

Sediment Quality Objectives Stakeholder Advisory Committee

Meeting Summary

October 9, 2012

Note: The list of attendees and the meeting agenda follow the meeting minutes. Additional materials from the meeting (PowerPoint presentations) have been sent to each Committee member and interested party along with this meeting summary.

Another note: The summary captures the major issues presented and discussed during the meeting, though they are not intended as an exhaustive record of all comments made. Where it contributes to the readability of the summary, discussion of the same issue that occurred at more than one place during the meeting is summarized together. Items on which the Committee expressed general agreement are indicated **in bold**, although it is important to emphasize that the Committee did not vote on these items. General agreement was assessed by the facilitator although no votes were taken. Specific commitments by State Board staff, SCCWRP, the facilitator, or Committee members are also indicated **in bold**.

Meeting objectives

The objectives of the meeting were to provide an update on the SQO development schedule, identify key issues from stakeholders' perspective, and hear information about local TMDL efforts related indirect effects.

SQO schedule update

(See slide #2 in the presentation "Adv comm mtng 10-09-12 Issues Summary.pdf" distributed with these notes)

Chris Beegan summarized the proposed time line extending into 2015 and said this is the timeline he will propose to State Water Board executive management. The extended schedule will allow time to address technical and implementation issues and to work through these with the stakeholder committee.

Discussion and comments included the following:

- Chris Beegan stated that a good opportunity for stakeholders to begin discussing and preparing flowcharts, ideas, draft language, and other input to the policy would be after he distributes a draft strawman in the first quarter of 2013
- The science team's interaction with the Scientific Steering Committee (SSC) is essentially complete and they will not be involved as the policy development moves forward from here

Summary of issues

(see slides #3 - #10 in the presentation "Adv comm mtng 10-09-12 Issues Summary.pdf" distributed with these notes)

Discussion and comments on the topics identified in the presentation slides included the following:

- Purpose of each tier (slide #4)
 - The definitions of tiers 2 and 3 are still somewhat ambiguous

- The outcome categories still need labels / names
- Tier 2 study design (slide #5)
 - Most of the focus should be here, on ensuring there is good information on the tissue / sediment linkage
 - The five ingredients listed will determine whether Tier 2 is appropriate for the situation or not
- Tier 3 criteria (slide #6)
 - How would the transition from Tier 2 to Tier 3 be accomplished?
 - What conditions would / could be associated with moving from Tier 2 to Tier 3?
 - Perhaps a decision tree could help
 - Stakeholders would prefer not to be impeded from moving to Tier 3 if it is in their interests; regulators, on the other hand, do not Tier 3 to be used simply as a delaying tactic; there should be some bounds or prerequisites for moving to Tier 3
 - An uncertainty analysis could be used as a criterion for moving to Tier 3
 - Chris Beegan pointed out how helpful it was in Phase I development when stakeholder subgroups developed implementation flowcharts; that could also be useful here
- Post assessment outcomes (slide #7)
 - What scale would management focus on (site, waterbody)?
 - How would TMDLs be managed?
 - How would TMDL targets be set, e.g., with the decision support tool (DST)?
- Off ramps (slide #8)
 - Offramps for Phase II would be anything that shows the sediments are not linked to fish tissue levels, e.g., low site fidelity, evidence that fish are picking chemicals up elsewhere, evidence that the water column is not linked to sediments, consumption patterns that show there is no pathway from contaminated fish to humans
- Other sources of information (slide #9)
 - Criteria for using offsite information and for demonstrating their importance as contributor to fish tissue are critical
 - It is not clear how this would be accomplished in implementation
- Program applications (slide #10)
 - The SQO would be interpreted as receiving water limits under the NPDES program
 - There is some dissatisfaction with the current listing/delisting policy, but the biological objectives policy being developed now will probably require changes to the listing policy

Additional comments included the following:

