

**STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
DECEMBER 6, 2011**

ITEM 16

SUBJECT

CONSIDERATION OF A PROPOSED RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR TOXIC POLLUTANTS IN DOMINGUEZ CHANNEL AND GREATER LOS ANGELES AND LONG BEACH HARBOR WATERS

DISCUSSION

On May 5, 2011, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted [Resolution No. R11-008](#) incorporating a Total Maximum Daily Load (TMDL) for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

IMPAIRMENT

A number of different heavy metals and organic pollutants cause impairments to water, sediment and fish tissue including cadmium, chromium, copper, mercury, lead, zinc, chlordane, dieldrin, toxaphene, DDT, PCBs, and certain PAH compounds. In addition, degraded benthic community and toxicity impairments have been observed. These impairments are documented in the State of California's 303(d) list of impaired waterbodies in 1998, 2002, 2006 and 2008, and were reassessed during the development of this TMDL. The reassessment has confirmed 77 listings and 79 impairments to be addressed by this TMDL.

Specifically, water quality is impaired in the Dominguez Channel; sediment and fish quality are impaired in two estuaries: the Dominguez Channel estuary and the Los Angeles River estuary; and sediment and fish are impaired in the Greater Los Angeles and Long Beach Harbor Waters (Greater Harbor Waters)¹.

A schedule for development of TMDLs in the Los Angeles Region was established in a consent decree (Heal the Bay Inc., et al. v. Browner C 98-4825 SBA) approved on March 22, 1999. In accordance with the consent decree, the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL addresses the listings for analytical units 73 (in part), 74, 75, and 78. Based on the consent decree schedule, TMDLs for these analytical units must be approved or established by U.S. EPA by March 24, 2012.

SOURCES

Pollutant loading to the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters from urban runoff and stormwater, historic discharges, including from what is now a Superfund site, and harbor activities has impaired water, sediment, and fish in areas of the

¹ Greater Los Angeles and Long Beach Waters include Inner and Outer Harbor, Consolidated Slip, Fish Harbor, Cabrillo Marina, Inner Cabrillo Beach, Los Angeles River Estuary, and San Pedro Bay.

harbors, estuaries, and upstream channels that drain to the harbors. PCBs, DDT, dieldrin, and chlordane are mostly legacy pollutants and they remain present in the environment bound to fine-grained particles. Because they are subject to environmental decay, their concentrations are gradually decreasing over time. However, when these particles become waterborne, the chemicals are ferried to new locations. In addition, urban runoff and rainfall higher in the watersheds re-suspend and mobilize the particles, which are then washed into storm drains and channels that discharge to the Dominguez Channel and Greater Harbor Waters. Metals and PAHs are currently generated or deposited in the watersheds and are then washed into storm drains and channels that discharge to the Dominguez Channel and Greater Harbor Waters.

There are several categories of pollutant sources to the waters of concern in these TMDLs. Point sources include stormwater and urban runoff (MS4) and other NPDES-regulated discharges, including but not limited to Port operations, Terminal Island Water Reclamation Plant (TIWRP), refineries, and generating plants. Nonpoint sources include existing contaminated sediments and direct (air) deposition.

TARGETS

Applicable water quality objectives for this TMDL are narrative objectives for Chemical Constituents, Bioaccumulation, Pesticides, and Toxicity in the Basin Plan and the numeric water quality criteria promulgated in 40 CFR section 131.38 (the California Toxics Rule (CTR)). In addition, sediment condition objectives were determined using the State Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (SQO Part 1) and sediment quality guidelines.

Water targets were determined by the Basin Plan and the California Toxics Rule (CTR). Site-specific conversion factors were developed to convert CTR acute dissolved metal criteria to total recoverable metals using *The Metals Translator Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion* EPA 823-B-96-007.

This TMDL also establishes a numeric toxicity target of 1.0 toxicity unit, chronic (1.0 TUc) to address toxicity. Targets based on new toxicity objectives that achieve the narrative Toxicity objective of Chapter 3 of the Basin Plan may substitute for the TUc of 1, when those new objectives are adopted by the State Water Board.

