

EXECUTIVE OFFICER SUMMARY REPORT  
June 19, 2013

- ITEM: 8
- SUBJECT: Public Hearing: A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) to incorporate Total Maximum Daily Loads (TMDLs) for Toxic Pollutants in Sediment at the Mouths of Paleta, Chollas, and Switzer Creeks in San Diego Bay and Miscellaneous Changes to Chapter 5 to Update the Regional Board Resolutions List (Tentative Resolution No. R9-2013-0003). (Lisa Honma)
- PURPOSE: To receive public testimony and consider adoption of Tentative Resolution No. R9-2013-0003.
- RECOMMENDATION: Adoption of Tentative Resolution No. R9-2013-0003 is recommended.
- KEY ISSUES:
1. Sediment Numeric Targets: Attachment A of the Tentative Resolution (Supporting Document No. 2) is the tentative Basin Plan Amendment and proposes Sediment Numeric Targets that are based on the Aquatic Life Sediment Quality Objective (SQO) multiple lines of evidence approach included in the Enclosed Bays and Estuaries Plan, Part 1. Several stakeholders object to the chosen targets and suggest (1) a stressor analysis should have been performed to choose pollutants of concern and mixtures of chemicals, (2) numeric targets should be risk-based, (3) sediment chemistry has too much weight in the analysis, (4) an inappropriate statistic was applied.
  2. Polychlorinated biphenyls (PCBs): Several stakeholders object to including PCB TMDLs and suggest (1) PCBs should not be included because they are not a direct cause of the listed aquatic life impairments at the creek mouths, (2) evidence does not support direct PCB effects to benthic communities, (3) development of PCB numeric targets based on an aquatic life methodology is inconsistent with the goal of protecting human health uses, (4) human ingestion of PCBs in fish tissue is a bay-wide

issue, and therefore action should not be taken at only these three creek mouth locations, and (5) a TMDL is not needed because current watershed loadings already meet the waste load allocations.

3. Sediment Cleanup Values: The proposed Basin Plan Amendment includes Sediment Concentration-Based TMDLs, which ensure watershed loadings do not impair the sediment in the three creek mouth areas (receiving waters). Several stakeholders misinterpret these TMDLs as sediment cleanup values.

4. Sediment Remediation: The Implementation Plan in the tentative Basin Plan Amendment includes sediment remediation as an action needed to address existing impairments. Several stakeholders object to including sediment remediation in the Implementation Plan.

5. Human Health Numeric Targets: Numeric Targets for the protection of Human Health beneficial uses include water column concentrations based on water quality criteria in the California Toxics Rule (CTR) for ingestion of organisms and a fish tissue concentration based on Fish Contaminant Goals (FCGs) developed by the Office of Environmental Health and Hazard Assessment (OEHHA). Several stakeholders object to the use of human health numeric targets because (1) the creek mouth impairments listed on the Impaired Waters List are for sediment toxicity and benthic community effects, not Human Health, (2) the CTR values are below current laboratory detection capability, and (3) they feel OEHHA's FCGs are too conservative.

#### DISCUSSION:

##### Goal of the Basin Plan Amendment:

The proposed Basin Plan Amendment (Supporting Document No. 2) sets forth a long-term plan to restore the beneficial uses of San Diego Bay at the creek mouth areas of Paleta, Chollas, and Switzer Creeks. The goal will be achieved by (1) ensuring permitted discharges in the watershed do not exceed the TMDLs; and (2) remediating polluted bay sediments.

The Technical Report (Supporting Document No. 3) includes the technical analysis, which contains the written, quantitative assessment of water quality problems and contributing pollutant sources.

Targeted Pollutants:

Polychlorinated biphenyls (PCBs), Chlordane, and polyaromatic hydrocarbons (PAHs) impair aquatic life and human health beneficial uses. The creek mouths are on the Clean Water Act section 303(d) list of impaired water bodies for sediment impairments affecting benthic communities, and the whole of San Diego Bay is listed for elevated PCB levels in fish tissue that impair human health. PCBs, Chlordane, and some PAHs are persistent, bioaccumulative, toxic chemicals. PAHs are generated from petroleum-based products and emissions. PCBs and Chlordane are no longer manufactured, but remain in watershed environments where they can be mobilized by storm water.

All three pollutants are often bound to fine-grained particulates in storm water. Therefore, typical management actions will include efforts at source control and removal of particulates from storm water. All three are also found in existing sediments within the creek mouths. Polluted creek mouth areas will need to be remediated.

