



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

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CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
LOS ANGELES REGION

Thomas Howard
Executive Director
California State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-0100

Dear Mr. Howard:

Thank you for submitting the Basin Plan Amendment containing the Total Maximum Daily Load (TMDL) for toxic pollutants (lead, zinc, chlordane, dieldrin, PAHs, DDT and PCBs) in the Colorado Lagoon, in Long Beach, California. Based on the United States Environmental Protection Agency's (EPA) review of the TMDL submittal under Clean Water Act (CWA) section 303(d), I have concluded the TMDL adequately addresses the pollutants of concern and, upon implementation, will result in attainment of the applicable water quality standards for the Colorado Lagoon. All required elements are adequately addressed; therefore, the TMDL is hereby approved pursuant to CWA section 303(d)(2).

EPA received the State Water Resources Control Board's complete TMDL package for approval on May 18, 2011. The TMDL includes waste load and load allocations as needed, takes into consideration seasonal variations and critical conditions, and provides an adequate margin of safety. The State has provided adequate opportunities for public review and comment on the TMDL, and described how public comments were considered in the final TMDL.

The TMDL submittal also contains a detailed plan for implementing the TMDL. Current federal regulations do not define TMDLs as containing implementation plans; therefore, EPA is not taking action on the implementation plan provided with this TMDL. However, EPA concurs with the State's proposed implementation approaches.

If you have any questions concerning this approval, please call me at (415) 972-3572 or Peter Kozelka at (415) 972-3448.

Sincerely,

Alexis Strauss 14 June 2011
Alexis Strauss
Director, Water Division

Enclosure

cc: Sam Unger, Executive Officer
California Regional Water Quality Control Board, Los Angeles Region

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TMDL Review Checklist

State: California, Los Angeles Region

Water Bodies: Colorado Lagoon

Pollutant(s): Pb, Zn, Chlordane, Dieldrin, PAHs, DDT, PCBs, sediment toxicity

Date of Letter Requesting EPA Approval: January 12, 2011

Date EPA Received Complete Submittal: May 18, 2011

EPA Reviewer: Peter Kozelka

1. Submittal Letter: *Letter indicates final TMDL(s) for specific water(s)/pollutant(s) were adopted by the State and submitted to EPA for approval under 303(d).*

The State Water Resources Control Board's (State Board) submittal letter, dated January 12, 2011 from Elizabeth Haven to Alexis Strauss, describes an amendment to the Los Angeles Regional Water Quality Control Board's (Regional Board) Basin Plan to adopt TMDLs for toxic pollutants in Colorado Lagoon.

The Basin Plan Amendment was adopted by the Regional Board on October 1, 2009. The Amendment was approved by the State Board on August 3, 2010. On May 6, 2011, EPA received a copy of California's Office of Administrative Law (OAL) approval document. EPA considers the State's submittal complete as of the date of receipt of the email (May 18, 2011) providing additional clarification.

The submittal letter requests EPA to approve the TMDLs under Clean Water Act (CWA) section 303(d)(2).

The State's submittal package includes the following documents: (1) the Total Maximum Daily Loads (TMDLs) for Organochlorine (OC) Pesticides, Polychlorinated biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHs), Metals and Sediment Toxicity for Colorado Lagoon (TMDL Staff Report) dated October 1, 2009; (2) the Proposed Basin Plan Amendment and Final Regional Board Resolution No. R4-2009-005, dated October 1, 2009, adopting the Regional Basin Plan Amendment (BPA); (3) State Board Resolution No. 2010-0056, dated November 16, 2010, approving the Regional Board Basin Plan Amendment; and (4) OAL approval document, File No. 2011-0324-01 S, dated May 6, 2011; (5) Responses to comments documents from both Regional Board and State Board.

2. TMDLs Included: *The submittal clearly identifies the water segments and pollutants or stressors for which TMDLs were developed. The submittal should distinguish TMDLs adopted for listed water/pollutant combinations from TMDLs adopted for water/pollutant combinations not identified on the current Section 303(d) list. It should also clarify if TMDLs were adopted for new impairment findings (by waterbody-pollutant combinations) that do not exist on the current Section 303(d) list. If appropriate, the submittal should describe any assessment decisions that may have resulted in non-impairment status for water/pollutant combinations that exist on State's most current 303(d) list.*

The State submittal includes TMDLs for many toxic pollutants in the Colorado Lagoon, including lead, zinc, chlordane, dieldrin, total PAHs, total PCBs and total DDT. Colorado Lagoon was listed as impaired for these toxic pollutants on California's 2006 303(d) list. They were originally listed in 1996. (BPA, p 2; TMDL Staff Report, p. 7-8).

EPA concludes it is appropriate for the State to include TMDLs for all these pollutants within the Colorado Lagoon.

