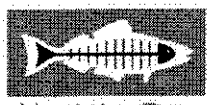

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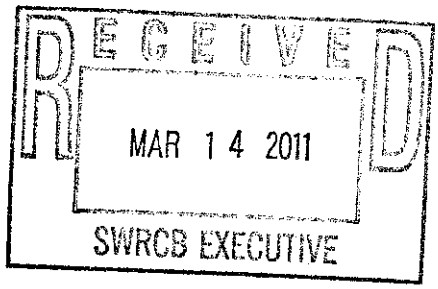

March 14, 2011

Mr. Hoppin, Chair and Board Members
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814
Via Email: commentletters@waterboards.ca.gov

Re: Comments on the Proposed Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, Part 1, Sediment Quality Objectives

Dear Chair Hoppin and State Board Members:

On behalf of Heal the Bay, we submit the following comments on Proposed Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, Part 1, Sediment Quality Objectives ("SQO Amendments" or "Amendments"). We appreciate the opportunity to provide these comments on the SQO Amendments.

Heal the Bay has been intimately involved in sediment issues for over 15 years, including 10 years of participation on the Los Angeles Region Contaminated Sediment Task Force. As you may know, Heal the Bay resigned from the sediment quality objective ("SQO") stakeholder group after participating for six months. We made this decision largely because the vast majority of our comments were never addressed or taken seriously. Although we disengaged with the stakeholder group, Heal the Bay acknowledges the importance of developing technically-sound SQOs to differentiate between clean and impacted sediments. Thus, we have been involved in the process by attending and commenting at the State Board workshops and submitting written comments on draft reports. Despite critical flaws with the SQOs Phase I that were described in our comment letter to the State Board dated November 30, 2007, the SQOs were adopted without modification by the State Board on September 16, 2008. These flaws have become all the more evident with the issuance of a Draft TMDL for the Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters. Thus, many of the same concerns are reiterated below.

The stated purpose of the SQO Amendments "...is to protect additional receptors not contemplated in Part 1." Staff Report at 1. The California Water Code requires that SQOs be developed as part of a program to protect beneficial uses in bays and estuaries. After reviewing the SQO Amendments, it is clear that these goals have not been met due to the technical approach taken by staff and the extremely limited application of the SQOs. In fact it is unclear what, if anything, the SQO Amendments will accomplish in terms of enhanced beneficial use protection. Thus we ask the State Board to postpone the adoption of these Amendments and ask staff to reevaluate the proposal entirely.

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I. Technical Issues

There are several key elements in the technical approach for developing SQOs that do not adequately protect beneficial uses. Three of these issues are ***extremely*** problematic: including non-implementable narrative objectives; limiting the applicability to the top 5 cm of sediment; and requiring multiple lines of evidence to be integrated before sediment is deemed impacted. These issues are described in greater detail below.

Receptors

Receptors are used to assess all the beneficial uses of a waterbody. Thus, the selection of appropriate receptors is vital to developing strong SQOs. The SQO Amendments attempt to include finfish and wildlife receptors by adding a narrative objective rather than a more objective numeric objective. Exploring these indirect receptors in the development of SQOs is critical, as biomagnification can occur throughout the food chain. However, the Amendments do little to address these receptors and appear completely non-implementable. In fact, it is unclear how and why the recommended alternative was chosen. Completing an ecological risk assessment at each monitoring location, as is suggested in the Amendments, is impractical and calls into question the merit of the SQOs themselves. Thus, the State Board must revisit these receptors and develop technically-sound SQOs that will actually protect beneficial uses.

Surficial Sediments

The SQOs target the surficial sediments "...representing recent depositional materials and containing the majority of the benthic community." Amendments at 54. Specifically, this appears to be designated as 5 cm. However, the Staff Report does not provide sufficient justification for limiting the scope to the top 5 cm of sediment. In fact, this decision appears extremely arbitrary and greatly limits the scope of the SQOs.

While it is true that the surficial sediments are the primary exposure pathway, limiting the scope to sediments in the top 5 cm is completely inappropriate. Examining just the very top layer of sediment does not give sufficient insight on the ecological health of the waterbody. Species such as ghost shrimp and spoon worms go down a meter or more into the sediments. Burrows of Thassaladian mud-shrimps have been reported to reach down to 2.5-meter sediment depths.[1] According to the Monterey Bay Aquarium ghost shrimp tunnel almost constantly, reworking the sediment to a depth of as much as 30 inches (76 cm), and these burrows provide shelter for other invertebrates.[2] Thus, buried sediments can impact the benthic community and beneficial uses. USEPA's work on the DDT and PCB contaminated sediments off of Palos Verdes supports a thicker active layer. The final remediation plan includes a cap of 45 centimeters to prevent significant bioturbation for benthic infauna. USEPA and the Los Angeles Regional Board have been involved with contaminated sediments issues in the Port of Los Angeles and Long Beach

[1] Pemberton, S. G., Risk, M. J. & Buckley, D. E. Science 192, 790-791 (1976) quoted in W. Ziebus et al. Complex Burrows of the Mud Shrimp *Callianassa truncata* and their geochemical impact in the sea bed Nature Vol. 328 15 Aug. 1996

[2] Monterey Bay Aquarium. Bay Ghost Shrimp On Exhibit. Accessed Feb. 10, 2011. http://www.montereybayaquarium.org/animals/AnimalDetails.aspx?id=781172

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area where sediment caps for contaminated sediments of 1 meter or greater have been required. Also sediments can be dynamic and can move and be buried due to a single storm event and legacy contaminated sediment may be buried. Clearly, the USEPA and Regional Board should consider deeper sediments in order to understand the health of the water body and ensure that beneficial uses are protected for all species.

