

August 23, 2005

STATE WATER RESOURCES CONTROL BOARD
WORKSHOP SESSION—DIVISION OF WATER QUALITY
SEPTEMBER 7, 2005

ITEM 16

SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR ORGANOCHLORINE PESTICIDES, POLYCHLORINATED BIPHENYLS, AND SILTATION IN THE CALLEGUAS CREEK WATERSHED AND MUGU LAGOON

DISCUSSION

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted the revised Water Quality Control Plan for the Los Angeles Region (Basin Plan) under Resolution No. 94-07 on June 13, 1994. The revised Basin Plan was approved by the State Water Resources Control Board (State Water Board) on November 17, 1994, and by the Office of Administrative Law (OAL) on February 23, 1995.

The Calleguas Creek Watershed (CCW) is located in southeast Ventura County and in a small portion of western Los Angeles County and drains an area of about 343 square miles from the Santa Susana Pass in the east to Mugu Lagoon in the southwest. Current land use is approximately 26 percent agriculture, 24 percent urban (mostly in the central Oxnard Plain), and 50 percent open space. Of fourteen segments or reaches of the CCW, the 2002 Clean Water Act (CWA) 303(d) list identified eleven reaches as impaired for organochlorine (OC) pesticides and polychlorinated biphenyls (PCBs).

A consent decree between the U.S. Environmental Protection Agency (USEPA), Heal the Bay, Incorporated and Baykeeper, Incorporated was approved on March 22, 1999, in response to litigation brought by the environmental groups relating to USEPA's progress in complying with section 303(d) of the federal CWA. This court order establishes a consent decree schedule that among other things requires completion of a Total Maximum Daily Load (TMDL) to reduce OC pesticides, PCBs, and siltation in the CCW by March 22, 2006. The Los Angeles Water Board's goal in establishing the CCW OC Pesticides, PCBs, and Siltation TMDL is to determine and set forth measures needed to correct impairment of water quality due to OC pesticides, PCBs, and siltation in Calleguas Creek and Mugu Lagoon.

On July 7, 2005, the Los Angeles Water Board adopted Resolution No. R4-2005-010 ([Attachment](#)) to amend the Basin Plan with a TMDL to address water quality impairments of Calleguas Creek, including its tributaries, and Mugu Lagoon, caused by OC pesticides, PCBs, and siltation. The TMDL specifies Load Allocations (LAs) and Wasteload Allocations (WLAs) that, when implemented, are expected to result in the attainment of applicable water quality standards.

Calleguas Creek stakeholders have been actively engaged with USEPA and the Los Angeles Water Board on a variety of watershed planning activities through the Calleguas Creek Watershed Management Plan (CCWMP), an established stakeholder-lead watershed management group operating since 1996. The CCWMP includes broad participation from federal, State, and county agencies, municipalities, Publicly-Owned Treatment Work (POTWs), water purveyors, groundwater management agencies, and agricultural and environmental groups. As part of its mission to address issues of long-range comprehensive water resources, the CCWMP proposed to USEPA and Los Angeles Water Board to take the lead on development of the TMDLs for the CCW.

The Los Angeles Water Board staff has worked with the CCWMP and USEPA in developing a detailed technical document that analyzes and describes the specific necessity and rationale for the development of this TMDL. The document titled "Calleguas Creek Watershed OC Pesticides and PCBs TMDL" was prepared by Larry Walker Associates as an integral part of this Los Angeles Water Board action. Los Angeles Water Board staff led the development of the TMDL analysis for siltation with participation from CCWMP and stakeholders. The document provides the detailed factual basis and analysis supporting the problem statement, numeric targets (interpretation of the narrative and numeric water quality objectives used to calculate the pollutant allocations), source analysis, linkage analysis, WLAs for point sources, LAs for nonpoint sources, margin of safety, and seasonal variations and critical conditions of this TMDL.

The Los Angeles Water Board staff used all available information in its analysis of the siltation listing for Mugu Lagoon. The Los Angeles Water Board found that excessive siltation can impair the estuarine aquatic life habitat in Mugu Lagoon and that historic pesticide and PCBs adhere to sediment, where they are transported through the watershed to Mugu Lagoon. The Los Angeles Water Board found insufficient existing data to establish the annual loading to Mugu Lagoon under the highly variable meteorological and hydrological conditions within the CCW. Consequently, this TMDL establishes interim WLAs and interim LAs as sediment mass reduction and provides for special studies to develop a refined TMDL to be adopted to protect aquatic life and wetland habitat beneficial uses. The interim WLAs and LAs represent the Los Angeles Water Board's best professional judgment of the sediment mass reductions needed to achieve compliance with the TMDL targets.

