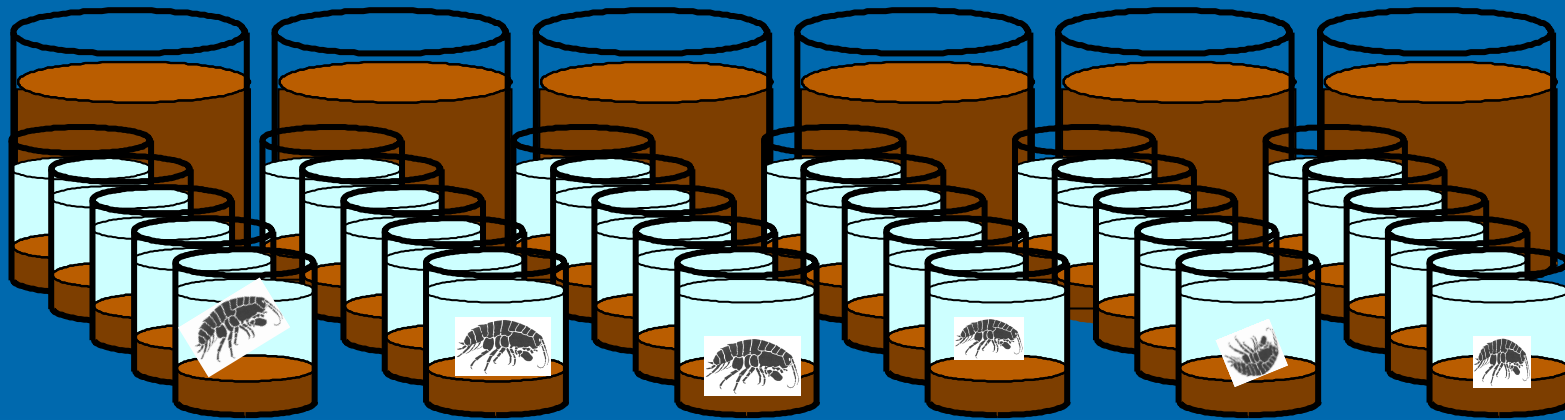
RMP – Trans-Chlordane, Cyfluthrin, Pyrene

SCCWP – Cis-Chlordane, Cyfluthrin, DDT, DDE

RMP (2009 – 2010):

Causes of Sediment Toxicity - TIE & LC50s

2. Develop Sediment TIE Procedures



RMP (2009 – 2010):

Causes of Sediment Toxicity - TIE & LC50s

3. Sediment Toxicity Stressor ID Workshop/s



Workshop focused on
amphipod toxicity tests

1) Well attended

UCD, SCCWRP, CCSF, USGS, EPA, SWRCB, RWQCB-SFBay

2) Positive feedback on amphipod TIE methods

3) Constructive suggestions on improving specific TIE methods and developing guidance documentation

Refining Sediment Quality Assessment Methods

Future Plans?

Coordinate through the Benthic and
Toxicity workgroups

Work on the SQO Delta project

Develop long-term strategy for studies