TMDLs:

TMDLs require calculation of numeric targets that implement existing water quality standards. The TMDLs' numeric targets are not water quality standards themselves, and they are not directly enforceable against dischargers. Waste load allocations necessary to achieve the TMDLs become enforceable after being put into NPDES permits as water quality based effluent limitations.

The amendment incorporates a suite of TMDLs to ensure attainment of water and sediment quality standards that protect aquatic life and human health. Mass-based TMDLs for chlordane, total PAHs, and total PCBs pertain to controlling discharges of these pollutants into the creek mouths. Additionally, concentration-based TMDLs are established to directly limit the concentrations allowed to be present in the sediment, water, and fish tissue of the creek mouths.

The mass-based TMDLs are allocated as Waste Load Allocations (WLAs) to municipal storm water dischargers, Naval Base San Diego, and Caltrans; and as Load Allocations (LAs) to direct atmospheric deposition. Implicit and explicit Margins of Safety (MOS) are used to account for uncertainty. Therefore the  $TMDL = \sum WLAs + \sum LAs + MOS$ .

Implementation Plan:

The WLAs will ultimately be incorporated into the NPDES (including storm water) permits as water quality based effluent limitations. Permits will also include specific implementation and monitoring requirements based on recommendations in the Technical Report (Appendices J, K & L of Supporting Document No. 3) and summarized in the Basin Plan Amendment. They include developing/updating and implementing load reduction plans, Storm Water Pollution Prevention Plans or Storm Water Management Plans, as applicable, installing appropriate best management practices to limit discharges of organic pollutants, and monitoring of effluent and receiving waters. Implementation should utilize an adaptive management approach.

The Implementation Plan also includes commitments to issue enforcement actions, specifically Investigative Orders and Cleanup and Abatement Orders. An Intertidal Segments Study(s) will investigate unknown sources in the infrastructure and/or creek beds in the tidally- influenced areas of these watersheds. A Bioaccumulation Monitoring Study will provide data to assess compliance with the Fish Tissue Concentration Target. A Cleanup and Abatement Order(s) will require responsible parties to remediate contaminated sediment in accordance with State Board Resolution No. 92-49. This Resolution requires that dischargers clean up and abate the effects of discharges in a manner that promotes attainment of either background water quality, or the best water quality which is reasonable if background levels cannot be restored. Sediment TMDLs are not being proposed as cleanup levels, instead the sediment remediation levels will be determined during development of the CAO.

Schedule of Actions: Reductions in current watershed loading to meet the TMDLs will be phased in over 20 years. By the end of this period, Aquatic Life and Human Health SQOs must be attained in order to demonstrate restoration of beneficial uses. The sediment remediation is projected to occur within 8 years, concurrent with the timeframe for approximately 80 percent of final waste load reductions from the watershed. Once implemented, the actions identified in this Basin Plan Amendment are expected to result in significant improvements in the water and sediment quality

conditions in these three creek mouth areas, which will also benefit greater areas of San Diego Bay.

### Numeric Targets

The numeric targets used to develop the TMDLs represent interpretations of water quality standards. Therefore, they are subject to intensive stakeholder scrutiny (see key issues above and the Response to Comments in Appendix M to Supporting Document No.3).

Water Board staff had to develop *numeric* targets to interpret the *narrative* sediment quality objectives that are the basis for the impairments on the 303(d) list. Sediment characterization studies and toxicity identification evaluations identified pollutants of concern for aquatic life toxicity and bioaccumulation. Staff then developed pollutant-specific targets by identifying pollutant levels at sites within San Diego Bay currently meeting the SQOs, following a methodology used in CAO No. R9-2012-0024 (the Sediment Shipyard Site in San Diego Bay). Source analyses and watershed and receiving water models were then used to identify waste load allocations that could support the targets once sediments are remediated.

The foundation of this methodology is the multiple lines of evidence (MLOE) approach within the Enclosed Bays and Estuaries Plan that synthesizes data from sediment chemistry, sediment toxicity, and the benthic community to categorize sites on a spectrum of impairment. No single indicator alone determines the station category, therefore no single indicator, such as sediment chemistry, can overly influence the determination of a site's status. The sediment targets are based on the 95th percent upper confidence limit of the mean of pollutant concentrations at the set of unimpacted and likely-unimpacted San Diego Bay data sites.