- The policy's narrative objective includes a potentially wide range of chemicals, although the initial implementation and the DST focus on legacy organochlorines. However, these are not being manufactured at present and much of the source control for these compounds has been accomplished. Because of differences in pathways and effects, actions taken to respond to organochlorine impacts may not be suitable for newer classes of compounds
- The Phase II policy is focused on risks stemming from human consumption and the related foodwebs; wildlife are not a focus of the present policy
- Development of benthic index assessment tools for direct effects on sediment communities in the Delta was not successful and there is not enough sediment toxicity to produce the gradients needed to develop and validate such tools. The current focus is therefore on bioassessment rather than SQO direct effects
- The SQO for indirect effects is not directly linked to the mercury policy, which is a separate effort with its own process. In addition, mercury involves a separate conceptual model and there are not resources available to include that in the Phase II approach and DST. In addition, mercury contamination is less likely to be due to localized local sources that could be addressed by permittees

- Direct chemical effects on sediments may be due to newer chemicals and not to organochlorines, even though TMDLs are being implemented for organochlorines and unwinding the organochlorine listings is difficult
 - Chris responded that this emphasizes the importance of stressor identification as an essential step in the Phase I SQO. He has some funding to support additional work on stressor identification tools, although the perception is that existing tools are generally not very successful. Steve Bay is working with Regional Water Boards interested in having better stressor identification tools. This might result, for example, in more guidance on sediment toxicity testing and information on chemical-specific toxicity thresholds. This project will be developed over the next few months. Chris Beegan noted that this is a statewide issue
 - Chris suggested that new information showing that, for example, direct effects are due to pyrethroids and not DDT, though both are included in a TMDL, would best be addressed through the listing policy. The State Board wants to ensure that Regional Boards understand the importance of targeting management actions at those chemicals responsible for the biological response
- This and other work may result in chemical-specific threshold levels, with the goal of providing better cleanup values for situations with direct effects; however, such threshold levels would probably not be rigidly applicable statewide because of differences across locations. In addition, there are often differences between species' responses in the lab and in the field
- The offramp for Phase I direct effects is designed to identify those situations where changes or impacts to the benthic community are not due to toxic chemicals, but to other factors. While such non-chemical stressors may fall under other policies, they can also be difficult to identify and quantify. Chris Beegan emphasized that the SQO's focus is on effects due to toxic chemicals
- The assessment matrices for the Phase I SQO describe how to interpret all possible combinations of response for the three lines of evidence
- There is some additional funding available to update the DST with new information if needed; some of this may come from the case studies and other beta testing
- In terms of a suggestion to add pyrethroids to the list of chemicals in the DST, Steve Bay responded that the primary effect of pyrethroids is through direct effects on sediment communities, not bioaccumulation, and there are tools in the Phase I SQO to handle that
- The SWAMP statewide assessments give some idea of the chemicals of greatest concern for human seafood consumption, e.g., DDT, PCBs, mercury. DDT has a few hot spots but there are limits on the management response(s) possible because of its legacy nature
- Regarding the DST
 - There are some remaining stakeholder concerns about how the DST deals with fish feeding guilds and this could be a focus of attention in the case studies and a topic for further discussion; it will also be something to examine as the project team addresses the SSC's final recommendations. An evaluation of the impact of the guild integration step will be included in the team's response to the SSC and this will also be made available to the stakeholders. After hearing back from the SSC would be a good time to make a decision about whether to consider this issue any further
 - However, the basic structure of the DST is complete and the SSC's involvement essentially done; the goal from here on is to ensure the DST works as advertised and to make sure that its structure, operation, and limitations are well understood
 - Steve Bay said that the current version of the DST is available to any stakeholders who want to work with it and try it out on their own data
 - The DST allows for different assumptions about human consumption rates; there is no state standard for this risk factor
 - The potential that the DST might produce different results than OEHHHA's risk assessment is a key issue for State Board staff. OEHHHA uses 10^{-6} for the Fish Consumption Goal (FCG) and 10^{-4} for the Advisory Tissue Level (ATL). Chris has identified this as a key issue for the Board and a

- decision about what risk level to use has not been made. One option would be to select a middle-of-the-road option, using 10^{-5} for the risk level and 32 g/day as the consumption rate
 - Additional testing of the DST and its use in case studies will produce information about where additional development in the future could improve the tool
- Stakeholders were concerned about how to move forward with Phase I given that Phase II is not yet complete and that sites and waterbodies subject to both phases will overlap. Chris replied that this has not yet been determined, although the Phase I policy included a provision that permittees could continue on a pathway if it had started before the policy was adopted.

