



January 15, 2014

Mr. Samuel Unger, Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

Via email: [Samuel.unger@waterboards.ca.gov](mailto:Samuel.unger@waterboards.ca.gov); [Shana.Rapoport@waterboards.ca.gov](mailto:Shana.Rapoport@waterboards.ca.gov);  
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**RE: Proposed Amendment to the Los Angeles Regional Basin Plan to revise the Total Maximum Daily Loads for Marina del Rey Harbor Toxic Pollutants**

Dear Mr. Unger,

On behalf of Los Angeles Waterkeeper (“Waterkeeper”) and Heal the Bay, we submit the following comments to the Los Angeles Water Quality Control Board (“Regional Board”) on the proposed amendments to the Water Quality Control Plan - Los Angeles Region (Basin Plan) to revise the Marina del Rey Harbor Toxic Pollutants Total Maximum Daily Load (“Draft Toxics TMDL”). We support many of the proposed revisions of the Draft Toxics TMDL, specifically the expansion of the geographic reach of the TMDL, the inclusion of dissolved copper and in-harbor sediment load allocations and the requirements to replace copper-based boat hull paints. Our major concerns with the Draft Toxics TMDL are the extension of interim and final compliance deadlines, the proposed alternative compliance demonstration, as well as some of the technical calculations of the waste load allocations.

Chlordane, copper, lead, zinc, PCBs, DDT, and sediment toxicity negatively affect the beneficial uses of water contact recreation (REC 1), marine habitat (MAR), wildlife habitat (WILD), commercial and sport fishing (COMM), and shellfish harvesting (SHELL) in Marina del Rey Harbor (“MDR Harbor” or “Marina”). In 2009, the MDR Harbor was found to be the most toxic marina in California.<sup>1</sup> Activities involving human contact with during boating or other recreational activities in the MDR Harbor waters or ingesting seafood originating from these waters is potentially harmful. Additionally, many of the species impacted by these impairments support food chains for birds, fish and wildlife that residents of the Marina, boaters, fishers, and visitors enjoy. Polluted water decreases overall use of the Harbor, with economic impacts to recreational businesses, shopping venues, and nearby hospitality businesses; thus, improving water quality throughout the MDR Harbor will yield numerous economic benefits. The Marina del Rey Harbor Toxics TMDL is critical for marine life and the Los Angeles community that relies on its myriad of beneficial uses. For this reason, Waterkeeper and Heal the Bay urge the Regional Board to revise the Draft Toxics TMDL to address our comments below.

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<sup>1</sup> Singhasemanon, N., Pyatt, E. and Bacey, J. 2009. MONITORING FOR INDICATORS OF ANTIFOULING PAINT POLLUTION IN CALIFORNIA MARINAS. Report of the Department of Pesticide Regulation, California Environmental Protection Agency.



## **1. The Draft Toxics TMDL Appropriately Expands the Geographic Extent of the TMDL and Includes WLAs and LAs for DDT.**

Studies carried out since the 2005 adoption of the Marina del Rey Harbor Toxics TMDL, namely the Marina del Rey Toxics TMDL Coordinated Monitoring Plan, Bight 2008 Study, and the Sediment Characterization Study, indicate water column and sediment impairment throughout the Marina del Rey Harbor. Data collected indicates impairments are not solely confined to the back basins (Basins D, E, and F) or hotspots as previously perceived, but also extend to the front basins (Basins A, B, C, G, and H). Sediment samples for copper, zinc, chlordane, DDT, and PCBs in the front basin meet or exceed the minimum number of sampling exceedances required to be placed on the Clean Water Act Section 303(d) list for impaired waterbodies.

Based on the data analysis demonstrating additional impairments in the front basins, we support the Regional Board in extending the geographic area of the Marina del Rey Harbor Toxics TMDL for metal and organic constituents in sediments. Moreover, we support the addition of Waste Load Allocations (“WLAs”) and Load Allocations (“LAs”) for DDT in the Draft Toxic TMDL.

## **2. The Draft TMDL Appropriately Includes LAs for Dissolved Copper.**

Waterkeeper and Heal the Bay support the inclusion of a dissolved copper LAs in the Draft Toxic TMDL, as its inclusion is necessary to protect beneficial uses of the MDR Harbor. The Toxicant Identification Evaluation (TIE) study concluded that copper is the most significant cause of toxicity in the Marina. Elevated dissolved copper levels affect growth, development, feeding, reproduction, mobility, and survival at various life stages of mussels, oysters, scallops, crustaceans and sea urchins.<sup>2</sup> Elevated dissolved copper also changes the types of phytoplankton that thrive in boat basins, which can have effects throughout the food web.<sup>3</sup> Dissolved copper also affects fish in general, negatively impacting fish gills, kidneys, tissues and sensory receptors function.<sup>4</sup> Due to its well-known impacts, copper is a priority pollutant in the California Toxics

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<sup>2</sup> United States Environmental Protection Agency. 2000. 40 CFR Part 131. Water Quality Standards; Establishment Of Numeric Criteria For Priority Toxic Pollutants for the State of California Rule. Federal Register May 1, 2000.

