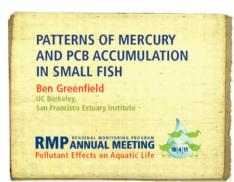
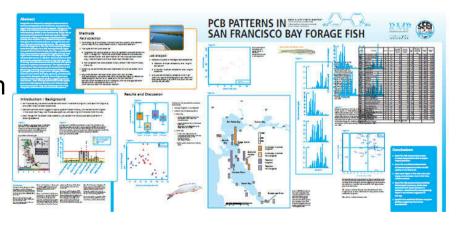
#### Small Fish Update

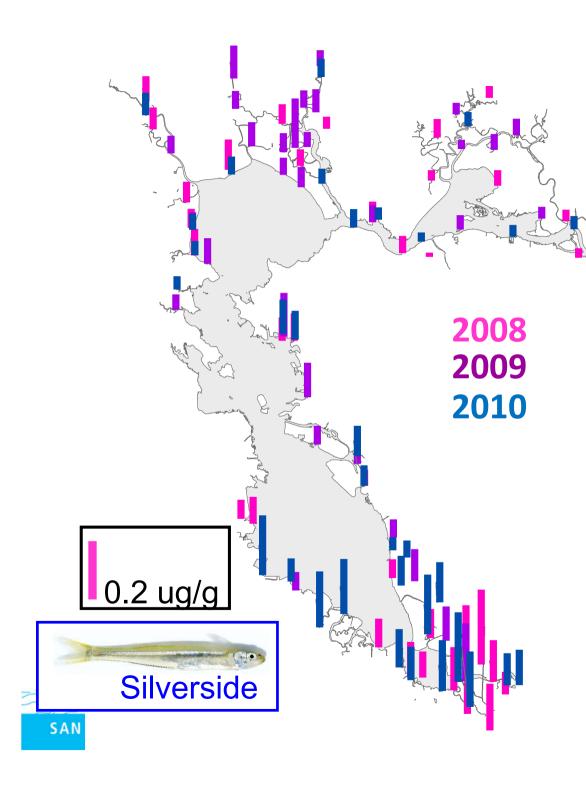
- Presentation at RMP Annual Meeting (Ben Greenfield)
- Draft Technical Report (Greenfield et al)
  - Mercury (spatial and temporal trends)
  - PCBs (spatial trends)
- Poster at SETAC North America Meeting (Rachel Allen)
- Manuscript in prep (PCB Patterns in Small Fish)
- 2011 Seasonal sampling









