March 16, 2015

Mr. Samuel Unger, Executive Officer
Los Angles Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, CA 90013
Via Email: Samuel.Unger@waterboards.ca.gov; Deborah.Smith@waterboards.ca.gov; Renee.Purdy@waterboards.ca.gov; Jenny.Newman@waterboards.ca.gov; Celine.Gallon@waterboards.ca.gov; losangeles@waterboards.ca.gov

Re: Proposed Amendments to the *Water Quality Control Plan for the Los Angeles Region* to Adopt Site-Specific Objectives for Lead and Copper in the Los Angeles River Watershed and to Revise the Total Maximum Daily Load for Metals in the Los Angeles River and Tributaries

Dear Mr. Unger,

On behalf of Los Angeles Waterkeeper ("Waterkeeper") and Heal the Bay, we submit the following comments on the *Proposed Amendment to the Water Quality Control Plan for the Los Angeles Region to Adopt Site-Specific Objectives for Lead and Copper in the Los Angeles River Watershed and to Revise the Total Maximum Daily Load for Metals in the Los Angeles River and Tributaries* ("Tentative Amendment"). Los Angeles Waterkeeper has been working to protect the Santa Monica Bay, San Pedro Bay and inland waterways of Los Angeles County through volunteer-based water quality monitoring, advocacy, and enforcement. Heal the Bay is an environmental organization with over 15,000 members dedicated to improving water quality in Santa Monica Bay and Southern California coastal water for people and marine life. We appreciate this opportunity to provide comments on the Tentative Amendment.

I. Introduction

The Tentative Amendment would revise water quality objectives ("WQOs") for copper and lead in the Los Angeles River Watershed through the use of site-specific objectives ("SSOs"). We understand and acknowledge the amount of effort and resources the Los Angeles Regional Water Quality Control Board ("Regional Board") and stakeholders have put into the Tentative Amendment. However, we believe the SSOs proposed in the Tentative Amendment are premature and require further data collection and analyses to justify their incorporation in the Los Angeles River and Tributaries Metals Total Maximum Daily Load ("TMDL") and Los Angeles Region Water Quality Control Plan ("Basin Plan"). Most notably, we believe Attachment A – Final Report Copper Water-Effect Ratio Study to Support Implementation of the Los Angeles River and Tributaries Metal TMDL ("Copper WER Report") and Attachment B – Final Lead Recalculation Report to Support the Implementation of the Los Angeles River and Tributaries Metals TMDL ("Lead Recalculation Report") have serious limitations and thus should not be used at this time to justify any Basin Plan Amendments.

Heal the Bay and Los Angeles Waterkeeper have several concerns with the studies being used for the Tentative Amendment - most notably we are concerned study data is not site-specific, does not capture

seasonal variability, and does not characterize when toxicants are most bioavailable to aquatic organisms. The Tentative Amendment would create SSOs in the Los Angeles River Watershed resulting in significant increases to copper and lead water quality standards. With limited monitoring, it is extremely difficult to capture natural variability in waterbodies and develop appropriate water effects ratios ("WERs") values. Thus, there is little assurance that the SSOs developed through WERs will actually be protective of the beneficial uses of the waterbody.

When establishing SSOs, it is essential that data used for Basin Plan and TMDL changes is representative of watershed conditions in which they apply. Robust site-specific data for water chemistry, ecological function, native species, precipitation, etc. is necessary to ensure changes to WQOs will protect designated beneficial uses. Without site-specific data, there is no assurance that SSOs will indeed be protective of impaired waterbodies. We strongly believe SSOs should be applied with caution and if used, it is imperative that SSOs are supported by sound science and monitoring.

II. Attachment A - FINAL Report Copper Water-Effect Ratio Study to Support Implementation of the Los Angeles River and Tributaries Metals TMDL

The Los Angeles River Watershed receives flow from approximately 843 square miles originating in both the San Gabriel Mountains in the northeast and Santa Monica Mountains in the northwest. The watershed includes both heavily urbanized and rural landscapes, and is home to millions of people and thousands of businesses. Because of the geographic scope of the Tentative Amendment, the Copper WER Report needs to thoroughly examine the most critical conditions in the watershed. The implications of not properly analyzing the right environmental conditions are significant.

If proposed WERs in the Copper WER Report were adopted, WQO concentrations for copper in reaches 1 through 4 of the Los Angeles River would nearly quadruple. For soft bottom tributaries of the Rio Hondo and Tujunga Wash, WQOs would increase by factors of 9.691 and 8.279, respectively. We urge the Regional Board to thus take a conservative approach in considering the Tentative Amendment.

