

Department of Water and Power



the City of Los Angeles

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October 28, 2011

Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
P.O. Box 100, Sacramento, CA 95812-2000  
1001 I Street, 24th Floor, Sacramento, CA 95814



Dear Ms. Townsend:

Subject: Comment letter –Dominguez Channel and Greater Los Angeles and  
Long Beach Harbor Waters Toxic Pollutants Total Maximum Daily  
Loads

Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to comment on the proposed Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxicity Pollutants Total Maximum Daily Loads. LADWP is committed to being environmentally responsible. Thus, LADWP believes that the impairments to the affected waterbodies need to be addressed properly in order to protect all beneficial uses of the area; however, LADWP has concerns, which are detailed below, with the Los Angeles Regional Board's (RWQCB) Response to Comments (RTC).

**1. Stormwater Wasteload Allocations, RTC 23.2**

Pages 12 and 13 of the Basin Plan Amendment (BPA) have concentration-based WLAs for General Construction and General Industrial Stormwater permits (as well as generating stations). For the stormwater permits, stormwater regulations compliance should be measured by the installation of Best Management Practices (BMPs). In the Response to Comments, the RWQCB stated that they disagreed, but did not provide a reason for the disagreement.

**Recommendation:**

The BPA should clarify that compliance for stormwater requirements should be expressed as BMP implementation for construction and industrial stormwater permits, as long as estimates for BMP performance in total provide a reasonable assurance that concentration targets or sediment quality objectives may be achieved to the maximum extent practicable.

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The BPA should also specify the maximum design storm that dischargers should use in planning BMPs for reduction of pollutants.

Furthermore, the RWQCB seems to be requiring permit writers to implement concentration-based effluent limitations in stormwater permits. Implementation of the Best Management Practices (BMPs) consistent with the stormwater management program and the Minimum Control Measures outlined in 40 CFR 132.34 is considered to constitute compliance with the standard of compliance, maximum extent practicable or MEP. To achieve reductions in stormwater discharges, EPA regulations establish six categories of Minimum Control Measures BMPs that must be met by permittees (these are "narrative" permit effluent limitations). The six BMP categories, also called "minimum control measures" in the Federal regulations, are: 1. Public education and outreach on stormwater impacts 2. Public involvement /participation consistent with state/local requirements in the development of a stormwater management plan. 3. Illicit discharge detection and elimination, including mapping of the existing stormwater sewer system (including at least the outfalls) and adoption of an ordinance to prohibit illicit connections and control erosion and sedimentation from development. 4. Control of runoff from construction sites when one to five acres of land are disturbed. (Phase I covered sites larger than five acres.) 5. Post-construction stormwater monitoring and management in new development and redevelopment, and 6. Pollution prevention and good housekeeping for municipal operations and maintenance facilities Under Phase II, permittees are also required to establish measurable goals for each BMP. EPA has developed a National Menu of BMPs available for meeting the minimum control measures. Information can be found on EPA's website at:  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm>.

**2. Use of Effects Range Low Values are Inappropriate as TMDL Targets, RTC 23.3**

LADWP commented that Effects Range Low values (ERLs) are not appropriate and also unreliable for evaluating waterbody toxicity.

**The Response to Comments refers the reader to RTC 20.1**, which states that "the toxicity predictive ability of ERLs has been tested in the field and when several ERLs are exceeded, the predictive ability is greater. The targets do not estimate current conditions in the Harbors but represent the target chemical conditions. Because this TMDL also allows compliance to be demonstrated using the triad [from the Sediment Quality Objectives or SQOs], healthy sediments in the Harbors considered to be in compliance even if the ERL target is exceeded."

The Response to Comments further explains: “The Effects Range Low (ERL) values represent the levels below which adverse biological effects are not expected to occur, and therefore are the appropriate threshold for ensuring that aquatic life beneficial uses are fully supported and that impairment is eliminated. The use of ERLs...is consistent with previously adopted TMDLs in the Los Angeles Region...”

“In the absence of full triad data which includes the assessment of toxicity and benthic communities, the ERLs are a protective predictor of toxic effects in sediment...”

