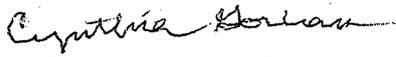


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**San Diego Regional Water Quality Control Board**

**TO:** Gerald Bowes, Ph.D.

**FROM:** Cynthia Gorham   
Senior Environmental Scientist, Restoration And Protection Planning Unit  
**SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD**

**DATE:** February 4, 2016

**SUBJECT:** REQUEST FOR EXTERNAL SCIENTIFIC PEER REVIEW; ADOPTION OF  
SITE-SPECIFIC WATER QUALITY OBJECTIVES FOR COPPER AND ZINC  
IN CHOLLAS CREEK

This letter transmits a request from the San Diego Regional Water Quality Control Board (San Diego Water Board) to begin the process for external peer review for an amendment to the Water Quality Control Plan for the San Diego Basin (Basin Plan). The amendment updates water effect ratios (WERs) used in adopted Total Maximum Daily Loads (TMDLs) from a default value of 1 to site-specific values of 6.998 for dissolved copper and 1.711 for dissolved zinc in Chollas Creek. The water quality objectives (WQOs) for dissolved copper and dissolved zinc are a function of WER values; therefore, updating the WERs to site-specific values also results in site-specific WQOs.

The proposed amendment requires peer review pursuant to California Health and Safety Code Section 57004. The proposed amendment and the technical documents supporting it are available for peer review and San Diego Water Board staff requests the peer review be completed by May 31, 2016, if possible. The proposed amendment is scheduled to be heard by the San Diego Regional Water Quality Control Board (San Diego Water Board) at its September 14, 2016 meeting; therefore, it is essential to complete the review in a timely manner.

The San Diego Water Board is requesting external peer review of the following:

1. An October 2014 report titled *Development of Site-Specific Water Quality Objectives for Trace Metals in Chollas Creek: Water-Effect Ratio Study for Copper and Zinc, and Recalculation for Lead* (WER study);
2. The California Environmental Quality Act (CEQA) analysis for an amendment to the Basin Plan that updates WERs used in adopted TMDLs from a default value of 1 to site-specific values, based on the WER study, of 6.998 for dissolved copper and 1.711 for dissolved zinc in Chollas Creek; and
3. The proposed Basin Plan amendment.

A minimum of two reviewers with the appropriate technical expertise should review the aforementioned items' assumptions, findings, and conclusions to justify replacing the default WER value of 1 (originally used due to the absence of site-specific data) with site-specific WERs. The peer review should verify that although adoption of site-specific WERs greater than 1 would result in increased WQOs for the metals, these WQOs would be no less protective of aquatic life and they would be more representative of actual conditions. Accordingly, the appropriate areas of technical expertise include aquatic chemistry and ecological risk assessment. The reviewers should also be familiar with metals aquatic life water quality criteria and United States Environmental Protection Agency methods for calculating site-specific criteria.

The attachments to this request are as follows:

1. A plain English summary of the proposed Basin Plan amendment (Attachment 1);
2. An outline of the scientific and other technical assumptions, findings, and conclusions of the Basin Plan amendment in need of peer review (Attachment 2); and
3. A list of persons who participated in the development of this proposed amendment (Attachment 3).

Should you have questions regarding the project, please contact Melissa Valdovinos at (619) 521-8039 or [mvaldovinos@waterboards.ca.gov](mailto:mvaldovinos@waterboards.ca.gov).

## Attachment 1

### Summary of Proposed Action

The San Diego Regional Water Quality Control Board (San Diego Water Board) is charged with implementing the provisions of both the Porter Cologne Water Quality Control Act (California law) and the federal Clean Water Act in the San Diego Region. Section 303(d)(A)(1) of the Clean Water Act requires the San Diego Water Board to identify those waters within the Region that do not support beneficial uses and to establish Total Maximum Daily Loads (TMDLs) for the pollutants causing the impairments. A TMDL specifies the maximum amount of a pollutant a water body can receive and still meet water quality standards. A TMDL also allocates the acceptable pollutant load to point and nonpoint sources.

The Chollas Creek Metals TMDLs (Metals TMDLs) were originally adopted on June 13, 2007 and became effective on October 22, 2008. The Metals TMDLs address impairments due to copper, lead, and zinc and assign numeric targets and allocations based on the California Toxics Rule (CTR). The proposed amendment to the Water Quality Control Plan for the San Diego Basin (Basin Plan) would revise the copper and lead numeric targets and allocations in the Metals TMDLs based the results of study, which are in the October 28, 2014 report titled *Development of Site-Specific Water Quality Objectives for Trace Metals in Chollas Creek: Water-Effect Ratio Study for Copper and Zinc, and Recalculation of Lead*. The study determines water effect ratios (WERs) for copper and zinc, which is allowed by the California Toxics Rule (CTR) and entails comparing local water body toxicity to laboratory water toxicity. The proposed Metals TMDL revision would incorporate WER values for Chollas Creek.