A. Copper WER Report Data Limitations

i. Critical Condition Sampling Data is Not Representative of Conditions when Copper is Most Toxic to Aquatic Organisms

The Copper WER Report identifies dry weather, regardless of season, as the critical condition in the Los Angeles River Watershed.[1] Critical condition is defined as the condition with the lowest WER or the condition in a waterbody when aquatic life is most threatened.[2] We agree with this approach. However, we believe the Copper WER Report does not capture conditions that would result in the lowest WERs and therefore does not coincide with how the study defines critical condition. The only specificity in the Report for dry weather sampling was that (1) flow must be below 500 cfs at the Wardlow station and (2) that samples would be collected roughly monthly. Six dry weather samples were used to calculate final WERs for each reach of the Los Angeles River and tributaries (expect for Rio Hondo where only five sample

[1] Copper WER Report at ES-3.
[2] Copper WER Report at 8.

results were used), with the intention of capturing the critical condition. We believe samples do not characterize the variability of water chemistry during all dry weather conditions, especially dry weather immediately following a rain event. If a variety of samples were collected, in a variety of dry weather conditions (those following a rain event and in drier conditions), the data would provide a more complete basis to compare and determine critical condition and final WERs. Thus, we believe the analyses used in the Tentative Amendment may not be protective during times when toxicity is most harmful to aquatic life.

During storm events, copper concentrations in the Los Angeles River and tributaries spike due to stormwater discharges laden with copper, while at the same time turbidity increases and instream water hardness plummets. In the days following rain events, copper concentrations may remain high and instream hardness relatively low, while turbidity levels drop due to sedimentation; this condition creates a period in which copper is more bioavailable and a higher threat to aquatic life.[3] T**hese critical days following a rain event are not accounted for in the study's sampling design – and these may be the most critical times for identifying toxicity to organism.** In review of the Copper WER Report, no samples were collected during this critical period; most dry weather winter samples were collected **weeks following the last rain event**, giving time for hardness to return to typical levels and copper concentrations to decrease, thus lowering copper toxicity and resulting in higher WERs. As identified on page eight of the Copper WER Report, the "approach to developing an environmentally conservative WER [is] to identify a critical condition and ensure sufficient data [is] collected to develop a representative and protective WER for each waterbody." The Copper WER Report falls short on its own approach for developing environmentally conservative WERs - **the study does not collect data during conditions in which the lowest WER could be observed**. Because of this shortcoming, we believe any recommendations from the Report are not representative of the true critical condition and should not be used for the Tentative Amendment at this time.

ii. Copper WER Report Data Collection Period is Insufficient

The lack of site-specific data used for calculating copper WERs undermines the protectiveness of the Tentative Amendment. The Copper WER Report's data collection period was only 17 months long, March 2011 to August 2012, covering just one wet season. This is concerning as 2011-2012 had below average rainfall and does not characterize average conditions in the Los Angeles River Watershed – annual rainfall was 6.29 inches below average. The use of data collected over such a short period of time and during drought conditions to justify long-term water quality management regulations lacks scientific merit and reasoning. Samples collected for the Copper WER Report do not accurately represent an average precipitation year or full range of conditions experienced in the Los Angeles River Watershed. Relying on extremely limited data to justify changing a WQO is inappropriate, and SSOs should not be pursued until more thorough data is collected. We recommend that data collection and sampling continue over a five year study period to develop a WER that is well supported and protective of beneficial uses. This would

[3] Larry Walter Associates Memo titled *Evaluation of Los Angeles River Critical Sampling Conditions for Copper Water-Effects Ratios* (dated October 30, 2009) (pg. 12) shows dry weather predicted WERs in Los Angeles River Watershed to be lowest within 72 hours of rainfall. *See* sampling locations White Oak Ave. and Sepulveda Blvd. This identifies evidence supporting that the worst case scenario dry weather condition occurs after wet weather events, as defined by the Los Angeles River Metals TMDL.

ensure samples collected include a variety of water chemistry and flow conditions, which not only influence copper loading, but also parameters influencing hardness and bioavailability of copper.

iii. Insufficient Number of Wet Weather Sampling Dates to Confirm Critical Condition

The primary purpose for wet weather sampling in the Copper WER Report was to confirm the assumption that dry weather represents the critical condition. Two wet weather samples were collected for each reach and tributary of the Los Angeles River for the Copper WER Report. These sampling events, however, did not capture the "first flush", the first major rain event of the year, when copper loading is the highest. The "first flush" is a potential worst case scenario. With such limited monitoring data, it is not possible to capture the full seasonal and yearly variability in the watershed to ensure that dry weather is the most critical condition. Limited wet weather sampling and lack of "first flush" samples gives little assurance that the WERs contained in the Tentative Amendment will be protective of all beneficial uses of the Los Angeles River and its tributaries during all times of the year.

iv. Sampling Locations and Frequencies in the Copper WER Report are too Limited to Characterize Watershed Conditions