Sediment targets were determined by the narrative standards of the Basin Plan, the SQO Part 1, and the sediment quality guidelines of Long et al. (1998) and MacDonald et al. (2000), which are recommended by the State Listing Policy. The freshwater sediment numeric targets for Dominguez Channel are based on the freshwater Threshold Effect Concentration (TEC) sediment guidelines compiled by the National Oceanic and Atmospheric Administration (NOAA) in the Screening Quick Reference Tables (SQiRTs). The marine sediment quality guidelines of Effect Range Low (ERL), also from NOAA SQiRTs, were used to establish the numeric targets for marine sediment for the Greater Los Angeles and Long Beach Harbor Waters. These TECs and ERLs are set as the sediment quality thresholds for the calculation of loading capacity and allocations. This TMDL anticipates that revisions to specific sediment quality targets may be determined by development of site-specific sediment quality values (SQV).

These sediment targets are not intended to be used as 'clean-up standards' for navigational, capital or maintenance dredging or capping activities; rather, they are long-term sediment concentrations that should be attained after reduction of external loads, targeted actions addressing internal reservoirs of contaminants, and environmental decay of contaminants in

sediment. In addition, the categories designated in the SQO Part 1 as **Unimpacted** and **Likely Unimpacted** by the interpretation and integration of multiple lines of evidence shall be considered as the protective narrative objective for sediment toxicity and benthic community effects. The thresholds established in the SQO Part 1 are based on statistical significance and magnitude of the effect. Therefore, this TMDL implicitly includes sediment toxicity and benthic community targets by its use of the SQO Part 1.

Fish tissue targets were determined from *Fish Contaminant Goals and Advisory Tissue Levels for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene*, developed by OEHHA (2008) to assist agencies in developing fish tissue-based criteria for pollution mitigation or elimination and to protect humans from consumption of contaminated fish. Associated sediment targets required to achieve the fish tissue targets were determined from several sources depending on the contaminant.

INTERIM ALLOCATIONS

Interim allocations are based on current conditions.

In the freshwater portion of Dominguez Channel, a toxicity interim allocation of 2 TUc applies to each source, including all point sources assigned a WLA and all nonpoint sources assigned a LA. The freshwater toxicity interim allocation is set at 2 TUc based on current monitoring results performed by the Los Angeles County Department of Public Works.

Freshwater metals interim allocations are assigned to stormwater dischargers (MS4, Caltrans, general construction and general industrial stormwater dischargers) and other NPDES-regulated dischargers. Interim water allocations are based on the 95th percentile of total metals data collected from January 2006 to January 2010 using a log-normal distribution.

In the Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters, interim sediment allocations are assigned to stormwater dischargers (MS4, Caltrans, general construction and general industrial stormwater dischargers) and other NPDES-regulated dischargers based on the 95th percentile of sediment data collected from 1998-2006.

FINAL ALLOCATIONS

- In the freshwater portion of Dominguez Channel:
 - A final allocation of 1 TUc, or its equivalent based on an adopted Statewide Policy for Toxicity Assessment and Control, applies to each source, including all point sources assigned a WLA and all nonpoint sources assigned a LA.
 - A final allocation for metals applies in wet weather. Dominguez Channel freshwater allocations are set for wet weather only because exceedances have only been observed in wet weather. A mass-based LA has been developed for direct atmospheric deposition. Concentration-based WLAs are assigned for the other point sources including, but not limited to, General Construction, General Industrial, Power Generating Stations, minor permits and irregular dischargers, and other NPDES-regulated dischargers.

- In the Torrance Lateral (tributary to Dominguez Channel):

Mass-based sediment allocations are assigned to the ExxonMobil Torrance Refinery. Sediment WLAs are assigned to all other dischargers to Torrance Lateral equal to the concentration-based sediment targets.

- In the Dominguez Channel Estuary and Greater Harbor Waters:

- A final allocation of 1 TUc, or its equivalent based on an adopted Statewide Policy for Toxicity Assessment and Control, applies to each source, including all point sources assigned a WLA and all nonpoint sources assigned a LA.

- Final allocations apply for Metals and PAHs (non-bioaccumulative compounds).

Mass-based WLAs for metals and PAHs are assigned to the Terminal Island Water Reclamation Plant (TIWRP) (based on current discharge volume) and other point sources that have sufficient discharge flow data. MS4 discharges, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a mass-based allocation. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits.

Load Allocations are assigned to existing sediments and direct air deposition. The bed sediment LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission.

Final allocations for cadmium, chromium and mercury in the sediment in the Dominguez Channel Estuary, Consolidated Slip and Fish Harbor are concentration-based.

- Final allocations apply for DDT and PCBs (bioaccumulative compounds).

