

**STATE WATER RESOURCES CONTROL BOARD  
BOARD MEETING SESSION--DIVISION OF WATER QUALITY  
JUNE 19, 2007**

**ITEM 7**

**SUBJECT**

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION (BASIN PLAN) TO INCORPORATE WATER-EFFECTS RATIOS FOR COPPER IN LOWER CALLEGUAS CREEK AND MUGU LAGOON LOCATED IN THE CALLEGUAS CREEK WATERSHED, VENTURA COUNTY

**DISCUSSION**

The Basin Plan amendment results in a modification of criteria using site-specific water-effects ratios (WERs) for copper as part of a comprehensive strategy for addressing metal impairments in the Calleguas Creek watershed. Under the provisions of the California Toxics Rule, the Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted a WER to modify the copper criteria for Calleguas Creek and Mugu Lagoon. WERs take into account site-specific conditions in local water bodies that alter the toxicity of copper to aquatic life. The WERs modify the copper criteria while remaining as protective of aquatic life as the California Toxics Rule criteria. The strategy for addressing metal impairments includes development and implementation of Total Maximum Daily Loads (TMDLs) and corresponding effluent and receiving water limitations in national pollutant discharge elimination system permits. The adoptions of site-specific WERs will not lower the water quality of the candidate water bodies, relative to existing conditions, because additional loadings of copper are not anticipated. Therefore, the modifications are consistent with the State's antidegradation policy (State Board Resolution No. 68-16) and federal antidegradation requirements.

The WERs for copper study, conducted in accordance with U.S. Environmental Protection Agency (USEPA) guidance document titled "Interim Guidance on Determination and Use of Water-effect Ratios for Metals," (February 1994, EPA-823-B-94-001), demonstrated that site-specific conditions in Lower Calleguas Creek and Mugu Lagoon reduce the toxicity of copper to aquatic life. Based on the above, the Los Angeles Water Board staff found it appropriate to adopt a copper WER for the Lower Calleguas Creek and Mugu Lagoon.

**Purpose of a WER**

The toxicity of a metal to aquatic life can be influenced by a variety of physical and chemical characteristics of both the site water and the metal itself. If there is a difference in toxicity due to the site water and it is not taken into account, the aquatic life criterion for the water body will be more or less protective than intended by USEPA's "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses," which were designed to be protective of conditions throughout the United States. Because of the potential for site-specific conditions to vary from the conditions used to derive the national aquatic life criterion, USEPA has provided guidance concerning three procedures that may be used to

convert a national criterion into a site-specific criterion (USEPA, 1994). In instances where the chemistry of local water is different from laboratory test water, such as those used to establish California Toxics Rule criteria, the appropriate procedure to use is the WER method. A WER is a means to account for a difference between the toxicity of copper in laboratory test water and its toxicity in local water bodies. A WER of 1.0 indicates equivalence between local waters and laboratory dilution water, while WERs of greater (*or less*) than 1.0 indicate lower (*or higher*) toxicity in local waters than in laboratory dilution waters.

After a WER is determined for a site, the applicable criteria are calculated by multiplying the criteria from the California Toxics Rule by the WER. Most WERs are expected to be equal to or greater than 1.0, but some might be less than 1.0. If a WER for copper is greater than 1.0, then the chemistry of the site water makes the metal less toxic than that metal would be in lab water, and, therefore, the criteria will be higher (less stringent). Conversely, if WERs are less than 1.0, then the chemistry of the site water makes the metal more toxic than the metal would be in lab water, and, therefore, the criteria will be lower (more stringent). (USEPA, 1994)

### **Rationale for Developing a WER**

Bioavailability and toxicity of copper are dependent on site-specific factors such as pH, hardness, suspended solids, dissolved oxygen (i.e., Redox state), dissolved carbon compounds, salinity, and other constituents. Beyond the headwaters, many of the water bodies in Los Angeles and Ventura Counties are dominated by effluent from publicly owned treatment works (POTWs), particularly during the prevailing dry weather conditions in Southern California. Characteristics of these water bodies, such as high hardness and ionic composition, vary from conditions in other water bodies where there is significant flow from sources other than POTWs' discharges. These differences in water chemistry illustrate that developing and implementing a WER for copper for these water bodies may be appropriate.