Concentration-based numeric targets included in the TMDL are:

1) Table 7-17.1 for Water Quality Targets in nanograms per liter (ng/L) with levels for freshwater and marine water for: Aldrin, Chlordane, Dacthal, Dichlorodiphenyldichloroethane (DDD), Dichlorodiphenyldichloroethylene (DDE), Dichlorodiphenyltrichloroethane (DDT), Dieldrin, Endosulfan I, Endosulfan II, Endrin, Hexachlorocyclohexane (gamma BHC), Heptachlor, Heptachlor Epoxide, PCBs, and Toxaphene. Water column targets are derived from California Toxics Rule (CTR) water quality chronic criteria for protection of aquatic life. 2) Table 7-17.1 for Fish Tissue Targets in nanograms per kilogram (ng/Kg) with levels for: Aldrin, Chlordane, Dacthal, DDD, DDE, DDT, Dieldrin, Endosulfan I, Endosulfan II, Endrin, alpha BHC, beta BHC, delta BHC, gamma BHC, Heptachlor, Heptachlor Epoxide, PCBs, and Toxaphene. Fish tissue targets are derived from CTR human health criteria for consumption of organisms. 3) Table 7-17.1 for Sediment Quality Targets in nanograms per dry kilogram (ng/dry Kg) with levels for freshwater Threshold Effects Level (TEL) and marine water Effects Range-Low (ERL) for:

Aldrin, Chlordane, Dacthal, DDD, DDE, DDT, Dieldrin, Endosulfan I, Endosulfan II, Endrin, alpha BHC, beta BHC, delta BHC, gamma BHC, Heptachlor, Heptachlor Epoxide, PCBs, and Toxaphene. Sediment targets are derived from sediment quality guidelines in National Oceanographic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (1999). 4) Table 7-17.1 two Siltation Targets, one for reduction and one for maintenance of Mugu Lagoon:

- Annual average reduction in the import of silt of 5,200 tons/year, to be measured at the US Naval Base total suspended sediment gauge at Mugu Lagoon entrance.
- Maintenance of existing habitat in Mugu Lagoon, preserve 1,400 acres of aquatic habitat.

The numeric targets in this TMDL are not water quality objectives and do not create new bases for enforcement against dischargers apart from the water quality objectives they translate. The targets establish the bases through which LAs and WLAs are calculated. WLAs are only enforced for a discharger's own discharges, and then only in the context of its National Pollutant Discharge Elimination System (NPDES) permit, which must be consistent with the assumptions and requirements of the WLA. The Los Angeles Water Board will develop permit requirements through subsequent permit actions that will allow all interested persons, including but not limited to municipal storm water dischargers, to provide comments on how the WLAs will be translated into permit requirements.

Implementation actions for the Los Angeles Water Board include in Table 7-17.1: 1) WLAs for listed OC pesticides and PCBs in effluent for the POTWs will be implemented through NPDES permit limits. POTWs affected include Hill Canyon Waste Water Treatment Plant, Simi Valley Water Quality Control Plant, Ventura County (Moorpark) Water Treatment Plant, Camarillo Water Reclamation Plant, and Camrosa Water Reclamation Plant. Compliance will be determined by monitoring of end-of-pipe effluent, the implementation plan focuses on source control activities. The final WLAs will be included in NPDES permits according to the compliance schedule provided. The Los Angeles Water Board may revise these WLAs based on information developed through Special Studies and/or Monitoring of this TMDL. 2) Storm water Permittee WLAs for pollutants in sediment will be incorporated into the NPDES permit as in-stream annual average at the base of each CCW subwatershed and are to be achieved by implementation of Management Practices (MPs). 3) Minor Point Source permittees under NPDES permits or Waste Discharge Requirements are assigned concentrations in the water column. 4) A group siltation WLA has been developed for Urban Stormwater Co-Permittees (MS4), including the California Department of Transportation MS4, of 2,496 tons per year reduction in sediment to Mugu Lagoon. The grouped allocation will apply to all NPDES regulated municipal storm water discharges in the CCW. The Los Angeles Water Board will detail its findings and conclusions supporting the use of MPs in the NPDES permit fact sheets. LAs for listed OC pesticides will be implemented through the State's Nonpoint Source Pollution Control Program (NPSPCP). Sediment based LAs are to be measured as an in-stream annual average at the base of each sub-watershed.

The Los Angeles Water Board is currently developing a Conditional Waiver for Irrigated Lands. Once adopted, the Conditional Waiver Program will implement allocations and attain numeric targets of this TMDL. Agricultural dischargers will receive an allocation of 2,704 tons per year reduction in sediment to Mugu Lagoon. Studies are currently being conducted to assess the effectiveness of MPs for reduction of pollutants from agricultural operations.

Results will be used to develop Agricultural Water Quality Management Plans, including the implementation of agricultural MPs. Additionally, an agricultural education program will be developed to inform growers of the recommended MPs and the Management Plan. As shown in the implementation schedule, the implementation of agricultural MPs will be based on a comprehensive approach to address pollutant loads discharged from agricultural operations. The Los Angeles Water Board may revise these LAs based on the collection of additional information developed through special studies and/or monitoring conducted as part of this TMDL. Achievement of final WLAs and LAs is expected 20 years after effective date of the TMDL.