Mass-based WLAs for DDTs and PCBs are assigned to the Terminal Island Water Reclamation Plant (TIWRP) (based on current discharge volume) and other point sources that have sufficient discharge flow data. Municipal stormwater sources, including the Los Angeles, Long Beach, Caltrans and other MS4 co-permittees, are assigned a mass-based allocation. Discharges from the Port of Los Angeles (POLA) and Port of Long Beach (POLB) are grouped with the MS4 dischargers. Mass-based WLAs are applied as annual limits.

Load Allocations are assigned to existing sediments and direct air deposition. The bed sediment LA is assigned to the City of Los Angeles (including the Port of Los Angeles), the City of Long Beach (including the Port of Long Beach) and the State Lands Commission.

Fish tissue levels of certain bioaccumulative compounds are above desired numeric targets. These allocations are designed to reduce contaminated sediment levels, which will result in lower corresponding pollutant levels in fish tissue. These sediment allocations have been derived to support lowering fish tissue levels using biota-sediment accumulation factors (BSAFs) or ERLs, whichever is more protective.

For chlordane and dieldrin, the ERL values are lower and more protective than BSAF values. The DDT sediment values are comparable (ERL = 1.58, BSAF = 1.9); the more stringent one was used for the calculation. The PCBs sediment value associated with fish tissue is more stringent than the ERL sediment value for PCBs.

In addition, bed sediment concentration-based allocations are assigned for chlordane in Dominguez Channel Estuary, Consolidated Slip, Fish Harbor, Los Angeles River Estuary and Eastern San Pedro Bay. Bed sediment concentration-based allocations are also assigned for dieldrin in Dominguez Channel Estuary and Consolidated Slip. Bed sediment concentration allocations are also assigned for toxaphene in Consolidated Slip.

- Concentration-based allocations apply for non-MS4 point sources such as General Construction, General Industrial, individual industrial permittees, including power generating stations, minor permits and irregular dischargers into Dominguez Channel Estuary and Greater Harbor Waters. Any future minor NPDES permits or enrollees under a general NPDES permit are also assigned the concentration-based WLAs.

COMPLIANCE

Compliance with the TMDL for metals and PAHs is based on achieving the load and waste load allocations or demonstrating attainment of the sediment quality objectives (SQO Part 1). Compliance with the TMDLs for bioaccumulative compounds is based on achieving the load and waste load allocations or, alternatively, by meeting fish tissue targets.

Compliance with freshwater metals allocations for Dominguez Channel and Torrance Lateral may be demonstrated via any one of three different means:

- a. Final allocations are met.
- b. CTR total metals criteria are met instream.
- c. CTR total metals criteria are met in the discharge.

Compliance with sediment TMDLs for Cu, Pb, Zn, Cd, Cr, Hg and total PAHs in Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters may be demonstrated via any one of three different means:

- a. Final sediment allocations, as presented above, are met.
- b. The qualitative sediment condition of Unimpacted or Likely Unimpacted via the interpretation and integration of multiple lines of evidence as defined in the SQO Part 1, is met, with the exception of Cr, which is not included in the SQO Part 1.
- c. Sediment numeric targets are met in bed sediments over a three-year averaging period.

Compliance with the sediment TMDLs for the bioaccumulative DDT and PCBs may be demonstrated via any of four different means:

- a. Fish tissue targets are met in species resident to the TMDL waterbodies.
- b. Final sediment allocations, as presented above, are met.
- c. Sediment numeric targets to protect fish tissue are met in bed sediments over a three-year averaging period.

- d. Demonstrate that the sediment quality condition protective of fish tissue is achieved per the Statewide Enclosed Bays and Estuaries Plan, as amended to address contaminants in resident finfish and wildlife.

MONITORING AND IMPLEMENTATION

Implementation will require the elimination of toxic pollutants being loaded into Dominguez Channel and the Harbors, and cleanup of “hot spots,” contaminated sediments lying at the bottom of Greater Los Angeles and Long Beach Harbors. Dischargers and responsible parties may implement structural and or non-structural BMPs and work collaboratively to achieve the numeric targets and allocations.

The TMDL requires all WLA and LAs to be achieved in 20 years after the effective date of the TMDL.