The proposed Basin Plan amendment would update 1) Chapter 3 of the Basin Plan to clarify the application of WERs in the CTR for developing site-specific water quality objectives and 2) Chapter 7 of the Basin Plan to update the WER values and associated water quality criteria calculations. The goal of the proposed Basin Plan amendment is to fully protect aquatic life, while taking into account site-specific conditions. The proposed amendment is supported by a technical report prepared by San Diego Water Board staff. The staff report and supporting documentation provide the detailed factual basis and analysis supporting the proposed amendment.



## Attachment 2

### Scientific assumptions, findings, and conclusions to be addressed by peer review for proposed site-specific water quality objectives for copper and zinc in Chollas Creek

The statute mandate for external scientific peer review (Health and Safety Code Section 57004) states that the reviewer's responsibility is to determine whether the scientific portion of the proposed rule is based upon sound scientific knowledge, methods, and practices. We request that you make this determination for the assumptions, findings, and conclusions that constitute the scientific basis of the proposed regulatory action. An explanatory statement is provided below for each component of the review.

1. The methodology for determination of copper and zinc water effect ratios (WERs) included in the October 2014 report titled *Development of Site-Specific Water Quality Objectives for Trace Metals in Chollas Creek: Water-Effect Ratio Study for Copper and Zinc, and Recalculation for Lead* (WER study) is consistent with United States Environmental Protection Agency (USEPA) guidelines.

The USEPA 1994 Water Quality Standards Handbook<sup>1</sup> presents three procedures for deriving site-specific criteria: the recalculation procedure, the WER procedure, and the resident species procedure. The proposed revisions to the copper and zinc water quality objectives (WQOs) are based on the WER procedure. The methodology follows USEPA's *Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals*<sup>2</sup> and *Streamlined Water-Effect Ratio Procedure for Discharges of Copper*<sup>3</sup>.

2. Consistent with 14 CCR section 15162, no subsequent environmental documents are necessary and the San Diego Regional Water Quality Control Board (San Diego Water Board) may rely on an addendum in conjunction with the existing substitute environmental documents for the Chollas Creek Metals TMDLs<sup>4</sup> to provide CEQA compliance in adopting the proposed amendment to the Water Quality Control Plan for the San Diego Basin (Basin Plan). The addendum consists of a discussion in the technical report, a standard California Environmental Quality Act (CEQA) checklist, and a response to comments concerning potential downstream impacts.
3. The proposed Basin Plan amendment to 1) clarify the application of WERs in the California Toxics Rule (CTR) for developing site-specific WQOs, and 2) update the WER values and associated water quality criteria calculations would be no less protective of aquatic life and would be more representative of actual conditions.

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<sup>1</sup> <http://water.epa.gov/scitech/swguidance/standards/handbook/chapter03.cfm#section7>

<sup>2</sup> [http://water.epa.gov/scitech/swguidance/standards/upload/2002\\_06\\_11\\_standards\\_handbook\\_handbookappxL.pdf](http://water.epa.gov/scitech/swguidance/standards/upload/2002_06_11_standards_handbook_handbookappxL.pdf)

<sup>3</sup> <http://water.epa.gov/scitech/swguidance/standards/criteria/aqlife/copper/upload/copper.pdf>

<sup>4</sup> [http://www.waterboards.ca.gov/sandiego/water\\_issues/programs/tmdls/chollascreekmetals.shtml](http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/chollascreekmetals.shtml)

Reviewers are not limited to addressing only the specific issues presented above and are asked to contemplate the following questions:

1. In reading the technical report and proposed amendment, are there any additional scientific issues that are part of the scientific basis of the proposal not described above? If so, please comment with respect to the statute language given above.
2. Taken as a whole, is the scientific portion of the proposed amendment based on sound scientific knowledge, methods, and practices?

Reviewers should note that some proposed actions may rely significantly on professional judgment where available scientific data are not as extensive as desired to support the statute requirement for absolute scientific rigor. In these situations, the proposed course of action is favored over no action. Reviewers should also note that the San Diego Water Board has a legal obligation to consider and respond to all feedback on the scientific portions of the proposed rule. Because of this obligation, reviewers are encouraged to focus feedback on the scientific issues that are relevant to the central regulatory elements being proposed.

## **Attachment 3**

### **List of Participants**

#### **SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD**

David W. Gibson, Executive Officer

James G. Smith, Executive Officer

Jeremy Haas, Environmental Program Manager

David T. Barker, P.E., Supervising Water Resource Control Engineer

Cynthia Gorham, Senior Environmental Scientist

Eric Becker, P.E., Senior Water Resources Control Engineer

Wayne Chiu, P.E., Water Resource Control Engineer

Melissa Valdovinos, Water Resource Control Engineer

#### **STATE WATER RESOURCES CONTROL BOARD, OFFICE OF CHIEF COUNSEL**

Catherine Hagan, Senior Staff Counsel, Office of Chief Counsel

Adriana Nunez, Staff Counsel, Office of Chief Counsel

#### **SUPPORTING RESEARCH AND STUDY**

Ruth Kolb, City of San Diego Transportation and Storm Water

Jerry Diamond, Ph.D., Tetra Tech, Inc.

Clint Boschen, Tetra Tech, Inc.

