

TRC Meeting
July 9th, 2009



SAN FRANCISCO ESTUARY INSTITUTE
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Exposure and Effects

- **Study 3 Estimation of PBDE Toxicity Thresholds in Common Terns**
 - Proposed by Barnett Rattner USGS Wildlife Research Center
 - \$48,500
 - PBDE egg injection study into common tern eggs to evaluate survival, pipping and hatching success
- **RMP Management Questions addressed / Relevancy:**
 - Level 1 MQ1 Are chemical concentrations at levels of concern and are impacts likely?
 - Context for evaluating RMP tern egg monitoring results (e.g., data interpretation and 303 (d) listing)
- **EE Workgroup management question addressed:**
 - Birds: Is there clear evidence of pollutant effects on survival, reproduction, or growth of individual birds?

Exposure and Effects

- **Study 4 Effect of Cu on Olfactory system of juvenile salmon**
 - Proposed by David Baldwin, NOAA NW Fisheries
 - \$51,525 (increased NOAA match)
 - Evaluating effect of Cu on salmon in estuarine systems
- **RMP Management Questions addressed / Relevancy:**
 - Level 1 MQ1 Are chemical conc. at levels of concern / are impacts likely?
 - SSO for Cu specifically requests studies on effects of Cu on the olfactory systems of salmonids
- **EE Workgroup management question addressed:**
 - Fish: Are pollutants, individually or in combination, reducing reproductive ability, growth, and health of sensitive fish populations?
 - What are appropriate thresholds of concern for contaminant concentrations for Bay species?

Exposure and Effects

- **Study 5 Gene Expression for use in Sediment TIEs**
 - Proposed by Steve Bay, SCCWRP and Chris Vulpe, UC-Berkeley
 - \$57,200
 - Evaluating use of molecular techniques for identifying causes of toxicity (Molecular TIEs)
- **RMP Management Questions addressed / Relevancy:**
 - Level 1 MQ1 Are chemical conc. at levels of concern / are impacts likely?
 - Will assist in SQO stressor identification and causes of moderate toxicity
- **EE Workgroup management question addressed:**
 - Benthos: Which pollutants are responsible for observed impacts on benthic biota?

Dioxin Strategy

- **Five-year Plan**

- 2008 \$114,000 Cores and surface sediments (ON HOLD)
- 2009 \$171,500 Surface sed., sportfish, water, small trib
atmospheric, QA/QC
- 2010 \$68,000 Tributary (Guad?) and Delta (Mallard)
- \$20,000 One-box modelling

- **Dioxin Questions addressed / Relevancy:**

- Are beneficial uses impaired by dioxin?
- What is spatial pattern?
- What is dioxin reservoir in sediments and water?
- Have dioxin loadings and concentrations changed over time?
- What is relative contribution of each pathway?
- What future impairment is predicted for dioxins?

Emerging Contaminants

- **Study 16 Screening of SFB mussels and seal tissues for ECs**
 - Proposed by John Kucklick (NIST) and Susan Klosterhaus (SFEI)
 - \$55,000 part of a two-year study (\$70,000 for 2011)
 - Using latest analytical techniques to review composite tissue samples to identify anthropogenic compounds in highest concentration
- **RMP Management Questions addressed / Relevancy:**
 - Are chemicals at levels of concern and are impacts likely?
 - EC WG question: What emerging contaminants have the greatest potential to adversely impact beneficial uses in the Bay?

Emerging Contaminants

- Study 17 Fipronil and its degradation products in SF water and sediment
 - Proposed by Katie Harrold and Meg Sedlak (SFEI)
 - \$15,700
 - Evaluating SF sediment, effluent, and runoff for new pesticides
- RMP Management Questions addressed / Relevancy:
 - Are chemicals at levels of concern and are impacts likely?