Limiting the scope to the top 5 cm also creates an implementation problem. If the SQOs indicated that the top 5 cm are impaired, will a remediation effort only dredge the top 5 cm? Then will another monitoring event be conducted right away to make sure the next 5 cm meets the SQOs? Will the process go on and on? As a point of comparison, maintenance dredging projects typically remove at least the top meter of sediments and some of them remove 5 meters or more. Thus, the 5 cm designation is a huge logistical issue.

Multiple Lines of Evidence

The SQO Plan relies on the integration of three lines of evidence to determine sediment impairment. The multiple lines of evidence approach is an ineffective way to determine if sediments are contaminated and impaired. Multiple lines of evidence are not always needed to identify that there is a problem that requires a response. This is especially true for toxicity. Toxicity tests act as the "safety net" for water quality and sediment quality monitoring because monitoring programs do not test for all constituents that can cause receiving water or sediment toxicity. The goal should be that all three tests are "clean." Further, the steps proposed to integrate the lines of evidence and determine impairment is extremely complex and subjective. The individual lines of evidence should be considered on their own merit.

Also if monitoring data for all three tests are unavailable, the SQOs should still allow for a sediment assessment. Consider the hypothetical situation where multiple bioassays demonstrate toxicity, but there is no chemistry and limited community data. Under the multiple lines of evidence approach no assessment could be conducted, yet a negative impact is likely. Of note, benthic community monitoring is rarely performed in potential hotspot areas except where there is a POTW NPDES Permit.

A margin of safety acts as a "safety net" in the event that incorrect assumptions were made or unknowns exist in the development process. The California Water Code defines SQO as "that level of a constituent in sediment which is established with an **adequate margin of safety**, for the reasonable protection of the beneficial uses of water or the prevention of nuisance." Emphasis added. Despite this explicit statutory requirement, the technical shortcomings in the approach as described above are not adequately protective of beneficial uses. Further, the SQOs appear to include no measures (explicit or implicit) to incorporate a margin of safety.

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II. Application/Implementation Issues

The application of the SQOs and SQO Amendments remains unclear. Four applications of the SQOs are vaguely described in the previously released SQO Plan: sediment cleanup actions, dredged materials assessment, impairment assessment, and NPDES permit development. However as discussed in our previous comments on Phase I, there is not enough detail provided in the document to understand how implementation of the SQOs will occur. Of note, this inadequacy has become all the more evident with the release of the Draft TMDL for the Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters, which does not provide a strong rational path for the implementation of SQOs. The Staff Report states that implantation of the ERA process may be done through the NPDES permit program, but then mentions that not all regions have the resources for this. Staff Report at 32. So will the finfish and wildlife receptors be ignored in these circumstances? As written, the SQOs will be difficult for agency staff and board members to translate into decisions and effective beneficial use protections. Further discussion on this inadequacy is included in our November 30, 2007 letter (attached).

III. Narrative Water Quality Objectives

The SQO Amendments state that "...all sediment quality objectives and related implementation policies adopted in Part 1 supersede all applicable narrative water quality objectives and related implementation provisions in water quality control plans." Staff Report at 1. The State Board should not make such a blanket statement in the Amendments. This direction is very open-ended, potentially harmful to aquatic life, and should be clarified. There are numerous water quality objectives that could be interpreted to apply to sediment that should not be "superseded" by the SQOs. For example, the Los Angeles Basin Plan Amendment has a water quality objective for pesticides that states, "No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life." Basin Plan at 3-15. This water quality objective should certainly not be eliminated. The Staff Report provides several examples of narrative objectives potentially applicable to sediment but it does not definitely say what should be done. Thus, the State Board should clarify or reject this amendment.

IV. Conclusion

The Phase I SQOs and Amendments will perpetuate the status quo of impaired waters and contaminated sediments that pose an ongoing threat to aquatic life and benthic communities. Clearly, there is a great need in California for technically-sound sediment quality objectives. SQOs are extremely important to protect aquatic life and human health, streamline the regulatory process and standardize contaminated sediment regulation and management across all regions. The SQOs and SQO Amendments do not meet these goals. The approach taken is too complicated and is not fully protective of aquatic life. Further, the application of the SQOs is extremely limited. Also it is unclear if "Phase II" is going to ever going to be completed. Unfortunately, the Amendments are not adequate to protect beneficial uses and must be revisited

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by staff. We urge the State Board to take strong leadership on this critical issue and direct staff to reassess the proposal.

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

Sincerely,

Kirsten James
Water Quality Director

Mark Gold, D. Env.
President