<sup>3</sup> See Fitzpatrick JL, Nadella S, Bucking C, Balshine S, Wood CM. 2008. The relative sensitivity of sperm, eggs and embryos to copper in the blue mussel (*Mytilus trossulus*). *Comparative Biochemistry and Physiology C-Toxicology & Pharmacology* 147(4):441-449; Katz, C. 1998. Seawater Polynuclear Aromatic Hydrocarbons and Copper in San Diego Bay. Technical Report 1768. Space and Naval Systems Center (SPAWAR). San Diego, CA; Kime, D.E. 1995. The effects of pollution on reproduction in fish. *Reviews in Fish Biology and Fisheries* 5:52-96; Krett Lane, S. M. 1980. Productivity and Diversity of Phytoplankton in Relation to Copper in San Diego Bay. Technical Report 533. Naval Oceans Systems Center; Lee, H. H. and C. H. Xu. 1984. Effects of Metals on Sea Urchin Development: A Rapid Bioassay. *Marine Pollution Bulletin* 15:18-21; Martin, M., K.E. Osborn, P. Billig, and N. Glickstein. 1981. Toxicities of Ten Metals to *Crassostrea gigas* and *Mytilus edulis* Embryos and Cancer magister Larvae. *Marine Pollution Bulletin* 12:305-308

<sup>4</sup> Hall LW, Scott MC, Killen WD. 1998. Ecological risk assessment of copper and cadmium in surface waters of Chesapeake Bay watershed. *Environmental Toxicology and Chemistry* 17(6):1172-1189.



Rule, which establishes water quality criteria for the protection of aquatic life and human health.<sup>5</sup>

**3. The Compliance and Implementation Provisions of the Draft Toxics TMDL Should Be Revised and Strengthened.**

- a. The Alternative Compliance Mechanism for General Industrial, General Construction, MS4, and CalTrans Storm Water Permits Should Be Removed*

The Draft Toxics TMDL provides a new alternative compliance mechanism allowing dischargers to demonstrate compliance with WLAs by providing “quantitative demonstrations that control measures and best management practices will achieve” WLAs and Water Quality-Based Effluent Limits (“WQBELs”) consistent with the TMDL’s implementation schedule and implementing these BMPs and control measures subject to Executive Officer approval. This proposed alternative compliance mechanism is improper and unjustified and must be removed.

While both Heal the Bay and Waterkeeper are supportive of BMPs and storm water and non-storm water control measures as an important method for achieving compliance with WLAs, effluent limits and water quality standards, BMPs and other measures cannot be used as a measure for compliance with water quality standards, effluent limits and TMDLs. Providing quantitative demonstrations of BMP effectiveness and/or installation of Regional Board-approved BMPs do not ensure that TMDL WLAs and WQBELs are actually met and achieve compliance with water quality standards in the impaired waterbodies. Neither is the implementation of these BMPs and control measures in itself sufficient to show WQBELs and WLAs are met.

Importantly, the Regional Board fails to provide any evidence to support its decision to allow the alternative compliance demonstration with the Draft Toxics TMDL, let alone explain how any of the quantitative demonstrations for BMPs or measures to be implemented in the future will be sufficient to achieve WLAs or WQBELs. The alternative compliance demonstration mechanism provided in the Draft Toxics TMDL is therefore not supported by the findings and the evidence and violate state law. *See Topanga Ass’n for a Scenic Cmty.*, (1974) 11 Cal.3d 506, 515 (the administrative agency’s analysis must “bridge the analytic gap between the raw evidence and [the] ultimate decision or order”); *see also Zuniga v. Los Angeles County Civil Serv. Comm’n* (2006) 137 Cal.App.4th 1255, 1258 (abuse of discretion is established when the administrative order or decision is not supported by the findings or the findings are not supported by the evidence).

For these reasons, the alternative compliance demonstrations must be deleted from the Draft Toxics TMDL or, at a minimum, revised to require post BMP implementation monitoring, to verify compliance with WLAs and WQBELs before the final compliance date of the TMDL.<sup>6</sup>

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<sup>5</sup> Given the amplitude of evidence that Marina del Rey is impaired by copper, Waterkeeper and Heal the Bay believe that the Clean Water Act section 303(d) listing for Marina del Rey Harbor should be updated to include the copper impairment during the next listing cycle.

<sup>6</sup> The proposed monitoring to verify that necessary reductions in pollutant loading are achieved (*see* Draft Toxics TMDL at page 11) is a step in the right direction but the language should be revised to clearly state that the purpose of the monitoring is not just to confirm and adjust BMP performance but also demonstrate compliance with WQBELs and WLAs is achieved.



