



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY

LOS ANGELES DISTRICT CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

November 28, 2006

Office of the Chief
Environmental Resources Branch

Song Her, Clerk to the Board
Executive Office
State Water Resources Control Board
P.O. Box 100
Sacramento, California 95812-0100



Dear Ms. Her:

This letter is to forward formal comments on the State Water Resources Control Board's informational document entitled "Development of Sediment Quality Objectives for Enclosed Bays and Estuaries" dated August 17, 2006. Comments are being submitted in accordance with the recently published Notice of Status Report Workshop and Public Scoping Meeting. Comments are being submitted in lieu of oral comments at the workshop.

If you have any questions or need additional information, please contact Mr. Larry Smith at (213) 452-3846. He may also be reached by e-mail at "lawrence.j.smith@spl.usace.army.mil".

Sincerely,

Ruth Bajza Villalobos
Chief, Planning Division

**DEVELOPMENT OF SEDIMENT QUALITY OBJECTIVES FOR
ENCLOSED BAYS AND ESTUARIES**

August 17, 2006

COMMENTS

1. Issue 2.5 How should the Policy apply to dredged materials?

Sediment Quality Objectives (SQO), as defined in the subject document, applies only to surficial sediments. The discussion points out the nature of dredged materials comprising almost entirely of sediments found below the surficial layer. These SQOs, therefore, cannot, and should not, be applied to dredged materials. If an objective for these SQOs is to apply them towards dredging, as required by Section 13396, Division 7, then the SQOs should be revised to include all sediments, and not just the surficial sediments.

2. Issue 2.7 What receptors should be targeted for protection?

SQOs that are limited to surficial sediments should attempt to protect benthic communities only. Other environmental communities, such as fish, that are ecologically important, are too mobile to be directly linked to specific sediments. The use of human health is inappropriate and extremely difficult to implement. Human health risk assessments must be done on a site-specific basis and include many aspects that require the use of best professional judgment. Such a policy relying on best professional judgment, as pointed out elsewhere in the subject document, precludes the implementation of a consistent, state-wide application of SQOs. In addition, human health risk is an indirect impact based primarily on fish. Fish, as indicated above and in the subject document, are too mobile and wide ranging to be accurately tied into specific sediments. In every case that we are aware of where both an ecological risk assessment and a human health risk assessment were performed on sediments, the ecological risk assessment resulted in much lower acceptable levels of contamination; usually by several orders of magnitude. Ecological risk assessment therefore precludes the need for human health risk assessment as the ecological risk assessment is more protective.

3. Issue 2.8 How should the protected condition be defined for benthos?

It is not entirely clear why a reference site[s] is required. The SQO should provide the standard of comparison against which the sediments are compared to determine if the benthic community is impacted. We do not see the need to establish a reference site for the same purpose.

4. Issue 2.9 How should the protected condition be defined in Phase I for human health?

If human health is removed, as recommended in response to Issue 2.7 above, than this question is rendered moot and should be deleted.

5. Issue 2.16 What sediment chemistry indicators should the State Water Board use to support the proposed SQO?

All chemical-based sediment guidelines are inaccurate. One set, however, is useful for screening sediments. That set is the NOAA effects range low (ER-L) and effects range median (ER-M). They are the most rigorous and have the largest data set. The regional and state guidelines are not rigorous enough and/or accepted sufficiently to be useful. The subject document restricted

its discussion to ER-M; however, it is useful to include the use of the ER-L also as a comparison. We recommend the use of ER-L and ER-M statewide and deleting the rest.

6. Issue 2.19 What are some of the interim tools that could be applied to the Delta and other estuaries?

We recommend the selection of alternative 1. We feel that it is best to wait and implement feasible and supportable tools than to rush in with inadequate tools. We support the position of the Scientific Steering Committee on this issue.

7. Issue 2.20 Should interim tools sunset in SQO Plan?

Should interim tools be implemented, a position we do not favor, we recommend that a fourth alternative be considered and adopted. That alternative is: "Alternative 4: Provide language that sunsets interim implementation tools when development of Phase II tools is complete."

8. Issue 2.21 How could the SQOs be applied?

This issue is missing the Baseline, Alternatives, Staff Recommendation, and Suggested Policy Language format used in all of the other issues. Without these sections, we cannot determine how the subject document resolves this issue.

9. Issue 2.23 How should the SQOs be used to determine if a water body is impaired?

The recommended alternative, Alternative 3, is unacceptable as it continues the practice of each individual Regional Board implementing its own criteria for listing water bodies as impaired. An alternative that includes a single state-wide approach should be developed and implemented.

10. Issue 2.24 Could the SQOs be applied within National Pollutant Discharge Elimination System (NPDES) permits?

We feel that Alternative 1 (Do not address implementation of SQOs in NPDES permits) is the most appropriate alternative. There are no valid, consistent relationships between the concentrations of contaminants in water and sediments to enable the preparation and use of "translator tools" to go from sediment SQOs to NPDES effluent limits. The attempt to apply SQOs to NPDES permits will only result in permit delays, potential litigation, and the potential loss of NPDES permit participation in such regional monitoring programs as the Bight programs. NPDES permittees, being faced with yet another monitoring program, could decide not to participate in future Bight programs, jeopardizing the Bight programs funding.

