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NEW MONITORING REPORT ON SF BAY WATER QUALITY CLEAN-UP

• On May 4, 2004 the San Francisco Estuary Institute will release a comprehensive report at a meeting held at the University of California, Lawrence Hall of Science assessing the progress in water quality clean-up in San Francisco Bay. The report is second of a three-part retrospective series assessing data collected from over a decade of Bay-wide monitoring and emphasizes the management implications of restoring clean water to San Francisco Bay.

• The clean-up strategy for San Francisco Bay includes developing Conceptual Models to organize and communicate existing knowledge about priority contaminants—where they come from, how they behave in the Bay, and where they ultimately end up. The Clean Estuary Partnership—a partnership between stakeholders, scientists and other agencies that works to improve water quality in the Bay—is developing conceptual models for many priority contaminants including mercury, PCBs, legacy pesticides, dioxins, selenium, and diazinon (pg. 23).

• Conceptual Models are critical in helping to build a consensus between stakeholders, scientists and environmental managers when developing a TMDL plan. A recent example of the Conceptual Model process in action is the newly released mercury TMDL (Total Maximum Daily Loads). The mercury TMDL is the first in a series of TMDLs to outline actions to restore clean water to San Francisco Bay (pg. 16, pg. 23).

• TMDLs (Total Maximum Daily Loads) are at the forefront for developing solutions to San Francisco's most challenging water quality problems. In addition to the newly released mercury TMDL, other pollutants to be addressed include: PCBs, selenium, copper/nickel and legacy pesticides (pg. 16).

• Urban runoff in Bay Area watersheds are significant sources of most priority contaminants, including PCBs, mercury, copper, organochlorine pesticides, dioxins, diazinon, PAHs, and PBDEs. The mercury and PCB TMDLs propose large reductions in urban runoff loads (pg. 46).

• Contaminant monitoring science is evolving and improving its techniques to provide new information to better protect and manage the natural resources of the Bay. The concept of using flexible implementation strategies that are modified as new information becomes available is known as adaptive management. This innovative management design utilizes new information to improve conceptual models of the sources and loadings of contamination to the Bay, the fate of these contaminants in Bay wildlife and the best management practices that will effectively reduce problem contaminants.(pg. 16)

• The legacy of mercury mining in the south Bay has created a reservoir of high mercury concentrations within the Bay's water and sediments. Old mines are also a continuing source of mercury that can be mobilized from land to the Bay during rainfall events. In 2002 the concentration of total mercury exceeded the water quality objective in 9 of 28 (32%) samples. In sediment, 41 of 49 samples (84%) were above the sediment target concentration that is deemed (pg. 4).

• Long-term data sets have allowed scientists to see the big picture in the trends of contamination in the Estuary. Annual precipitation and factors such as salinity can influence the amount of contamination that accumulates in biological indicators such as clams. Improvements in wastewater treatment have led to a decrease in silver concentrations in at least one local clam species. In the northern part of the Bay, clam populations have increased with the steadily declining concentrations in silver since 1977 (pg. 42, pg. 44).

To receive a copy of the full report in PDF format please e-mail your request to pchambers@sfei.org or visit www.sfei.org.

For more information on the mercury TMDL, presentations on the topic will be given at the SFEI Regional Monitoring Program Annual Meeting at the Lawrence Hall of Science on May 4. SFEI is a key participant in the Clean Estuary Partnership and the Mercury TMDL development, along with the Regional Water Quality Control Board, the Bay Area Stormwater Management Agencies Association (BASMAA), the Bay Area Clean Water Agencies (BACWA), and other stakeholders. For a copy of the Annual Meeting Agenda visit www.sfei.org.

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