3. Water Quality Standards Attainment: *Submittal describes applicable water quality standards, including beneficial uses, applicable numeric and/or narrative criteria.*

The TMDL submittal identifies the applicable beneficial uses in the Colorado Lagoon: water contact recreation (REC-1), non-contact recreation (REC-2), commercial and sport fishing (COMM), warm freshwater habitat (WARM), wildlife habitat (WILD) and shellfish harvesting (SHELL). The goal of these TMDLs is to protect and restore fish tissue and sediment quality; i.e., (COMM) and (WILD). The beneficial uses and narrative objectives are contained in the current Regional Board Basin Plan. Numeric criteria for aqueous pollutants are also contained in the California Toxics Rule. (BPA, p. 2, TMDL Staff Report, p. 16-17)

EPA concurs with the State's analysis, and concludes the TMDLs are set at levels necessary to attain applicable water quality standards.

4. Numeric Target(s): *Numeric water quality target(s) for TMDL are identified, and adequate basis for target(s) as interpretation of water quality standards is provided.*

The TMDL submittal provides water column, fish tissue and sediment quality targets to address these listings. Water column targets for metals and organochlorine compounds are from California Toxics Rule. Fish tissue targets for bioaccumulative pollutants are from OEHHA fish contaminant goals. Sediment quality targets are from relevant scientific studies and intended to address sediment toxicity as well as transfer of sediment contaminants to fish via bioaccumulation. The sediment quality and fish tissue targets are interpretations of the applicable narrative water quality objectives. (BPA, p. 3; TMDL Staff Report, p. 32-35). See TMDL Staff report, Table 3.1 for specific concentration target levels for each media.

EPA concludes the State's use of these numeric targets in the TMDL analyses to be reasonable and appropriate, and finds adequate basis for the targets.

5. Source Analysis: *Point, non-point, and background sources of pollutants of concern are described, including the magnitude and location of sources. If point sources are present, submittal identifies existing NPDES permits by name and number. Submittal demonstrates all sources have been considered.*

The submittal identifies both point sources and nonpoint sources of these pollutants to Colorado Lagoon. Point sources include urban and stormwater runoff from the County of Los Angeles and City of Long Beach municipal separate storm sewer systems (MS4) and California Department of Transportation (Caltrans). There are five sub-basins that collect stormwater and dry weather runoff and discharge via storm drains (trunk lines) in the waterbody. The five sub-basins are clearly described in the TMDL submittal. There are no waste water treatment plants in the watershed. Nonpoint sources are generally described as potentially contaminated sediments within sheet flow runoff from adjacent park areas, two golf courses, a right-of-way greenbelt and direct atmospheric deposition. (BPA, p. 3 -4; TMDL Staff Report, pp. 36-46).

EPA finds the State's source analysis to be complete, reasonable and appropriate.

6. Linkage Analysis: *Submittal describes relationship between numeric target(s) and identified pollutant sources.*

The TMDL analysis makes a simplifying assumption that the relationship between bioaccumulative pollutants (OC pesticides and PCBs) in fish tissue and sediment levels is linear, with the slope of the line being the overall sediment-organism bioaccumulation factor. All of these toxic pollutants, including metals, are associated with fine-grain particles transported in stormwater and urban runoff processes. The submittal also recognized that aqueous pollutants may cause or contribute to sediment toxicity and bioaccumulation (TMDL Staff Report, p. 33).

The Environment Fluid Dynamics Code (EFDC) model was used to estimate the current loads of contaminated sediments associated with stormwater discharges into the Lagoon. It was also used to develop and simulate the dynamic interaction between Marine Stadium (neighboring waterbody) and Colorado Lagoon. (BPA, p. 46-61)

EPA finds the State's analysis reasonable and appropriate.

7. TMDL and Allocations: *Submittal identifies the total allowable load, waste load allocations for all point sources and load allocations for non-point sources. The TMDL must be set equal to or less than the loading capacity. If no point sources are present, waste load allocations are zero. If no non-point sources are present, load allocations are zero. TMDLs and allocations should be expressed in terms of daily time steps. If the TMDL and/or allocations are also expressed in terms other than mass loads per day, the submittal explains why it is reasonable and appropriate to express the TMDL in those terms.*

TMDLs: The TMDLs are set equal to the loading capacity. The total loading capacity is based on the sediment quality numeric targets and the average annual total suspended solids load discharged to the Lagoon. (TMDL Staff Report, p. 63)

EPA concurs with the State's analysis and concludes the TMDLs are set at levels necessary to attain applicable water quality standards.

Waste Load Allocations (WLA)

Waste load allocations are defined for sediment media only and applied as either mass-based or concentration-based. Mass-based wasteload allocations apply to the following NPDES permits:

- County of Los Angeles (MS4-Flood Control District) – No. CAS004001
- City of Long Beach (MS4) – No. CAS004003
- Caltrans (MS4) – No. CAS000003

These mass-based sediment wasteload allocations are divided into five separate storm drains that flow into Colorado Lagoon. The submittal states that compliance for sediment WLA shall be determined at each storm drain outfall into the Lagoon. These are to be evaluated as average annual limits to any existing NPDES permits.

