

MEMORANDUM

To: Technical Review Committee

From: Meg Sedlak

Re: **Recommendations for Status and Trends for 2006**

Elimination of analysis of dissolved organic contaminants in water is proposed for 2006; implementation of aquatic toxicity testing is proposed for 2007.

Elimination of Analysis of Dissolved Organic Contaminants in Water

Considerable expense is spent analyzing water samples for both dissolved and particulate concentrations. However, only total organic concentrations are used for regulatory purposes. The California Toxic Rule Water Quality Criteria (CTR) are established for total organic contaminants. A review of the 2003 data indicates that most samples exceeded the CTR established for total polychlorinated biphenyls (PCBs), total chlorpyrifos, and total diazinon. None of the water samples exceeded the total CTR for individual polyaromatic hydrocarbons (PAHs) or for total PAHs under the Basin Plan objective.

Furthermore, many of the organic contaminants analyzed for in the RMP are hydrophobic and tend to be associated with particles (e.g., PCBs and PAHs) and therefore, very low concentrations are observed in the dissolved phase.

The dissolved fraction gives an indication of the amount of contaminant that is bioavailable. At present, the Regional Water Quality Control Board does not use this information for regulatory purposes or the development of TMDLs, or 303(d) listings. It is possible that at some future data, it may be desirable to measure the dissolved fraction of organics in water to understand the bioavailability of these contaminants and their uptake into the food web.

RWQCB has given the analysis of dissolved concentrations in water data a low priority. The RMP staff believe as an intermittent cost-saving measure it is acceptable to eliminate the analysis of dissolved organics for 2006; however, the long-term recommendation is that the analysis of dissolved organics remain in the Status and Trends program.

Aquatic Toxicity

Because historically little aquatic toxicity has been observed in the estuary, it is conducted on approximate five-year cycle in the Status and Trends program. In 2001, ambient aquatic toxicity testing using *Americamysis bahia* (a brine shrimp) was conducted in February and August at five and six historic sites in the Bay respectively.

Significant aquatic toxicity was observed in two sites in the southern sloughs in the South Bay.

In 2002, with the implementation of the random sampling, nine sites in the shallows of the bay were selected to investigate aquatic toxicity. Toxicity tests were conducted with *Americamysis bahia*. No aquatic toxicity was observed in 2002.

The toxicity work group met in the Fall 2005 and recommended that this program element be included in 2006. RWQCB recommends every five years, which would suggest including this program element in 2007.