*b. Extension of Implementation Schedule for Stormwater Permittees Is Not Justified*

While, as discussed above, we support the expansion of the Draft Toxics TMDL to include Basins A, B, C, G, and H (front basin) of Marina del Rey Harbor, we do not believe it merits the extension of interim and final compliance points for permittees given eight years has already passed since the adoption of the original TMDL. The 2005 adopted TMDL established implementation schedules for stormwater permits in the back basins, thus it is inappropriate to extend back basin interim and final compliance deadlines as Permittees should have already been working to comply with these allocations. The previously adopted TMDL encouraged hotspot dredging be conducted to remove MDR Harbor contaminated sediments in the near term; this dredging was not performed over the last eight years. We are unsure if any projects have been implemented other than the Oxford Basin Enhancement Project. Have Permittees implemented projects over the last eight years to achieve compliance? This should be outlined in the staff report.

In any event, because Permittees have been aware of the implementation schedule and compliance deadlines of the TMDL since it was originally adopted in 2005, and should have been working on projects to comply with the TMDL limits, no extension of the final and interim deadline is justified and the original schedule should remain.

*c. Load Allocations for In-Harbor Sediments Should Be Implemented Through a Clean Up and Abatement Order*

The Draft Toxics TMDL proposes two methods of implementing the LAs for in-harbor sediments--through a Memorandum of Agreement (“MOA”) with the County of Los Angeles or a Clean Up and Abatement Order (“CAO”). We believe that the best approach is to issue a CAO pursuant to Section 13304 of the Water Code because, unlike an MOA, a CAO is enforceable by the Regional Board and is therefore the best mechanism to ensure the LAs are in fact met by the TMDL deadline.

*d. A Load Allocation for Dissolved Copper in the Water Column Should be Implemented Through a Waiver*

Given that data and modeling indicate leaching of antifouling copper paint from boats to be the leading source of copper to Marina del Rey Harbor waters<sup>7</sup>, we support the use of non-copper and non-toxic hull paints on all boats moored in Marina del Rey Harbor.

We do, however, ask the Regional Board to revise the TMDL to require that compliance with the LAs should be achieved by demonstrating that 100% of the boats in the Harbor are using non-copper hull paint instead of just 85% of the boats, as stated by the Draft TMDL now. Clearly, in light of the proven impacts of copper leaching from boat hulls on water quality and aquatic life, requiring 100% of the boats in the Marina del Rey Harbor to replace copper-based paints will result in significant improvement in the water quality of the Marina and ensure that the LAs are met by the March 22,

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<sup>7</sup> California Regional Water Quality Control Board of Los Angeles Region. November 5, 2013. Reconsideration of the Total Maximum Daily Load for Toxic Pollutants in Marina del Rey Harbor, Draft Report.



2024 deadline.<sup>8</sup> Finally, requiring the removal of copper-based paints from 100% of the boats in Marina del Rey, rather than just 85% of the boats, will result in a fair, consistent and easy administration of the TMDL provisions with respect to all boat owners in MDR Harbor. In order to ensure early implementation of the LAs, we recommend the Regional Board work with state and federal agencies to explore the possibility of grants to support individual boat owners, similar to that seen at Shelter Island Yacht Basin in San Diego and Newport Bay in Orange County (i.e. EPA 319(h) grant funds). Regional Board staff should also provide education and outreach to boaters regarding the requirements of the TMDL, alternative hull paints, and available grants/subsidies in an effort to prevent misinformation and streamline the Draft Toxics TMDL implementation process and compliance.

Additionally, to avoid a strain on staff resources associated with issuing individual Waste Discharge Requirements for anchorages and boaters owning boats moored in the Marina Del Rey Harbor, we support the use of a conditional waiver under Water Code Section 13269<sup>9</sup> to implement the LAs for dissolved copper applicable to these entities. Any conditional waiver should require a robust monitoring program to demonstrate compliance with the LAs. We do not believe, however, that a conditional waiver is justified to implement the load allocations for discharges of dissolved copper as they apply to the County of Los Angeles. Rather, because the County of Los Angeles is the agency operating the Marina del Rey Harbor and none of the reasons justifying the use of a conditional waiver apply, the Regional Board should issue the County of Los Angeles a WDR.