**LADWP disagrees with the RWQCB’s response.**

For sediment toxicity, the WLAs given are based on Effects Range Low (ERLs) and Threshold Effects Concentrations (TECs) rather than quantities based on the triad approach specified by the California Sediment Quality Objectives. ERLs appear to be unreliable or unreasonably over-protective values to be used for WLAs. For this reason, the State required Sediment Quality Objectives to be developed<sup>1</sup>. As noted on page 7 of the SQO Policy,

*“None of the individual LOE [line of evidence] is sufficiently reliable when used alone to assess sediment quality impacts due to toxic pollutants. Within a given site, the LOEs applied to assess exposure as described in Section V.A. may underestimate or overestimate the risk to benthic communities and do not indicate causality of specific chemicals. The LOEs applied to assess biological effects can respond to stresses associated with natural or physical factors, such as sediment grain size, physical disturbance, or organic enrichment. Each LOE produces specific information that, when integrated with the other LOEs, provides a more confident assessment of sediment quality relative to the narrative objective. When the exposure and effects tools are integrated, the approach can quantify protection through effects measures and also provide predictive capability through the exposure assessment.”*

The impairment assessment of the proposed draft BPA did not utilize the SQO Policy (nor did it use ERLs but instead Effects Range Medians or ERMs), and cannot be considered to have been done using best available science. In addition, the failure to perform stressor identification, as required by the SQO Policy, means that there is no information to support the assumption of the Draft BPA that the pollutants for which targets are included in the Draft BPA are responsible for sediment impairment. Perhaps more importantly, stressor identification would be necessary to identify additional

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<sup>1</sup> State Water Resources Control Board, 2009. *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality*

pollutants (e.g., pyrethroids) that are more likely to cause impairment than the pollutants regulated by the Draft BPA.

Sediment Quality Guidelines such as ERLs and ERMs were developed for use only as screening tools and were not intended for use as regulatory standards or endpoints (as they are proposed to be used in the TMDL). The SWRCB explicitly considered and rejected the continued use of Sediment Quality Guidelines as a CEQA alternative when it adopted the SQO Policy. The SWRCB Staff Report for the SQO Policy presented citations for a number of scientific research articles, and utilized the input of a highly qualified Scientific Steering Committee and peer reviewers, in evaluating and rejecting the use of Sediment Quality Guidelines like ERLs for future use within the State (see, for example, SQO Policy Staff report, September 16, 2008, at p. 5-22). Documents produced during the SQO Policy development process and included in that record indicate that even Dr. Ed Long, the original author of ERLs and ERMs and a member of the Scientific Steering Committee for the State Water Board SQO Policy, rejected their use as regulatory endpoints.

By contrast, the RWQCB, in its response to comments, has not provided a citation to support its assertions that “the toxicity predictive ability of ERLs has been tested in the field” or that ERLs are “protective predictors.

**Recommendation:**

RWQCB should work with dischargers and/or interested parties to gather data and develop a method to express WLAs using a triad approach instead of inappropriate sediment quality guidelines (such as ERLs and ERMs), as well as gather data necessary to support de-listing of the sediment.

**3. Other Potential Sources of Toxicity, RTC 23.4**

Pyrethroids have recently been cited as being significant sources of toxicity in regional waters. A recent study<sup>2</sup> of Ballona Creek Estuary indicated that concentrations of TMDL listed compounds often exceeded target levels, but there was a poor correlation between these concentrations and toxicity. Furthermore, analysis of sediments and pore water found that pyrethroid pesticides were the likely primary source of toxicity within the estuary. Comparison of these pesticides' toxicity thresholds to chemical analysis results confirmed that sufficient pyrethroids were present in the estuary sediments to cause toxicity. The Harbor TMDL, as noted in RTC 23.3, may require controls and sediment dredging that is not necessary (i.e., that addresses pollutants that are not responsible for impairment) while failing to regulate pollutants that are more likely to be responsible for impairments. It

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<sup>2</sup> Bay, Steven, Darrin J. Greenstein, Keith A. Maruya and Wenjian Lao, 2010. *Toxicity Identification Evaluation of Sediment (Sediment TIE) in Ballona Creek Estuary, Final Report*

would be helpful to all stakeholders to resolve these issues before adopting the TMDL, because addressing the most appropriate pollutants would help conserve resources in these difficult economic times.

**Recommendation:**

The WLAs for sediment toxicity should be reexamined to verify the major source(s) of toxicity within the Dominguez Channel, Los Angeles Harbor, and Long Beach Harbor regions covered by the TMDL document.

