

## Information About the Regional Toxic Hot Spot Cleanup Plan

The following general information is presented to assist Regional Board members in understanding the issues involved in approving the cleanup plan.

1. The regional cleanup plans are required by law. The regional plans were required by the California Water Code to be submitted to the State Water Resources Control Board by December 30, 1997. Because the Bay Protection fee program provided fewer funds than originally anticipated, the Fiscal Year 1997-98 work plan for the Bay Protection Program deleted the requirement for the regional plans and instead provided for completion of the sampling program and issuance of technical reports. In October 1997 after funding was identified, the plans were again required, so staffs of coastal regional boards completed the "proposed" plans. Unfortunately, there was not enough time to gain approval from the regional boards. The regional cleanup plan now being introduced to the Board is an updated edition of the December 1997 "proposed" cleanup plan, and contains additional information not known in 1997. A second due date of December 1998 was established for approval of the regional plans so the statewide consolidated plan can be completed by the state board by June 30, 1999.
2. The state board adopted a policy on September 2, 1998. The *Water Quality Control Policy for Guidance on Development of Regional Toxic Hot Spot Cleanup Plans* was adopted by the state board. However, issues arose over pesticides in the Central Valley, and the policy was adopted two months later than anticipated. The policy provides cleanup guidance, definitions of toxic hot spots, and procedural information to the regions. Staff has assumed that this policy governs the overall approach to be taken in the regional cleanup plans. Because not all issues were addressed by the Policy, regional issues will need to be addressed by each regional board.
3. The Bay Protection Program has its own monitoring program. Intensive sampling of sediments occurred in the San Diego Region under two projects: the "San Diego Bay Region" project, which included Mission Bay, San Diego Bay, and the Tijuana Estuary; and the "coastal lagoons" project. Data from both of these efforts have been used by Regional Board staff to identify candidate toxic hot spots.
4. The cleanup plan is part of a continuous process to protect water quality. Historically, the San Diego Regional Board has offered leadership in protecting California bays and estuaries. During the 1950s the Board encouraged municipalities to create and operate the Metro wastewater system and to stop discharging 50 million gallons per day of partially treated sewage to San Diego Bay. In 1978, staff began a sediment

sampling program to address storm water and industrial waste embedded in Bay sediments. The Board required eight sites in San Diego Bay to be cleaned up. The Bay Protection and Toxic Cleanup Program is a logical extension of ongoing Regional Board efforts. Information gathered under the program can be incorporated into the Total Maximum Daily Load (TMDL) effort and other activities undertaken in priority watersheds.

5. The regional cleanup plan starts a process. The “candidate” toxic hot spot lists adopted by the coastal regional boards would become “prioritized” by June 30, 1999 when the state board adopts the statewide list submitted by the regions. According to legislative requirements, upon release of the prioritized list, within 120 days, regional boards must “begin” revising waste discharge requirements for dischargers identified as contributing wastes to the “known” toxic hot spots. Sites do not become “known” until the state board issues its cleanup plan. Since no dates for completion of regional board actions are mandated, it is assumed the regions should use their existing Water Code powers to manage the toxic hot spot sites and sites of concern identified in the regional cleanup plans. The *Water Quality Control Policy for Guidance on Development of Regional Toxic Hot Spot Cleanup Plans* adopted by the state board on September 2, 1998 contains the cleanup guidance for use by the regions. Many options are available for carrying out remediation, including sediment remediation (treatment, dredging, containment, or no remediation); and the use of the watershed approach (education, involvement of upstream organizations), establishment of TMDLs, or revision of NPDES permits and monitoring programs.
6. Subsequent remediation activities will be needed. Although the regional plan being considered is called a cleanup plan, the information contained in it will not be adequate to cause actual remediation of toxic hot spots. The primary function of the regional cleanup plans is to provide the regions with lists of sites in need of attention and to suggest methods for follow up. Subsequent actions could include issuance of CWC Section 13267 letters, cleanup and abatement orders, or other actions.
7. The Bay Protection approach is different than traditional approaches for designating cleanup sites. A decision made early in the Bay Protection Program was that the sampling should evaluate effects on beneficial uses. In the Bay Protection sampling programs, the first question asked was, “which stations have toxic sediments?” This was followed by the question, “are chemicals found at levels known to cause toxicity?” Additional questions involved whether degraded bottom communities and elevated chemistry was present. Five definitions were established by the state board to define toxic hot spots. Other definitions involving health advisories, exceedance of water or sediment objectives, contamination of shellfish or fish, or impairment, did not apply in the San Diego Region or were not needed.
8. The recommended Regional Board approach is presented in Attachments B and C. Staff’s approach has been to follow the State Board’s toxic hot spot cleanup guidance, which appears in the *Water Quality Control Policy for Guidance on Development of*