#### **4. Toxicity Numeric Limits Should be added to the TMDL**

Marina del Rey Harbor is included in Clean Water Act Section 303(d) list of impaired waterbodies for metals and organic compounds in sediment. We acknowledge sediment toxicity and benthic community effects are indirectly addressed in the TMDL through the inclusion of the State's Water Quality Control Plan for Enclosed Bays and Estuaries - Part 1 Sediment Quality Objectives. However, we believe a numeric target for toxicity should be included in the Draft Toxics TMDL, similar to that seen in the Calleguas Creek Watershed Toxicity TMDL. Toxicity testing (Coordinated Monitoring Plan, Bight 2008 Study, Sediment Characterization Study) conducted in Marina del Rey Harbor shows a high variation in toxicity results (High Toxicity to Nontoxic). Requiring the inclusion of *L. pulumulosus* 10-day survival test cannot alone account for this variation in toxicity testing. Given this variability in concurrent studies, it is imperative that a toxicity numeric limit and WLA be included in the TMDL to safeguard against type II errors for sediment toxicity. Additionally, given the variation in toxicity results and toxic condition of Harbor sediments, we suggest sediment quality objective evaluations be conducted more often than every five years for the Harbor in an effort to catalogue progress of TMDL compliance.

#### **5. More Stringent Numeric Targets for PCBs are Appropriate to Protect Beneficial Uses**

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<sup>8</sup> While the Draft Toxics TMDL, requires 85% of boats to have non-copper hull paint, it does not specify if the significant range in boat lengths and hull sizes of boat in MDR Harbor has been considered and how hull size would factor into the 85%.

<sup>9</sup> To be issued, a conditional waiver must be consistent with any applicable state or regional water quality control plan and be in the public interest. *See* Wat. Code § 13269(a)(1).



The previously adopted TMDL established a sediment numeric target for total PCBs based upon NOAA's ERL value. Since the adoption of the original TMDL, precedent has been set requiring numeric sediment targets be established which protect human consumption of contaminated fish tissue. We are supportive of the new, more stringent, numeric target for total PCBs in the TMDL, 3.2 µg/kg, as it is more protective of all beneficial uses and water quality objectives in Marina del Rey and takes into account uncertainty in the relationship between pollutant loading and beneficial use effects. Additionally, we are supportive of the revised numeric target for total PCBs in fish tissue as this establishes more protective numeric targets for fish consumption.

*a. PCBs Implementation Need to Protect all Beneficial Uses*

The TMDL states "MS4 and Caltrans Storm Water Permittees can demonstrate compliance with TMDL sediment waste load allocations for total PCBs via one of four different ways:

- a. Sediment numeric targets are met in bed sediments.
- b. Fish tissue targets are met in species resident to waterbody.
- c. Final sediment allocations, as presented above, are met.
- 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."

We believe that TMDL language should be modified to require that "a" and "b" and "c" must be met in order to be deemed in compliance. The goal of any TMDL is for all beneficial uses to be protected, not just one. If you only have one compliance endpoint, it is uncertain if all beneficial uses will be met. In addition, fish tissue concentration of PCBs can vary depending on size and age of fish as well as season. Furthermore, fish migration in the marina can influence constituent concentrations. Because of fish tissue concentration variability, we ask that the Regional Board modify the Draft Toxics TMDL compliance point for total PCBs to combine option "a", "b", and "c" into one compliance point and specify as to how fish tissue sampling should be conducted.

**6. Waste Load Allocations Should be Re-Calculated**

On pages six and seven of the Draft Toxics TMDL, Metals and Organics Stormwater WLAs appear to be incorrectly calculated. The load allocations were subtracted twice from loading capacities when the WLAs for MS4, Caltrans, general construction, and general industrial stormwater permittees were calculated. We ask that these WLAs be changed to correct the miscalculation.

**7. Reconsideration of TMDL Needs to be Clarified**

The Draft Toxics TMDL states that "Compliance with the TMDL for total PCBs shall be based on achieving the LAs or WLAs, the PCB fish tissue related sediment target, or, alternatively, by meeting fish tissue targets. If monitoring data or special studies indicated that load and waste load allocations will be attained, but fish tissue targets may not be achieved, the Regional Board shall reconsider the TMDL to modify the waste load allocation and load allocation to ensure that the fish tissue targets are attained" (Draft TMDL at 8). In contrast, the staff report states that "Should the numeric targets for total PCBs in fish tissue be met, while the concentration of total PCBs in Marina del Rey Harbor



sediment continues to exceed the sediment numeric target designed to be protective of fish tissue, the TMDL should be reconsidered to include a numeric sediment target for total PCBs that is protective of the benthic community.” As stated, the goal of any TMDL is for all beneficial use to be protected. The statement in the staff report appears to indicate that benthic communities were not considered while developing the TMDL. It is important that WLAs and LAs be established that protect human consumption as well as aquatic life. Any reopening/reconsideration of the TMDL should reflect this goal, and we ask that the Regional Board for clarification.

Thank you for this opportunity to provide comment on the Draft Toxics TMDL. We ask that you consider the aforementioned concerns. If you have any questions, please contact us at (310) 451-1500, Heal the Bay, or (310) 394-6162, Los Angeles Waterkeeper.

Sincerely,

Handwritten signature of Lara Meeker in blue ink.

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