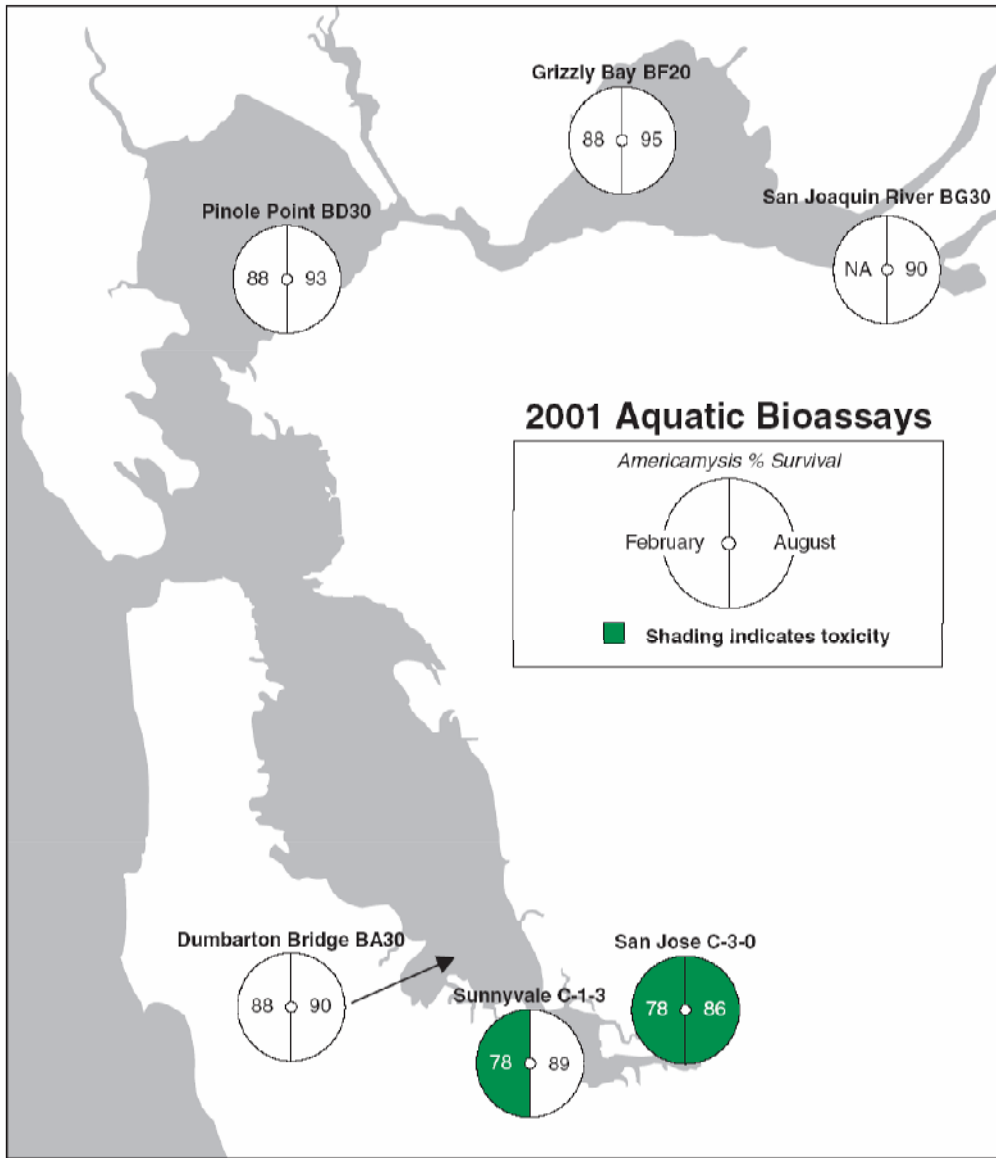


Figure 2.26. Aquatic bioassay results for 2001. NA = not available. Significant toxicity in a seven-day *Americamysis bahia* (formerly *Mysidopsis bahia*) test was observed at San Jose (C-3-0) in both February and August, and at Sunnyvale (C-1-3) in February. Toxicity was determined by statistical comparison to controls in clean artificial seawater.

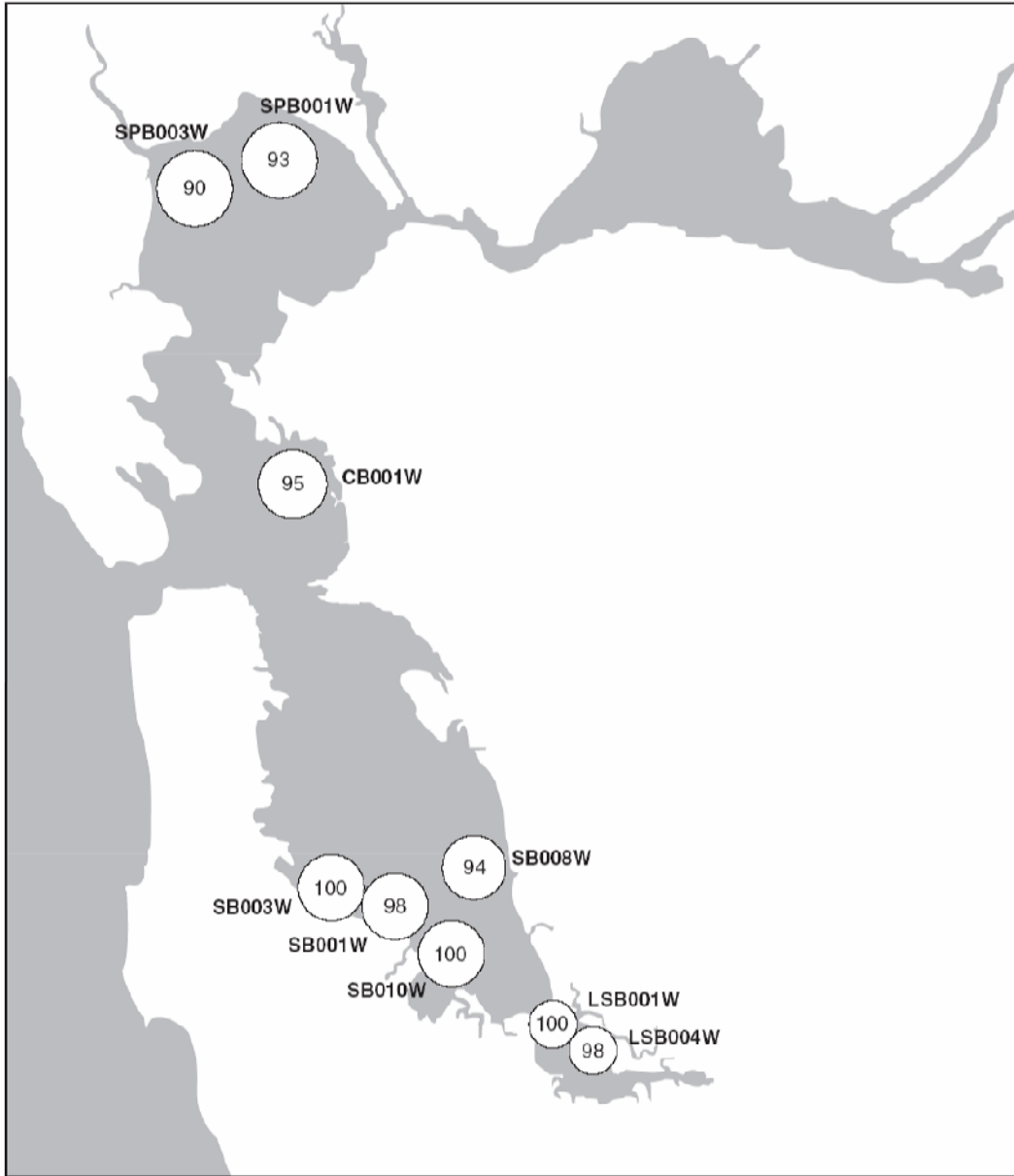


Figure 2.40. Aquatic bioassay results for July 2002. Significant toxicity in a seven-day *Americamysis bahia* (formerly *Mysidopsis bahia*) test was not observed at any of the sampling stations in July 2002. Toxicity was determined by statistical comparison to controls in clean artificial seawater.