

EXECUTIVE OFFICER SUMMARY REPORT  
June 9, 2010

- ITEM: 12
- SUBJECT: Informational Item: San Diego Bay Sediment Cleanups – Past, Present, and Future (*John Anderson*)
- PURPOSE: To provide the San Diego Water Board with an update on the status of San Diego Bay sediment cleanups and lessons learned to date.
- PUBLIC NOTICE: This item was listed in the June 9, 2010 Board Meeting agenda notice that was mailed to the San Diego Water Board's agenda mail list of interested persons.
- DISCUSSION: The San Diego Water Board was an early leader in addressing the issue of contaminated marine sediment in San Diego Bay. Recognizing that contaminated sediment poses both an environmental and public health threat, the San Diego Water Board began the San Diego Bay Cleanup Program in 1985. This long-term effort is aimed at controlling contaminant inputs and cleaning up contaminated sediment.
- Bay bottom marine sediment provides habitat for many aquatic organisms and functions as an important component of aquatic ecosystems. Bay bottom sediment also serves as a major repository for persistent and toxic chemical pollutants released into the environment. In the aquatic environment, chemical waste products of human origin that do not easily degrade can eventually accumulate in sediment. The environmental threat associated with these pollutants is their tendency to attach to sediment particles, accumulate to high concentrations in the bay bottom sediment, and bio-magnify up the food chain.
- In the early 1980s, the San Diego Water Board became the first regional water board to order and oversee the cleanup of contaminated marine sediment sites. These earliest efforts are notable because they took place during a time when almost no regulatory framework existed to guide the Board's actions. The Cleanup and Abatement Policy

(Resolution No. 92-49), and the *Water Quality Control Plan for Enclosed Bays and Estuaries* (Bays and Estuaries Plan), with its multiple lines of evidence or “triad” approach and sediment quality objectives, were adopted long after these early cleanup projects were underway or completed.

To date, eight contaminated sediment sites in San Diego Bay have been cleaned up. Projects completed to-date have resulted in removal or capping of more than 230,000 cubic yards of contaminated sediment at an estimated cost in excess of \$25 million. In each case, cleanup has consisted of dredging, capping, or a combination of the two. At the few sites with post-cleanup monitoring, data indicate that the beneficial uses are supported by the sediment and water quality.

Site characterization, assessment of impacts, and remedial design feasibility studies are ongoing at eight other sites with cleanups to follow. Two sites/areas remain to be assessed and cleaned up. In Fiscal Year 2010-2011, the goal is to identify responsible parties for these remaining two sites, and to work with responsible parties to initiate site characterization and assessment of impacts to benthic communities, wildlife, and human health.

The work to clean up contaminated sediment sites is controversial and time consuming because of the costs involved and disagreement over the actual impacts from contaminated sediment, cleanup responsibilities, and ultimate cleanup levels. This dynamic makes establishing responsibility for and/or establishing a reasonable basis to allocate responsibility for cleanup costs very difficult. As a result of all these factors, the sites that have been remediated have taken an average of approximately ten years to be cleaned up from start to finish.

The San Diego Bay sediment cleanups have taught us several lessons to carry forward. First, a consistent approach using multiple lines of evidence is needed to assess impairment of benthic communities from contaminated sediment. The recently adopted Bays and Estuaries Plan provides that approach, and was informed in large part by the San Diego Water Board’s early efforts in this area. Another important lesson is that source control is essential prior to cleanup. Source control prevents

remediated sediment from becoming recontaminated by ongoing discharges from pollution sources, and ensures cleanups will not have to be repeated at a later date. Also, post-remedial monitoring programs must be robust in order to demonstrate that cleanups have restored the beneficial uses of San Diego Bay so that sites can be removed from the 303(d) List.

Because the cost for cleanup at these sites is typically in the tens of millions of dollars, the San Diego Water Board's decisions on these matters have a high potential to be appealed and litigated. The San Diego Water Board must ensure that the complex proceedings follow an orderly process with adequate opportunity for meaningful participation by the parties.

**SUPPORTING  
DOCUMENTS:**

None

**RECOMMENDATION:**

Informational Item Only