Concentration-based sediment WLAs are also assigned to the above NPDES permits and apply to existing sediment in the West Arm, North Arm and Central Arm of the Lagoon, along with other minor MS4 storm drains to the Lagoon. These are to be evaluated as average monthly limits to any existing (and future) minor NPDES permits, other stormwater, and non-stormwater permittees identified in the submittal. (BPA, p. 5-6; TMDL Staff report, p. 66-69)

Concentration-based WLAs are assigned to minor NPDES permits, other stormwater permits, and non-stormwater permits. Any future minor NPDES permits or enrollees under a general non-stormwater NPDES permits, general industrial stormwater permit or general construction permit will also be subject to the concentration-based WLAs.

Load Allocations (LA)

Load allocations are assigned for (nonpoint source) atmospheric deposition directly onto the surface water within the lagoon. This constitutes 1.3% of the watershed. Mass-based load allocation for direct deposition is calculated to equal 1.3% of the loading capacity, expressed in mg/yr.

The State provided additional information to clarify the Colorado Lagoon restoration project will install bioswales in the immediate vicinity of the Lagoon and therefore no load allocations were necessary for sheet flows since the bioswales would capture the sediment runoff and associated contaminants. (BPA, p. 7; TMDL Staff Report, pp. 66-69).

EPA concludes the TMDL analysis includes waste load allocations and load allocations that are consistent with the provisions of the CWA and federal regulations. EPA notes that NPDES permittees seeking a compliance schedule for NPDES effluent limits based on the WLAs included in the TMDL must meet the scope/applicability provision and application requirements in the State's currently applicable compliance schedule policy (dated 2008).

8. Margin of Safety (MOS): *Submittal describes explicit and/or implicit margin of safety for each pollutant.*

The State's submittal includes an implicit margin of safety "based on the selection of multiple numeric targets, including targets for water, fish tissue and sediment to protect human health and the selection of ERLs as numeric targets for sediment, which are the most protective of the potentially applicable sediment guidelines available."

An additional 10% explicit margin of safety is included to address sources of uncertainty in the analysis. (BPA, p. 7; TMDL Staff Report, p. 65)

EPA finds the State's analysis to be reasonable.

9. Seasonal Variations and Critical Conditions: *Submittal describes method for accounting for seasonal variations and critical conditions in the TMDL(s).*

The submittal finds no correlation with flow or seasonality to exist between the sediment or fish tissue data. Because adverse effects of these chemicals are related to sediment accumulation and bioaccumulation in the food chain over long periods of time, short term variations in concentrations are less likely to cause significant impacts upon beneficial uses. (BPA, p. 7; TMDL Staff Report, page 64)

EPA finds the State's analysis to be reasonable.

10. Public Participation: *Submittal documents provision of public notice and public comment opportunity; and explains how public comments were considered in the final TMDL(s).*

The Regional Board and State Board held several public workshops and hearings, beginning in 2009, and adequately responded to written and oral public comments.

The Regional Board held stakeholder meetings beginning on July 23, 2009. On October 1, 2009, the Regional Board held its final public hearing on the TMDLs following a 45-day comment period, and considered all public comments and evidence in the record.

The State's submittal includes the State's Notice of Opportunity for Public Comment, dated September 16, 2010. The Regional Board's record includes Notices of Opportunity for Public Comment, as well as Scientific Peer Review Comments, and staff responses to comments.

EPA finds the State provided sufficient opportunities for public comment and adequately responded to public comments.

11. Technical Analysis: *Submittal provides appropriate level of technical analysis supporting TMDL elements.*

The TMDL submittal provides an appropriate level of technical analysis supporting all TMDL elements.

12. Reasonable Assurances: *If waste load allocations are made less stringent based on the inclusion of load allocations that reflect non-point source reductions, submittal describes how there are reasonable assurances that necessary non-point source reductions will occur.*

N/A

13. Other: *Table shows association between TMDL pollutants and 303(d) listings addressed. Table also shows findings of new impairment and findings of non-impairment. May include waterbody-pollutant combinations addressed by TMDL(s) which are not clear in submittal.*

<u>Waterbody</u>	<u>TMDL Pollutant (has allocation)</u>	<u>303(d) Listed Impairment (year)</u>	<u>TMDL Assessment (if applicable)</u>
<u>Colorado Lagoon</u>	<u>Lead (Pb)</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Zinc (Zn)</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Total PAHs</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Total DDT</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Total PCBs</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Chlordane</u>	<u>1996</u>	<u>Impaired</u>
<u>Colorado Lagoon</u>	<u>Dieldrin</u>	<u>1996</u>	<u>Impaired</u>