**4. Existing USEPA-Approved Variances, RTC 23.5**

Page 4 of the BPA for this TMDL (also Page 44 of the Staff Report) states that the numeric toxicity target of 1 TUc is established for the TMDL (freshwater). However, for some NPDES permits variances for best Available Technology Economically Achievable (BAT) for total residual chlorine and toxicity are allowed pursuant to Clean Water Act Section 301(g). These variances should not be superseded by the WLAs and TMDL targets in the BPA.

The Regional Board's response was that variances should be considered on a site-specific basis, and also that variances should be explored on a site-specific, chemical specific basis, not as part of a watershed wide pollutant budget.

**Recommendation:**

In its adopting resolution, RWQCB should clarify that existing EPA-approved variances are allowed for qualified dischargers.

**5. Using Modeling to Calculate WLAs and LAs, RTC 23.6a(i) – 23.6a(iv)**

LADWP noted in its comments that the allocations that were calculated (from the model results) did not consider through-Harbor flux of sediment, as indicated in the response to Comment 23.6a(iv). For this reason, it is not clear what the load and waste load allocations actually represent—or how they might be implemented in permits. It is also unclear how the fraction of load from any given source that settles to the Harbor sediments was calculated or estimated. It appears that it is incorrect to apply the WLAs and LAs as permit limits, since these allocations are only for the small fraction of sediment and pollutant discharged that settles to the Harbor floor.

The RWQCB disagreed in its response, stating that the model did, in fact, allow for the through-Harbor flux. However, LADWP believes that although the modeling included through-harbor flux, this same flux was neglected when Load and Wasteload Allocations were calculated.

Recommendation:

The RWQCB should not only ensure that the modeling incorporates sediment flux out of the Harbor, but the Load and Wasteload Allocation calculations should also incorporate the flux. LADWP requests that the TMDL allocations be revised to include an allowance for sediment and associated pollutants that flow out of the harbor.

**6. DDTs and PCBs in Sediment, RTC 23.6b**

LADWP commented that Pollutant concentrations for DDT and PCBs on sediments transported by tributary streams were assumed to be equivalent to pollutant concentrations on sediments in the top 5 cm of the sediment layer in the receiving water bodies. The modeling also assumed that all pollutants in the top-most sediment layers resulted from the recent deposition of sediments from streams and near-shore watersheds. This assumption is contradicted by the fact that most measurements of these pollutants in tributary streams are present below detection levels.

In the RWQCB's response, the RWQCB stated "While certain pollutants may be non-detectable in water, detectable concentrations are observed on sediment. The TMDL incorporates the sediment associated loads of the DDT and PCBs based on the best available data.

**LADWP disagrees.**

The LADWP has not seen data that would support this theory. As shown in figures within the Staff Report and its appendices, simulated concentrations of DDT and PCBs are well above detection limits, such that if the theorized concentrations of pollutants were actually present in inflows, they should have been detected. However, concentrations in samples collected from inflowing streams are below detection limits. There is no evidence that pollutant concentrations on sediment particles in rivers and streams entering the Harbor are anywhere near the levels assigned to them within the model.

Recommendation:

The RWQCB should provide data that shows that higher pollutant concentrations on sediments washing into the Greater Harbor actually exist.

**7. Higher Concentrations of Pollutant at Greater Depth in Sediment, RTC 23.6c**

LADWP expressed concern that concentrations of pollutants in bedded sediments were assumed to be uniform with depth. This assumption is also unrealistic, particularly for legacy pollutants such as DDT, which was banned in 1972. This assumption has two important implications: (1) At least some, if not most, of the pollutant mass present in the surface sediment layers within the Harbor is likely the result of historic legacy discharges, and transport of pollutants from deeper sediment layers to the surface by processes such as

porewater diffusion and bioturbation. Neglecting these processes results in a conservative generalization that overestimates the pollutant load delivered by tributary streams and watersheds. (2) Higher pollutant concentrations at depth may be disturbed and exposed by remedial activities such as dredging.

The RWQCB's response was that the best available data was used, and that core sampling would be done before any dredging.