Fourteen sampling sites were used to represent four reaches and six tributaries of the Los Angeles River Watershed (roughly 154 stream miles; 50 miles in the main stem). Given the geographic extent and varied land use of Los Angeles River and its tributaries, 14 dry weather sites and 10 wet weather sites is not representative of all watershed conditions. For many of the tributaries, only one sampling location was used in the study despite having extreme variability in land use, substrate and other conditions. Vegetation in waterbodies can also greatly influence water chemistry, flow dynamics, the binding of copper to sediments, etc., potentially having great influence on WER calculations. Thus, it is inappropriate to use a single sample location for tributaries because it cannot adequately characterize water chemistry for an entire reach. In addition, less than 100 data points were used to conduct the watershed wide SSO; this is simply not enough data to characterize an entire watershed and change WQOs. The California Toxics Rule (40 CFR §131.38) allows SSOs because every waterbody has slightly different conditions influencing toxicity. However, in identifying site-specific objectives, it is essential that robust data is collected in multiple locations for each reach to capture variability. The severely limited sampling regimes used in the Copper WER Report fails to use enough data to account for watershed variability.

v. Lab Blank Sample Contamination Risk Final WER Calculation and Should Not Be Used in the Tentative Amendment

The contamination of samples used in the Copper WER Report and the change of analytical laboratories during the first half of the study raises a red flag. How can we be sure that water chemistry analyses conducted for the study accurately portrays site specifics when several instances of contamination took place during the study? Several of the dissolved organic carbon (DOC) concentrations used in the analysis were qualified contaminated due to contamination in the equipment blank samples. However, this data was not eliminated, nor were samples recollected. Although efforts were made to correct for the contamination in the sample data, we fear that this contaminations may bias sample results, thus having an effect on study conclusion.

B. Attachment B - FINAL Lead Recalculation Report to Support Implementation of the Los Angeles River and Tributaries Metals TMDL

i. National Datasets Should Not be Used for Establishing a Site-Specific Objective

The Tentative Amendment proposes a lead recalculation SSO using a national Draft USEPA dataset. We have concerns that this dataset may not be protective of native species in the watershed. The national dataset does not include species native to Los Angeles River or Southern California. In the Lead Recalculation Report, the SSO is referred to as a *de facto* national recalculation. There is nothing site-specific about the lead SSO in the Tentative Amendment. How can we be creating a **site-specific objective** when no site-specific data is used? In our mind, this is bad policymaking and should not be pursued. We feel it is inappropriate for dischargers to apply a statewide approach to specific waterbodies or reaches, such as we are seeing in the Tentative Amendment, they are assigned TMDL wasteload allocations. Why didn't dischargers pursue a WER study for lead, using site-specific data, as they did with copper?

ii. Use of Surrogate Species in Recalculation of WQOs Does Not Ensure Protection for Native Species

Species of interest are identified in the Lead Recalculation Report to ensure lead recalculations are indeed protective of important species to the State of California. Surrogate species are commonly chosen by comparing surrogate species' toxicity sensitivity to species of interest's toxicity sensitivity. This is done to ensure recalculated WQOs are protective of important native species. The Lead Recalculation Report neither discusses nor justifies the use of the chosen surrogate species. Further, the Report fails to compare life cycle stages of surrogates and species of interest. Surrogates species used in the Report were non-native species, which, in general, are usually less susceptible to toxicity than native species. We are concerned that the use of surrogate species could result in lead recalculations which are not protective of natives (several of which are threatened or endangered). Further explanation and analyses is warranted to confirm surrogates used are comparable with species of interest. If surrogates species are utilized, we recommend they be regionally native species.

At a minimum, when selecting surrogate species, the taxonomic classification should be limited to the same genus. USEPA methods, used for lead recalculation rely solely upon genus for recalculation. However, of the surrogate species used in the recalculation, only one is of the same genius, while the others are of the same class, tribe, and family. There was no justification given in the Report for how species of the same family, class, and tribe relate in their sensitivity to lead. Furthermore, it is unclear if the California Department of Fish and Wildlife was consulted on the use of non-native surrogates for California species of concern and threatened and endangered species. The approach here lacks the appropriate level of caution. The Tentative Amendment unjustifiably relies on insufficient data for establishing a SSO and should be rejected.

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Changing a water quality threshold is a very serious action and should be approached cautiously. Since SSOs may allow for higher concentrations of metals than what the California Toxic Rule qualifies as toxic

to freshwater aquatic life there are major implications of their application. Moreover, if SSOs are developed using inappropriate methods, data, and reasoning, TMDLs will prove ineffective in addressing water impairments. Almost all of Los Angeles' waterbodies are impaired. It is critical that the region work to improve water quality in these waterbodies to protect their many beneficial uses. The Tentative Amendment would dramatically alter one of the most important TMDLs in Los Angeles County. It is imperative that sound science and analysis support any changes to regional WQOs. We urge the Regional Board to address our above comments and seriously reconsider the Tentative Amendment. We believe it is premature to move forward with adopting SSOs for metals in the Los Angeles River Watershed at this time as there are clear data gaps and unjustified findings in the Copper WER and Lead Recalculation Reports. We are also concerned that moving forward with faulty SSOs for metals in the Los Angeles River Watershed will set harmful precedent for the consideration of future SSOs.

Thank you for your consideration of these comments. If you have any questions, please contact Los Angeles Waterkeeper and/or Heal the Bay at (310) 394-6162 and (310) 451-1500, respectively.

Sincerely,

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