

Margins Pilot Preproposal

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RMP TRC Meeting
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History

- Dioxin Strategy Meeting
 - Suggestion for more cores to characterize distributions/loading history around sources
 - What sources unknown, but expected from terrestrial sources/pathways
- Margins conceptual model
 - Bay/margin modeling ambition
 - CFWG noted lack of data
 - what are system characteristics being modeled?
 - needed for either empirical or mechanistic models

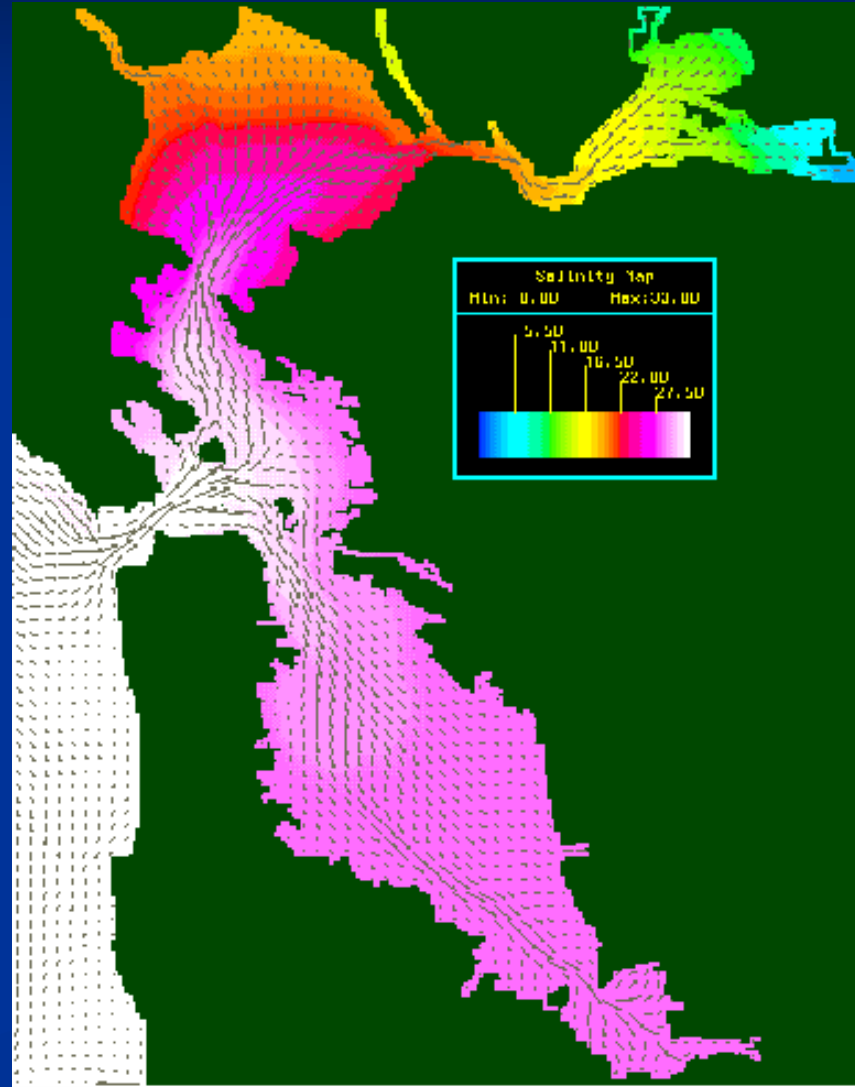
Margins Conceptual Model

- Margins Important Because:
 - Important habitat for many species
 - direct impact on resident biota
 - linkage to regional biota (foraging/breeding)
 - Near expected/known sources and pathways
 - small tributary loads through margins
 - known very contaminated sites, unknown perhaps moderately contaminated locations
 - Likely to show impacts of local management actions sooner

Hydrodynamics In SF Bay

- Most movement in open Bay
- What happens in margins stays in margins?
 - Even more so for sediment