Monitoring and implementation of the TMDL by assigned responsible parties is required in three waterbody areas:

1. Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary
2. Greater Los Angeles and Long Beach Harbor Waters (including Consolidated Slip)
3. Los Angeles River and San Gabriel River

Implementation processes for this TMDL include:

1. Implement and evaluate effectiveness of best management practices (BMPs) and source control in conjunction with remediation actions to remove contaminated sediment as necessary;
2. Evaluate effectiveness of controlling sediment loading from Los Angeles River, San Gabriel River, and Machado Lake through implementation of effective TMDLs for those waterbodies;
3. Conduct monitoring to evaluate compliance with targets during implementation and after implementation actions are in place.
4. Determine if further reductions in loadings from the Los Angeles River and San Gabriel River will be required and, if so, address these through revision of the TMDLs, as necessary.
5. Re-evaluate the WLAs and LAs, if necessary.

Actions to achieve WLA and LAs may be implemented in phases with information from each phase being used to inform the implementation of the next phase.

EVALUATION

Over the course of TMDL implementation, the TMDL may be reconsidered to incorporate new information from special studies and new State Water Board policies.

POLICY ISSUE

Should the State Water Board approve the amendment to the Basin Plan to incorporate a TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters as adopted by Los Angeles Water Board Resolution No. R11-008?

FISCAL IMPACT

Los Angeles Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

REGIONAL BOARD IMPACT

Approval of Los Angeles Water Board Resolution No. R11-008 will amend the Los Angeles Water Board's Basin Plan.

STAFF RECOMMENDATION

That the State Water Board:

1. Approves the amendment to the Basin Plan as adopted under Los Angeles Water Board Resolution No. R11-008.
2. Authorizes and Directs the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. R11-008 to Office of Administrative Law for approval of the regulatory provisions and to U.S. EPA for approval of the TMDL.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030. In particular, approval of this item will assist in fulfilling Action 1 to prepare, adopt, and take steps to carry out TMDLs, designed to meet water quality standards, for all impaired water bodies on the 2006 list.

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STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO. 2011-

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO INCORPORATE A TOTAL MAXIMUM DAILY LOAD FOR TOXIC POLLUTANTS IN DOMINGUEZ CHANNEL AND GREATER LOS ANGELES AND LONG BEACH HARBOR WATERS

WHEREAS:

1. On May 5, 2011, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted [Resolution No. R11-008](#), an amendment to the Water Quality Control Plan for the Los Angeles Region (Basin Plan amendment), to incorporate a total maximum daily load (TMDL) for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.
2. The Los Angeles Water Board found that the analysis contained in the California Environmental Quality Act (CEQA) substitute environmental documentation for the proposed Basin Plan amendment, including the CEQA Checklist, the Final Staff Report, entitled "Dominguez Channel and Greater Los Angeles and Long Beach Harbor Water Toxic Pollutants TMDL," and the responses to comments prepared by Los Angeles Water Board staff, complies with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3775 et seq. The State Board has reviewed the substitute environmental documentation for the Basin Plan amendment and concurs with the Los Angeles Water Board's findings and determinations, including the Statement of Overriding Considerations.
3. The Los Angeles Water Board also adopted the Basin Plan amendment pursuant to the "Necessity" standard of the Administrative Procedures Act, Government Code section 11353, subdivision (b)(2)(C).
4. The Los Angeles Water Board found that adoption of this Basin Plan amendment is consistent with the Statement of Policy with Respect to Maintaining High Quality Waters in California ([State Water Board Resolution No. 68-16](#)) and Federal Antidegradation Policy (40 CFR § 131.12), in that it does not allow degradation of water quality, but requires restoration of water quality and attainment of water quality standards.
5. The State Water Board found that the Basin Plan amendment conforms with Water Code section 13240, which specifies that Regional Water Quality Control Boards may revise Basin Plans, and with section 13242, which requires a program of implementation for achieving water quality objectives. The State Water Board also finds that the TMDL, as reflected in the Basin Plan amendment, is consistent with the requirements of federal Clean Water Act section 303(d).
6. A Basin Plan amendment does not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDL must also be approved by the U.S. Environmental Protection Agency (U.S. EPA).

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THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the [Basin Plan amendment](#) as adopted under Los Angeles Water Board Resolution No. R11-008.
2. Authorizes and directs the Executive Director or designee to submit the Basin Plan amendment adopted under Los Angeles Water Board Resolution No. R11-008 to OAL for approval of the regulatory provisions and to U.S. EPA for approval of the TMDL.

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 December 6, 2011.

Jeanine Townsend
Clerk to the Board