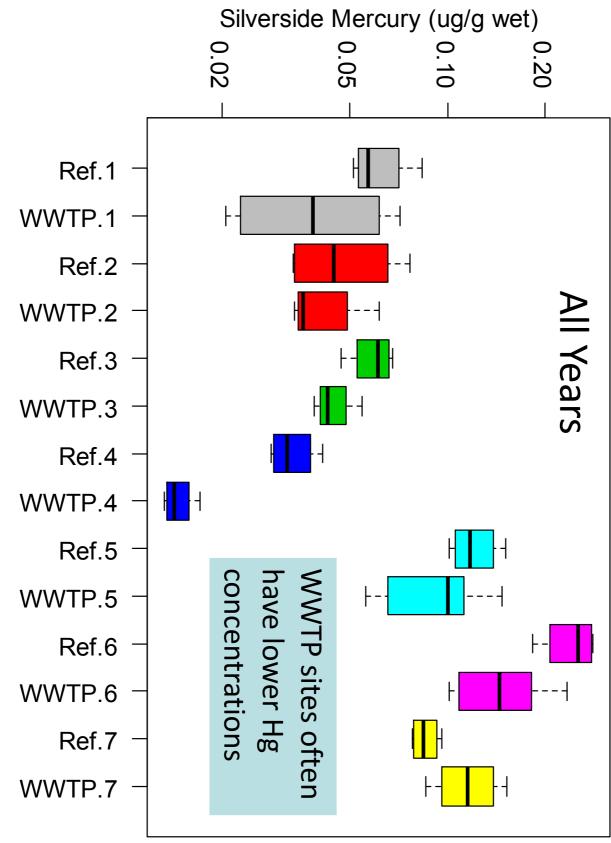


# Mercury in Silverside All years

Spatial gradient - higher in the South Bay



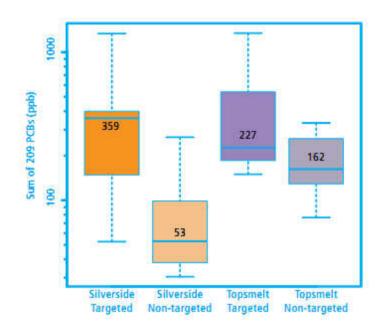




Waste Water Treatment Plants

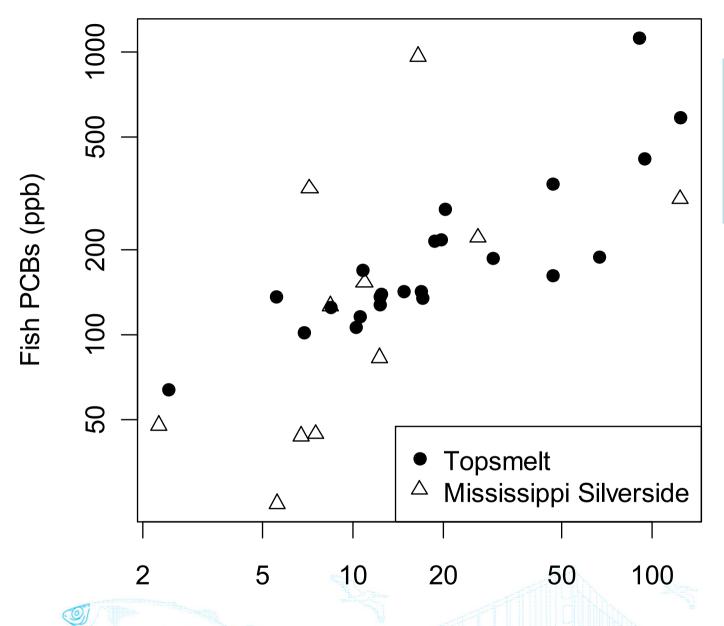
#### San Pablo Bay Suisun Bay 1000 500 Central 250 Stege Marsh Mississippi silverside targeted Oakland Mississippi silverside Harbor non-targeted Topsmelt targeted Topsmelt non-targeted **Hunters Point** South Bay **Guadalupe River**

#### **PCBs**



## Targeted sites higher than random sites





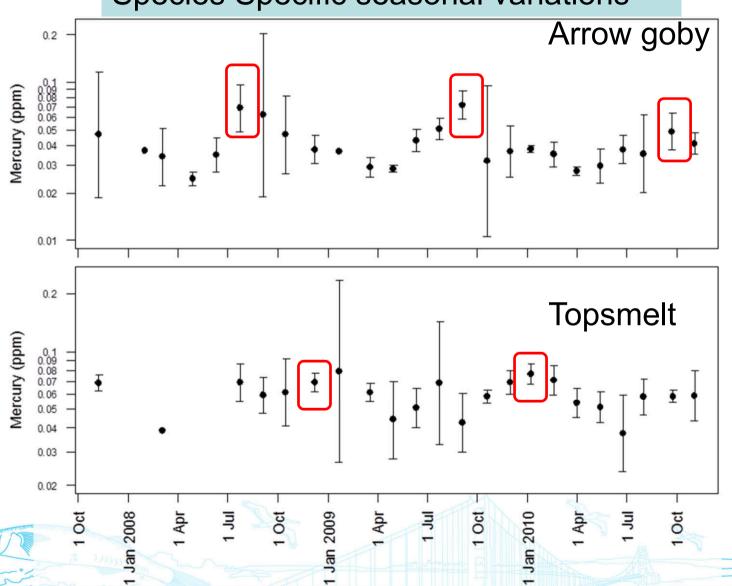
PCBs in fish correlated with PCBs in sediment

Sediment PCBs (ppb)



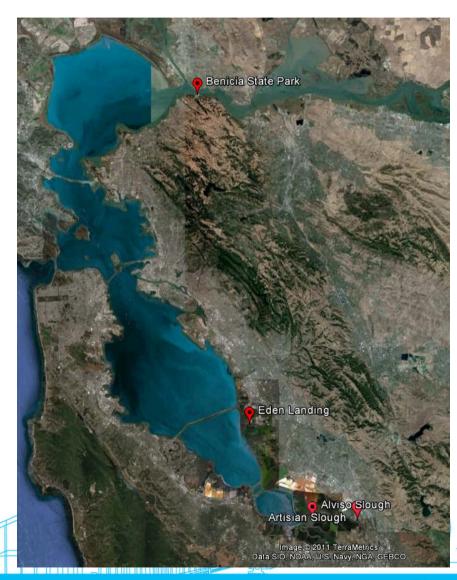
## Seasonal Trends (Hg)

Species Specific seasonal variations



#### 2011 Hg Seasonal Survey

- Four sites
  - Benicia SP, Eden Landing, Alviso Slough, and Artisian Slough
- Sampling successful: collected in Oct 2010, Jan, May, and July 2011
  - Samples also collected in Apr, Aug, and Oct 2011 at Alviso Slough and Artisian Slough (Leveraging sampling by the South Bay Salt Ponds Project)
- Determining seasonal patterns in MeHg uptake
  - Compare to MLK patterns from 2008-2010 and other locations
- Analyses (Darell Slotton UC Davis) will be completed by end of January 2012



#### Copper Rolling Averages



www.stei.org

SAN FRANCISCO ESTUARY INSTITUTE