Comments on California Water Resources Control Board (SWRCB)
May 24, 2012 Sediment Quality Objective (SQO) Meeting
Submitted to Steve Bay (Southern California Coastal Water Research Project) &
Chris Beegan (SWRCB)

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Steve and Chris,
In response to Steve's request for comments on the updated SQO conference-call facilities, I wanted to let you know that I found that this was the best of the conference-call facilities I have experienced for the SQO meetings. In fact, the quality approached the quality of facilities used in conference-call meetings in which I have participated with the US EPA, Delta Stewardship Council, SWRCB, and several other organizations. One of the problems I found, however, was that some of the comments made by in-house commenters were not audible.

I was disappointed to learn that the Delta sediment quality evaluation will apparently not be developed. This is a significant deficiency in the current SQO Phase II program.

I was also very discouraged to learn, based on Chris' comment, that co-occurrence-based ERLs/ERMs are being used by some regional boards to evaluate the excessive concentrations of bioaccumulatable chemicals in aquatic sediments; such use gives the false impression that there may be some technical validity to that approach. I have been involved in evaluating the role of sediment-associated chemicals as a source of bioaccumulatable chemicals in fish since the mid-1960s, have investigated the technical foundations of the co-occurrence approaches, and indeed was responsible for the development of some of the data that some have misused in that effort. The use of co-occurrence-based approaches should be unequivocally and resoundingly rebuked as technically invalid whenever they are even suggested for such use. To do otherwise is to give tacit, or overt, support for inclusion of misleading and unreliable information in sediment quality evaluation and for the waste of public and private funds in any actions taken based in any way on the results of such approaches.

Based on the presentation concerning the current status of development of the so-called Phase II SQOs, the SWRCB is a very long way from developing reliable SQOs for chemicals that tend to bioaccumulate in fish tissue to the point of threating the health of consumers. The status and trajectory of SQO development are not pointed toward achieving a reliable approach that the regional boards can and will use to properly evaluate the role of chemicals in sediments in contributing to excessive levels of chemicals in fish tissue. What is being discussed are incredibly complex models with extensive requirements for numeric coefficients and factors that must be guessed at, at best; model output and conclusions drawn are, however, dependent on the reliability of those unreliable or questionable guesses. Even if the reliability of some of the

model input values could be expeditiously improved, reliable and affordable application of the models would be beyond the capability of the regional boards.

As I commented on the Phase I SQOs and now the Phase II SQOs, the focus of the effort should have been and still should be providing technically sound guidance to the regional boards for developing the information needed to identify sediments that need to be remediated. Because of the nature of sediment-associated contaminants and their bioaccumulation within edible organisms, these assessments must be site-specific; the areas needing assessment need to be triaged based on evidence of existing bioaccumulation of chemicals of concern in aquatic life. For sediments identified as significantly contributing bioaccumulatable chemicals in edible fish such that their consumption threatens human health or wildlife, the focus of remediation should be on the efficacy of commonly used, cost-effective remediation approaches for contaminated sediment, such selective dredging, and source-control for those chemicals that are still being added to the waters.

As we have discussed in our comments, there are still important technical issues that need to be addressed to properly implement the Phase I SQOs into technically valid, cost-effective sediment remediation approaches; the most important is the development of reliable stressor identification approaches.

Based on the comments made at the recent SQO meeting, both time and funding are insufficient to enable the development of technically valid, cost-effective approaches that the regional boards can and will use to properly address polluted sediments that are significantly impacting beneficial uses of waterbodies. The net result is that the regional boards will continue to use technically invalid co-occurrence approaches to classify sediment quality and establish sediment remediation goals.

Fred