11. Issue 2.25 Should the Plan include follow-up actions for permittees when an exceedance occurs?

If SQO application to NPDES permits is removed, as recommended in response to Issue 2.24 above, than this question is rendered moot and should be deleted.

Alternative 2 is too costly, too time consuming, and too prone to litigation to be useful.

12. Section III Beneficial Uses

Table 3.1 lists five beneficial uses that are "protected by this policy". We agree that estuarine habitat and marine habitat uses are protected by the implementation of SQOs. However, we do not agree that Commercial and Sport Fishing, Aquaculture, and Shellfish Harvesting are in any

way protected by the implementation of SQOs. Please delete them from the table. The uses are protected more by limits placed by water quality criteria than they are by sediment quality.

13. Section V. F. Assessment of sediment toxicity.

This section discusses the use of three species for toxicity testing and two species for sublethal testing without addressing selection of the species to be used for testing a particular site. Without specifying standard selection criteria the selection is left to best professional judgment eliminating and statewide consistency in the process.

Table 3.4 lists criteria for determining the level of responses from sediment toxicity. There are two issues relative to this table in its current form. First, a reduction in survival without including a statistical test between test and reference sediments is not useful. A toxicity test with 85% survival has entirely different meaning if the reference survival is 90% as compared to 100%. Simply basing the rating on the test survival per cent will yield incorrect ratings. The second issue is that the Low Effect column contains the modifier "percent" while the moderate and high effects columns contain the modifier "percent relative to control". No indication is given how to calculate percent relative to control. Explicit instructions should be included to preclude confusion and to ensure consistency.

Paragraph 4 Integration of sediment toxicity data is confusing and vague. How can you take the average value and apply to a table with unequal values? For example, we did Eohaustorius survival testing and got 85% survival and a low effect and Mytilus normal testing and got 75% also a low effect. Averaging the two yields 80%. If we use the Eohaustorius survival row that equates to a moderate effect. If we use the Mytilus normal row we would get a low effect. Integration procedures should be more detailed and clearer for consistent use thereof.

14. Section V. G. Assessment of benthic community condition.

Paragraph 3 simply states "Calculation of Benthic Condition." with no further explanation. Additional text to explain and specify is required.

Paragraph 5 Integration of benthic community data is confusing and vague. Integration procedures should be more detailed and clearer for consistent use thereof.

15. Section V. H. Assessing exposure to toxic pollutants in sediment.

The list of contaminants assessed using this methodology is too limited for the method to be of any practical value. Too many known contaminants are not included in this method. For example, there is no measure of petroleum hydrocarbons included. A major oil spill would not change the chemical exposure category for the affected sediments. Organotins and several common chlorinated pesticides (i.e. aldrin, dieldrin, endrin, etc.) are not included that could render the sediments toxic.

Equation 1 and the use of Table 3.5 to calculate a benthic category score (CCS) is not clear. Equation 1 uses a value referred to as "cat" where the table uses T1, T2, and T3. Which value (T1, T2, or T3) is used for cat in the equation is not clear.

The paragraph Integration of sediment chemistry data is confusing and vague. Integration procedures should be more detailed and clearer for consistent use thereof.

16. Section V. I. Implementation of MLOE.

Tale 3.8 please change the category "POLLUTANT CATEGORY" TO "POLLUTANT EXPOSURE" to be consistent with the previous text.

17. Section VI. Human health.

If human health risk assessment permits is removed, as recommended in response to Issue 2.7 above, than this section is rendered moot and should be deleted.

18. Section VII. A. Receiving water limits.

If applying SQOs to NPDES permits is removed, as recommended in response to Issue 2.24 above, than this section is rendered moot and should be deleted.

19. Section VII. B. Sediment monitoring.

Paragraph 2.a. states that "Where the State Water Board or Regional Water Boards believe there is the reasonable potential that toxic or priority pollutants discharged by a Permittee may accumulate in sediments . . .". This language is unacceptable as it imposes what could be a very expensive monitoring program that is potentially based on no evidence whatsoever. This essentially states "sediment quality shall be required" based solely on the belief that there is "reasonable potential". Imposition of sediment quality monitoring should be based on sound science and a proven contribution to an SQO exceedance and not the belief of a potential contribution. This type of language has led to the imposition of impaired status on waters that are not impaired, but that now cannot be delisted.

Paragraph 4 contains a reference to "the methods and metrics described in Section 5." Unfortunately, Section 5 is the References and so contains neither methods nor metrics.

There are two paragraph 5's; one entitled Design and the second Index Period.

Paragraph 5 Design, subparagraph d calls for the "Identification of appropriate strata . . ." in the design of a sediment monitoring program. A sediment monitoring program that is designed to monitor for SQO exceedances need only be limited to the surficial sediments, as this is the only layer where the SQO applies. Please delete this subparagraph.

Paragraph 5 Index period establishes a requirement that sampling occur June through September. What is the purpose of this limitation? Such a limitation could result in the shortage of appropriate sampling vessels and teams and should be clearly explained and rationalized.