The numeric targets do not represent sediment remediation levels, and therefore were not developed with the same processes as used when issuing cleanup orders. For instance, some stakeholders expected to see risk assessments as part of this TMDL. While screening level assessments were used to gage whether the sediment targets would support human health via consumption, the more refined risk assessments will be performed during the CAO process to identify remediation levels. The TMDL sediment targets also differ from the sediment cleanup levels

in CAO No. R9-2012-0024 for the nearby Shipyard Site. The Shipyard CAO levels were developed pursuant to Resolution 92-49 and were based on a smaller set of data. Like the Shipyard CAO, the creek mouth sediment remediation levels will be established pursuant to Resolution 92-49.

### PCBs

PCB TMDLs have been calculated because San Diego Bay, including the three creek mouth areas, is listed for PCBs in fish tissues. PCBs are present in sediment at these creek mouths at concentrations of concern and are known to bioaccumulate up the food web. Further, although toxicity identification evaluations concluded that PCBs were not the sole cause of direct toxicity to benthic organisms, their presence in the mixture of pollutants in the sediment likely contributed to the toxic effects.

**LEGAL CONCERNS:** Responses to legal comments received during the public comment period are included in Appendix M – Responses to Public Comments (Supporting Document No. 3.o) at L-1, L-2, CAO-1 through -5, RP-1 through -3, CEQA-3 through -5, PR-1.

### **SUPPORTING DOCUMENTS**

1. Location of Paleta, Chollas, and Switzer Creek Mouths
2. Tentative Resolution No. R9-2013-0003 with proposed Basin Plan Amendment
3. Technical Report and Appendices:
  - a. Draft Technical Report
  - b. Appendix A – Peer Review
  - c. Appendix B – Tentative Resolution
  - d. Appendix C-1 – Watershed Monitoring & Modeling Report
  - e. Appendix C-2 – Watershed Modeling Report
  - f. Appendix D – Receiving Water Modeling Report
  - g. Appendix E – Watershed Modeling Report
  - h. Appendix F – Data Summaries Report
  - i. Appendix G – General Industrial Permit Enrollees List
  - j. Appendix H – Environmental Analysis and Checklist
  - k. Appendix I – Documentation for Numeric Targets
  - l. Appendix J – Language for Regional MS4 Permit
  - m. Appendix K – Language for Naval Base San Diego Permit
  - n. Appendix L – Language for Caltrans’ General Permit
  - o. Appendix M – Responses to Public Comments
  - p. Appendix N – Peer Review Document for SFEI Report
4. Notice of Filing and Hearing and Notice of Revised Date of Public Hearing

PUBLIC NOTICE:

Notices of Filing and Public Hearing for this Tentative Resolution and Basin Plan amendment, including filing of the written staff report, tentative resolution, and draft Basin Plan amendment, were provided by newspaper publication in the San Diego Union-Tribune and the North County Times on February 19, 2013 (Supporting Document No. 4). The Notices were also distributed to interested persons by email, including the *San Diego Bay Marine Sediments TMDLs* and *Basin Planning Issues* electronic subscription lists, on February 19, 2013 and February 21, 2013, respectively, and made available on the San Diego Water Board's website on February 19, 2012. The City of Lemon Grove was notified directly by email on February 20, 2013.

Notification letters requesting consultation from Trustee Agencies, including the California Coastal Commission, California State Lands Commission, and California Department of Fish and Wildlife, other agencies, including the California Air Resources Board, the San Diego Air Pollution Control District, and U.S. Fish and Wildlife Service, and 14 local tribal contacts were mailed on February 19, 2013.

The Notice of Public Hearing was revised to reflect a new hearing date on April 30, 2013 (Supporting Document No. 4). This notice was provided by newspaper publication in the San Diego Union-Tribune and the North County Times on April 30, 2013. The Notice was also distributed to interested persons by email, including the *San Diego Bay Marine Sediments TMDLs* and *Basin Planning Issues* electronic subscription lists, on April 25, 2013 and April 30, 2013, respectively, and available on the San Diego Water Board's website on April 25, 2013.

These notifications satisfy applicable requirements of Clean Water Act regulations [Code of Federal Regulations, Title 40, section 25.5] and State Water Resources Control Board (State Water Board) California Environmental Quality Act (CEQA) implementation regulations [California Code of Regulations Title 23 section 3777].