The siltation portion of the TMDL includes WLAs and LAs set as an annual mass reduction from a baseline value of sediment deposited in Mugu Lagoon. The baseline value of sediment conveyed to Mugu Lagoon is to be determined by a TMDL Special Study and established by the Los Angeles Water Board through an amendment to the TMDL. The Special Study, overseen by a Science Advisory Panel, is eight years in duration to ensure that the full range of conditions that affect loading of sediment to Mugu Lagoon are considered. At the conclusion of the Special Study, the Los Angeles Water Board will reconsider the TMDL to establish sustainable WLAs and LAs as recommended by the Special Study. In implementing this TMDL, staff recognizes that dischargers may be implementing management measures and MPs to reduce sediment loads through permit and waiver programs during the Special Study. Staff intends to coordinate the requirements of this TMDL with other programs to reduce sediment loading. WLAs and LAs become effective after the Los Angeles Water Board actions based on the Special Study, nine years after the effective date of the TMDL.

This TMDL relies on an implicit margin of safety, by incorporating conservative assumptions throughout its development, including:

- Percentage reductions in the concentrations of pollutants in fish tissue and water samples based on historical data.
- Determining the percent reduction in sediment, by basing it on the greater percent reduction of either water or fish tissue concentrations based on available data.
- Reducing the allowable concentration for upstream sub-watersheds, to ensure protection of those sub-watersheds downstream from upstream inputs.
- Choosing TELs and ERLs as numeric targets for sediment, which are the most protective applicable sediment guidelines.
- Selecting the more stringent of the allowable concentration (as calculated by percent reduction methodology) or the numeric target for sediment (TEL or ERL), when available, as the WLA and LA for all reaches with 303(d) listings for sediment.
- Resolution No. R4-2005-010 authorizes the Regional Board Executive Officer to make minor, non-substantive corrections to the language of the amendment, if needed, for clarity or consistency. State Water Board staff's review of the proposed amendment identified items in the amendment that needed clarification. The Los Angeles Water Board Executive Officer has made the non-substantive clarifications in a memorandum.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan in accordance with the Staff Recommendation below?

FISCAL IMPACT

Los Angeles Water Board and State Water Board staff work associated with or resulting from this action can be accommodated within budgeted resources.

REGIONAL WATER BOARD IMPACT

Yes, Los Angeles Water Board.

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan as adopted under the Los Angeles Water Board Resolution No. R4-2005-010 and as corrected by the Regional Water Board Executive Officer.
2. Authorizes the Executive Director to submit the amendment adopted under Los Angeles Water Board Resolution No. R4-2005-010, as approved, and the administrative record for this action to OAL and the TMDL to USEPA for approval.

STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2005-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR ORGANOCHLORINE PESTICIDES, POLYCHLORINATED BIPHENYLS, AND SILTATION IN THE CALLEGUAS CREEK WATERSHED AND MUGU LAGOON

WHEREAS:

1. The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted the revised Water Quality Control Plan for the Los Angeles Region (Basin Plan) under Resolution No. 94-07 on June 13, 1994. The State Water Resources Control Board (State Water Board) approved the revised Basin Plan on November 17, 1994 and by the Office of Administrative Law (OAL) on February 23, 1995.
2. A consent decree between the U.S. Environmental Protection Agency (USEPA), Heal the Bay, Incorporated and Baykeeper, Incorporated was approved on March 22, 1999. This court order establishes a requirement to establish a TMDL to reduce organochlorine (OC) pesticides and polychlorinated biphenyls (PCBs) in the Calleguas Creek watershed by March 22, 2006.
3. On July 7, 2005, the Los Angeles Water Board adopted Resolution No. R4-2005-010 (Attachment) to incorporate a Total Maximum Daily Load TMDL) for organochlorine pesticides, polychlorinated biphenyls, and siltation in Calleguas Creek, its tributaries, and Mugu Lagoon.
4. Los Angeles Water Board Resolution No. R4-2005-010 delegated to its Executive Officer authority to make minor, non-substantive corrections to the adopted amendment if needed for clarity or consistency. The State Water Board staff finds that provisions of the amendment, as adopted, warranted minor, non-substantive clarification of the language of various provisions. The Los Angeles Water Board Executive Officer has made the necessary corrections to the amendment.
5. The State Water Board finds that the amendment is in conformance with the requirements for TMDL development specified in section 303(d) of the federal Clean Water Act and the State Water Board Resolution No. 68-16 and is an appropriate program of implementation pursuant to Water Code section 13242.
6. The State Water Board finds that the Basin Plan amendment is in conformance with the requirements of Water Code section 13240, which specifies that Regional Water Quality Control Boards shall periodically review and may revise Basin Plans.
7. Basin Plan amendments do not become effective until approved by the State Water Board and until the regulatory provisions are approved by OAL. In addition, TMDLs must be approved by the USEPA.

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan as adopted under the Los Angeles Water Board Resolution No. R4-2005-010 as corrected by the Regional Water Board Executive Officer.
2. Authorizes the Executive Director to submit the amendment adopted under Los Angeles Water Board Resolution R4-2005-010, as approved, and the administrative record for this action to OAL and the TMDL to USEPA for approval.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on September 22, 2005.

Debbie Irvin
Clerk to the Board