Cheng et al TRIM model



Alternatives to Margin Data

- Make up data
 - Extrapolate from existing margin data
 - Focused/biased towards hotspots, known/suspected contaminated sites
 - Extrapolate from existing Bay data
 - May be good enough for “regional” trends
 - Wetland core surface data often ~ segment averages (N=6)
- Extremes for sensitivity testing
 - But likely not good for localized response

Sediment vs Fish Samples

Sediment data mostly in open waters

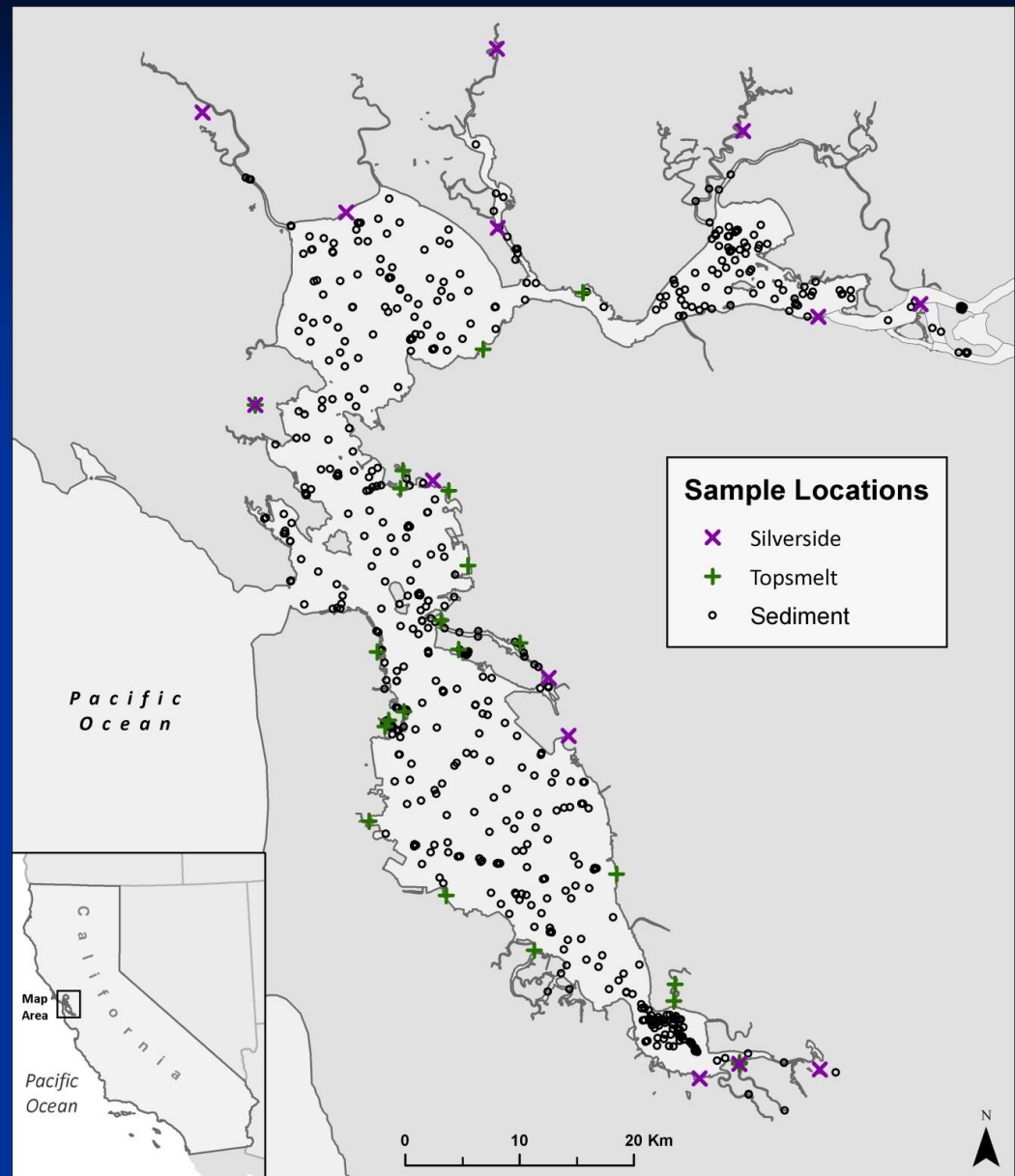
400+ RMP sites

300+ in SQO

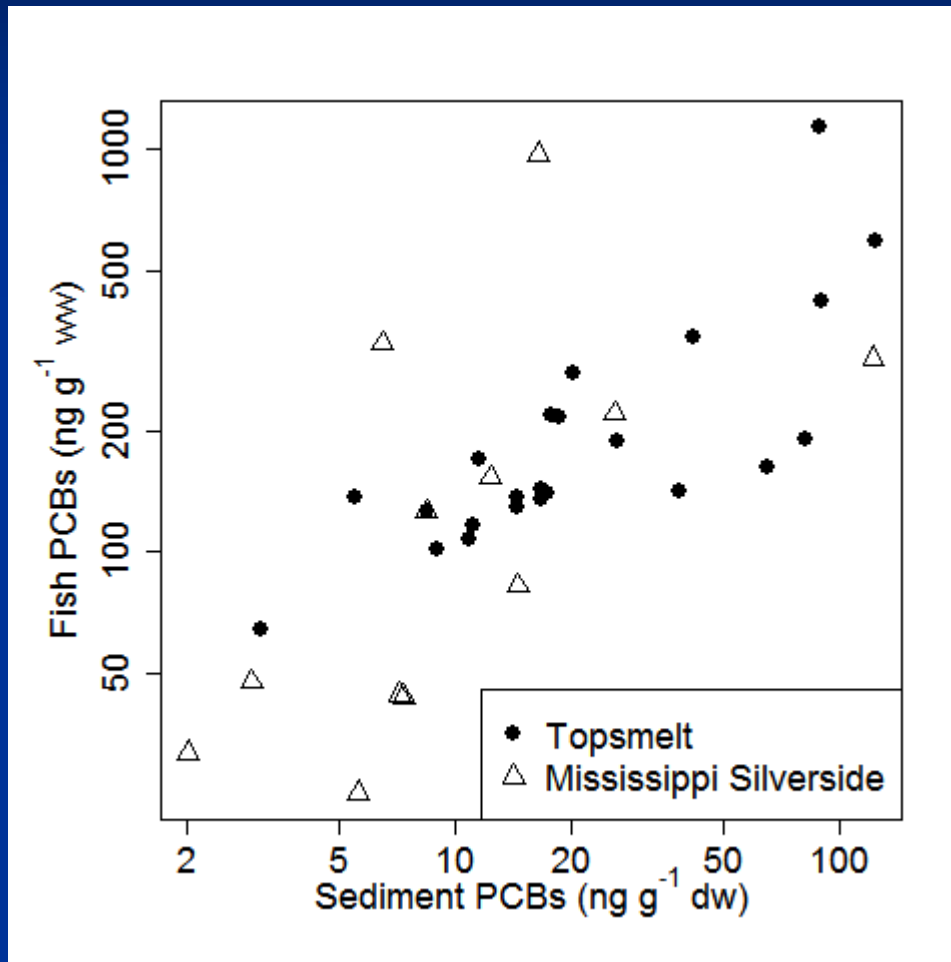
Some margins sparsely sampled

Small fish data all in margins

37 sites RMP



Assumptions \propto Outcomes



No Other Alternatives?

- Extrapolation possible but of limited utility
 - Small fish data show proportionality, nearly linearly dependent on presumed ambient concentration
- Best opportunity to see trends or change
 - Transport within/among margins much more localized than open bay
- Part of the environment to be characterized
 - Should be monitored so long as other sediments are

Scope (Largely TBD)

- Sampling frame
 - Outside of RMP S&T (<1 ft @ MLLW)
 - Revisit logistically skipped S&T stations? (>1ft MLLW but unsampleable)
- Effort intensity
 - At least areally proportional to open Bay S&T effort, perhaps more if biological importance higher
- Schedule
 - Focus on particular segment (to parallel mechanistic transport/fate model) or distribute (to populate empirical bioaccumulation model)?