*Regional Toxic Hot Spot Cleanup Plans.* The cleanup guidance contains decisions carefully made over several years by qualified scientists employed by the State Board, the Public Advisory Committee, the Monitoring and Surveillance Task Force, and the Scientific Planning and Research Committee. All decisions to date have been made publicly and documentation has been published. Attachment B explains the reasons for the recommendations. Attachment C presents the San Diego regional staff approach for recommending candidate toxic hot spots.

9. The San Diego regional approach requires a very high level of confidence for designating toxic hot spots. Where the statewide cleanup guidance did not provide specific detail, the regional approach shown in Attachment C was followed. The philosophy behind the regional approach is that sites are not toxic hot spots unless shown conclusively to be so. This approach follows naturally from the statistical tests run on sediment toxicity samples, called amphipod bioassay tests. In those tests, all stations were assumed to be non toxic (similar to control stations). Control stations were selected because the sediments did not contain chemicals at elevated levels known to cause toxicity. The control stations also were known to contain healthy communities of animals which live in the bottom sand or mud. If the results demonstrated that the survival of test animals at a particular station was significantly worse than that of animals at control stations, the station was classified as "toxic." At the request of San Diego Regional Board staff, the 99th percentile of control station survival values was used as the toxicity cutoff to assure a very high level of confidence that sites are toxic.
10. Two methods for reviewing sediment toxicity data were used. All sediment toxicity tests were run using amphipod crustacea test animals according to the highest standards of quality. Two methods were used to evaluate the data. The first method, called the "EMAP" method, only considered data from randomly-placed stations. This method is valuable because the areas of bottom sediment estimated to be toxic can be compared between bays. The second method, called the "reference envelope" method, is valuable because it adjusts the data for local bodies of water and takes background sediment toxicity into account. The state board's cleanup guidance calls for the regions to use the reference envelope data to designate toxic hot spots.
11. San Diego Bay ranked second out of 18 bays for toxic area of the bays. From a National Oceanic and Atmospheric Administration (NOAA) study which compared EMAP-type sediment toxicity data from various bays, Newark Bay ranked first with 85 percent of the area of that bay considered toxic. San Diego Bay ranked second with 56 percent of the area of the Bay considered toxic.
12. The coastal lagoon toxicity samples were run using different statistical factors. Fewer amphipod sediment toxicity stations were sampled in the coastal lagoon sampling program than in the San Diego Bay Region program. Because of the smaller database, a reference envelope database could not be established. This means that the Regional

Board should adopt an approach to determine “elevated chemistry” issues. Recommendations are included in the attachments.

13. Two staff workshops will have been held before today’s meeting. A staff workshop was held at the Regional Board office on October 27, 1998 to present the goals of the San Diego regional cleanup plan and staff’s approach for designating toxic hot spots. The workshop was attended by more than 30 participants representing government, industry, and environmental groups. The tables in Attachment 2 documenting the regional approach were presented at the October 27, 1998 staff workshop. It is anticipated that during the week preceding the November 18 Board meeting, a second staff workshop will have been held at the Regional Board office to discuss technical issues. A representative from the group of scientists who performed the sampling, analysis, and reporting for the Bay Protection Program will attend.
14. Cleanup plan information is available on the Internet. Regional Board staff established a Bay Cleanup Internet web site on which notices and information have been posted at [www.swrcb.ca.gov](http://www.swrcb.ca.gov) (click on *REGIONS/SAN DIEGO REGION/UNITS/BAY CLEANUP*). A second web site, the Bay Protection Program site, has been established by the State Board to post information and cleanup plans for public review at [www.swrcb.ca.gov](http://www.swrcb.ca.gov).