

Dredging, TMDLs and Beneficial Reuse

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San Francisco Bay TMDLS

- Mercury - 2007
- PCBs – 2010
- TMDLs under development
 - North Bay Selenium
 - Bay Beaches
 - Dioxin/Furans – RMP data collection

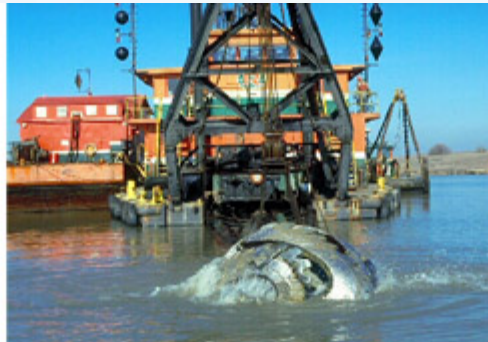
Adopted TMDLs & Dredging

- Water quality attainment strategy
- TMDL to achieve water quality standards
- Allocate loads to source categories
- Dredging - ***net loss*** of Hg/PCBs from the Bay
- Load allocation = zero

TMDL Implementation

Dredging and In-Bay Disposal

- Load allocation = zero
 - Implement via LTMS
- Restrictions on in-bay disposal
 - Sediment conc. \leq ambient
 - Apply 99th percentile of ambient data (10-year average)
- Operations shall not cause an increase in Hg bioavailability



TMDL Implementation

Wetlands Creation & Restoration

- No net increase in Hg or MeHg loads
 - Requirements in WDRs/401 WQ Certs to manage existing wetlands and ensure newly constructed wetlands are designed to minimize MeHg production and biological uptake
 - Pre- and post-restoration monitoring
 - Adaptive Implementation



Beneficial Reuse



Cullinan Ranch Restoration Site



Beneficial Reuse Suitability Criteria

- Clean material for wetland surface \leq ambient
- Foundation material
 - Min 3 feet below surface – stable conditions
 - Min 200 feet from future higher order channels
- Flexibility in permits
- Site – specific decisions

Challenges

- Ad Hoc decisions
- High cost
- Limited placement options
 - Lack of sites accessible by barge
- **Solution** = build-in to project design