

Heal the Bay

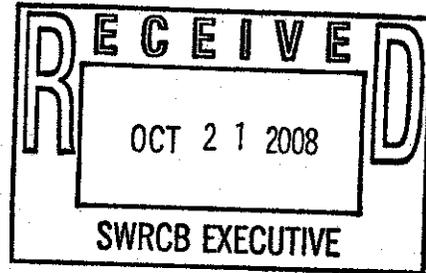
1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

October 21, 2008

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
Sent Via Email [commentletters@waterboard.ca.gov]



Re: Comment Letter – Water Quality Objectives for Cadmium and Related Implementation Methods

Dear Ms. Jeanine Townsend:

On behalf of Heal the Bay, we submit the following comments on the scoping document for Water Quality Objectives for Cadmium and Related Implementation Methods. We appreciate the opportunity to provide these comments.

We commend the State Board for proposing to use USEPA's revised cadmium criteria guidance to strengthen the acute and chronic criteria for cadmium in order to be protective of threatened and endangered species of aquatic organisms. After reviewing the scoping document, however, we do have several questions and concerns regarding the selection of Alternative 3 as the State Board's recommended alternative.

The revised criteria must capture the critical condition in the receiving water.

Alternative 3 would allow permit writers to "...calculate criteria specific to each water body based on available hardness data." Determining an appropriate hardness value is critical, as hardness influences the toxicity and bioavailability of cadmium and other metals. Thus before the permit writer could select an appropriate hardness value, the critical condition (or lowest) hardness value would need to be captured.

As State Board staff is aware, hardness levels in a waterbody can vary considerably depending on flow and other factors. Thus, a wide range of hardness values will likely be found in a single waterbody throughout different seasons and years. In fact, the scoping document acknowledges this variability in the waterbody itself and states that improper selection of hardness can lead to an unprotective standard: "...calculated criteria could be substantially different depending on whether upstream, effluent, or mixed hardness values are used, and that singular selection of one hardness source value, i.e., upstream, effluent, or mixed, for all cases may result in the application of unprotective criteria." Also, based on Heal the Bay's experience in the Los Angeles Region, there often is not enough historical data to determine the critical condition and develop site-specific objectives. If the State Board were to select Alternative 3, significant data would need to be collected in waterbodies around the state.

Thus, there are a lot of questions that must be answered by the State Board in developing these criteria: What is the current availability of hardness data and is this data representative of the discharge point? What is the hardness range of California's surface waters? If the range is never below a certain value, it may be most feasible to implement a limit based on this default hardness



1444 9th Street
Santa Monica CA 90401

ph 310 451 1550
fax 310 496 1902

info@healthebay.org
www.healthebay.org

Heal the Bay

value. A default hardness value of 50 mg/l should be adequately protective for waterbodies throughout the state in comparison to the current default hardness of 100mg/l. Through our work in Southern California, we have found that in times of high flow, water hardness drops substantially, resulting in hardness concentrations lower than 100 mg/l. Hence, the 100 mg/l value currently used is often underprotective during high flow, the state of the hydrologic cycle most critical to California's water quality.

In addition, we question how, where, and at what frequency would hardness be measured if insufficient data exist? Who would be responsible for collecting hardness data? Would the discharger be responsible for taking these measurements? Could there be any negative side-effects, such as dischargers redirecting effluent to reaches or waterbodies with higher hardness values? Would data be collected in the effluent stream, receiving water, or the convergence of the two? If data is collected at more than one location, which hardness value data would be used in the equation? It would be most protective to select the lowest value. Otherwise, as discussed above, a default value of 50 mg/l hardness should be used.

The State Board should revisit Alternative 2.

Due to the variability discussed above and the overall lack of sufficient hardness data, it is likely more protective for the State Board to use a specified hardness value to develop permit limits. A default hardness value of 50 mg/l should be adequately protective for waterbodies throughout the state. By lowering the default hardness to 50 mg/l from the current value of 100 mg/l, the acute cadmium criterion becomes twice as protective. This level of protection is necessary for sensitive species.

In sum, although we fully support strengthening the standard for cadmium based on recent scientific developments, we do have concerns regarding the preferred choice of Alternative 3. Hardness values can vary significantly, even in a single water body. We understand that the equations aim to set an appropriate standard in light of such variability, but it likely infeasible to accurately capture the critical hardness condition for every water body in California.

If you have any questions or would like to discuss any of these comments, please feel free to contact us at (310) 451-1500.

Sincerely,

Mark Gold, D. Env
President

Kirsten James
Water Quality Director

W. Susie Santilena
Water Quality Scientist