It is in the interest of the Los Angeles Water Board and stakeholders to establish the most appropriate metals criteria for a water body. The Clean Water Act section 303(d) list of impaired water bodies identifies Lower Calleguas Creek and Mugu Lagoon as impaired due to levels of copper that exceed California Toxics Rule criteria. Before implementing additional controls for copper, stakeholders wanted to ensure that the national criteria were appropriate for these water bodies, given site-specific conditions, by conducting a WER study. The results of the WER study established that a reduction of water quality would not unreasonably affect present and anticipated beneficial use of such water and would not result in water quality less than that prescribed in water quality plans and policies.

### **POLICY ISSUE**

Should the State Water Resources Control Board (State Water Board) approve the amendment to the Basin Plan to incorporate WERs for copper in Lower Calleguas Creek and Mugu Lagoon, as adopted under Los Angeles Water Board Resolution No. 2006-022?

### **FISCAL IMPACT**

The POTWs discharging to these water bodies are expected to be the primary parties involved in compliance with the site-specific WER-adjusted criteria. If approved, the copper WERs would be reflected in revised effluent and receiving water limitations for the affected POTWs and water body reaches, subject to antidegradation and antibacksliding requirements. It is not foreseeable that the amendment would instigate new or different compliance measures other than those

required to comply with the current criteria. Therefore, the additional economic cost of this amendment should be negligible.

**REGIONAL WATER BOARD IMPACT**

Yes, approval of this resolution will amend the Basin Plan.

**STAFF RECOMMENDATION**

That the State Water Board:

1. Approves the amendment to the Basin Plan adopted under Los Angeles Water Board Resolution No. 2006-022.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. 2006-022 to the Office of Administrative Law for approval of the regulatory provisions and to USEPA for approval of the WERs for copper.

## STATE WATER RESOURCES CONTROL BOARD RESOLUTION NO.

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION (BASIN PLAN) TO INCORPORATE WATER-EFFECTS RATIOS FOR COPPER IN LOWER CALLEGUAS CREEK AND MUGU LAGOON LOCATED IN THE CALLEGUAS CREEK WATERSHED, VENTURA COUNTY

### WHEREAS:

1. The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board) adopted a revised Basin Plan on June 13, 1994, which was approved by the State Water Resources Control Board (State Water Board) on November 17, 1994 and by the Office of Administrative Law (OAL) on February 23, 1995.
2. On November 9, 2006, the Los Angeles Water Board adopted Resolution No. 2006-022 ([Attachment](#)) amending the Basin Plan to incorporate water-effects ratios (WERs) for copper in Lower Calleguas Creek and Mugu Lagoon located in the Calleguas Creek watershed.
3. The Los Angeles Water Board found that the detailed technical report titled, "Proposed Amendments to the Water Quality Control Plan to Incorporate Water-Effects Ratios (Water-effects ratios) for Copper in Lower Calleguas Creek and Mugu Lagoon," the California Environmental Quality Act (CEQA) Checklist, the staff report, supporting documentation, and the response to comments comply 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.
4. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code section 13240, which specifies that Regional Water Quality Control Boards may revise Basin Plans, and section 13242, which requires adoption of an implementation program to achieve water quality objectives.
5. On November 9, 2006, the Los Angeles Water Board held a public hearing to consider the Basin Plan amendment. Notice of the Public Hearing was given to all interested persons and published in accordance with Water Code section 13244.
6. The Los Angeles Water Board found that the Basin Plan amendment will not lower the water quality of the candidate water bodies, relative to existing conditions because additional loadings of copper are not anticipated. Therefore, the modifications are consistent with the State's antidegradation policy (State Board Resolution No. 68-16) and federal antidegradation requirements.
7. The Los Angeles Water Board found that pursuant to section 711.4(d)(1) of the California Fish and Game code, the proposed amendment will result in not more than a de minimis adverse effect on fish and wildlife.
8. The Los Angeles Water Board certified the final CEQA substitute environmental documentation prepared in accordance with Public Resources Code section 21159 and California Code of Regulations, Title 14, section 15187.

# DRAFT

May 21, 2007

9. This Basin Plan amendment will not become effective until approved by the State Water Board, OAL, and the U.S. Environmental Protection Agency (USEPA); a Notice of Decision has been filed with the Secretary of the California Resources Agency.

## **THEREFORE BE IT RESOLVED THAT:**

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under Los Angeles Water Board Resolution No. 2006-022.
2. Authorizes the Executive Director or designee to submit the amendment adopted under Los Angeles Water Board Resolution No. 2006-022 to the Office of Administrative Law for approval of the regulatory provisions and to USEPA for approval of the WERs for copper.

## **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 Board held on June 19, 2007.

---

Song Her  
Clerk to the Board