**LADWP believes that the best available data was insufficient for TMDL calculations.**

The assumption that pollutant concentrations within the sediment bed are uniform is an oversimplification and appears to be unsupported by any data. The higher pollutant concentrations at depth within the sediment may materially affect surface concentrations and remediation methods, depths, and extent, and the Regional Board's economic and CEQA analyses. Also, surface concentrations of pollutants within the Harbor are almost certainly the result of historic discharges of higher concentrations of pollutants, not the result of current-day inflows. The RWQCB's response has not addressed these points.

The RWQCB's claim that sediment core sampling can be deferred until consideration of remediation activities (such as dredging) misses the point that information about the distribution of contaminants in the sediment will have significant implications for the modeling results used to establish the TMDLs.

**Recommendation:**

The RWQCB should address the pollutant concentrations at various depths and their relation to historic discharges and modeling results.

**8. Insufficient Wet Season Modeling Data, RTC 23.6d**

The RWQCB failed to evaluate wet season conditions in detail. The RWQCB's response was that modeling was based on best available data and can be refined with new data in the future.

**LADWP's response**

The wet weather loads are, in the modeling, responsible for the vast majority of pollutants in inflows to the Harbor, yet the Regional Board has no data upon which to evaluate these loads or the model's representation of these loads. For this reason, the results of the modeling for wet weather needs more statistical support, not because the Regional Board relied upon "best available data" but because sufficient data was not available to support the modeling and TMDL development.

Recommendation:

Since the largest amounts of pollutants are believed to be deposited during wet weather, the TMDL should be remanded to the RWQCB until appropriate data have been collected and modeling with the new data is completed. Alternatively, compliance with TMDL Load and Wasteload Allocations should be delayed until further wet weather sampling and modeling have been completed and the TMDL reconsidered.

**9. Air Deposition Alone Exceeds the TMDLs for Some Pollutants, RTC 23.8**

LADWP commented that atmospheric deposition alone exceeds the TMDL. Regional Board's response was that air deposition estimates were based on measurements from 2006. "...however, staff does not find that this will require constant remediation of bed sediments. Rather a more extensive DDT flux study within these waters will help clarify these results and perhaps provide more accurate characterization. The Implementation Plan includes recommendation for such a study within the first five years of implementation."

Recommendation:

The RWQCB provides no support for the assertion that constant remediation will not be required by a source that contributes more than the loading capacity for the waterbody. If the RWQCB believes this to be true—for example, if it believes that the assumed aerial deposition fluxes are too large, or that not all of the material that enters the waters of the Harbor from the atmosphere will be deposited to the sediments—then the modeling and allocations of the TMDL should be revised and adjusted to reflect these beliefs, and the beliefs themselves should be clearly stated in the TMDL and supported by data or evidence.

**10. Economic Impacts, RTC 23.9**

LADWP commented that economic and environmental impacts were underestimated. RWQCB's response is that they probably actually overestimated costs, and actual costs are likely to be lower than they indicated. RWQCB relies upon a memorandum presented by the Ports' consultants for these calculations.

**LADWP is concerned regarding the RWQCB analysis.**

LADWP notes that the TMDL targets and allocations are based on ERLs, and these would be the legally applicable requirements if the TMDL becomes effective; However the RWQCB's cost estimates are based not on compliance to ERL targets, but rather on dredge volumes based on SQO Policy.

Furthermore, the TMDL appears to indicate that continuous dredging will be required based on aerial deposition alone (see 23.8), so that it's very unclear



that the RWQCB's cost or environmental evaluations are tied to the TMDL that the RWQCB has adopted.

**Recommendation:**

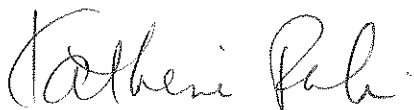
The RWQCB should revise the compliance costs based on compliance with ERLs for all associated subwatersheds.

**Conclusion and Recommendation:**

In conclusion, LADWP believes that the the TMDL as written contains sufficient deficiencies that warrant significant reanalysis and revision.

If there are any questions, please contact Mr. Clayton Yoshida of the Wastewater Quality and Compliance Group at (213) 367-4651.

Sincerely,



Katherine Rubin  
Manager, Wastewater Quality and Compliance Group

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Submitted by email to [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

c: Ms. Thanhloan Nguyen/Los Angeles RWQCB  
Mr. Clayton Yoshida