Steve Bay identified key points from this discussion as:

- Need for identifying triggers / criteria for moving to Tier 3
- Identifying offramps more clearly
- Reviewing how the DST integrates feeding guild information in Tier 2
- Developing policy language to deal with projects that are underway when the policy is adopted
- Developing an approach to deal with conflicting assessments, e.g., DST vs. OEHHHA

Information on assessment tiers

(see slides #11 - #15 in the presentation “Adv comm mtng 10-09-12 Issues Summary.pdf” distributed with these notes)

Steve Bay presented a more detailed picture of the structure of Tiers 1, 2, and 3 and how they relate to each other.

Additional comments and discussion included the following:

- Results of Tier 3 would override results of Tier 2 if they conflict, but in the context of the requirement that specific criteria would have to be met to move to Tier 3
- This is similar to the process for developing a site specific objective (SSO) and the SSO decision trees might be a starting point for developing analogous criteria for the SQO
- In theory, a listing could be based on results of Tier 2. However, the State Board has several policies that disagree with or do not quite fit with the existing listing policy; hopefully these will be resolved. Until and unless the listing policy is revised, it must be complied with
- Slide #15 on post assessment outcomes is intended as a starting point for developing guidance for Regional Boards; this will be an area where stakeholders could have useful input
 - Suggestion that one approach to meeting the fishable beneficial use could be to identify which fish should or should not be consumed (i.e., consumption advisories); this would be an alternative to large-scale and expensive cleanups
- Chris stated that there are no current plans to include remedial action or changes to permit limits in the policy, but he welcomes ideas and draft language for discussion and consideration

Local TMDL efforts

(see presentation “Adv comm mtng 10-09-12 Ports TMDL Studies.pdf” distributed with these notes”

Staff from the Ports described the TMDL and modeling runs to apply the Tier 2 assessment of sediment contributions to fish tissue contamination levels.

Discussion and comments on the topics identified in the presentation slides included the following:

- This case study provides an opportunity to learn more about the appropriate spatial scale(s) for Tier 2 assessment
 - The Tier 2 results are representative of the area but not necessarily useful in targeting management actions
 - Steve Bay hopes that this and other case studies will illustrate issues and provide detailed results that will inform development of the policy and its implementation guidance
- The case study highlights other key issues, such as quantifying the strength of the link between sediment and fish, whether the assessment accurately captures the spatial heterogeneity known to exist, how to represent the impact categories spatially, and how to achieve more resolution
- Parts of the Ports are under different management authorities / mandates; an important implementation issue is how to integrate across different jurisdictions
- What are the implications for Phase 1 results, which might target specific subsections of a harbor, if Phase 2, which integrates over larger scales, later shows that the entire harbor is a concern? For example, Consolidated Slip might rise to the level of concern under Phase 1 that would lead to a cleanup, but it may not contribute enough to the system-wide contamination to reduce overall levels of tissue contamination
- Phase I and II should be considered together somehow, perhaps in a phased approach that addresses the highest priority areas first and that will require balancing the costs and benefits of different regulatory / management approaches (e.g., TMDL and source control, dredging and cleanup)
 - A site / area could be delisted for direct effects while the fish associated with the site / area still have high tissue levels if Phase I and II are applied separately
 - However, need to recognize that Phase I and II focus on different chemicals, with some overlap
 - A phased approach could focus on more localized actions to address direct effects under Phase I and then move to Phase II in an adaptive management approach
 - Implementation language for Phase I may need to be revised to account for integration with Phase II
- Any such choice of approach will also have to select a target (e.g., background, water quality objective or in best interest of people of the state). The DST could help in this process by evaluating alternative scenarios, such as sequentially removing hotspots and seeing what effect that has on tissue levels
- Fish tagging studies that show fish moving back and forth from the harbor to the Palos Verdes Shelf highlight the importance of addressing the issue of model scale and how to deal with inputs from sediments outside the management area. Perhaps more regional approaches are needed. Sediment itself is not moving between the two areas but they are connected via bioaccumulation processes through fish movement
- This finding and modeling results that indicate that even dramatic cleanup would not reduce tissue levels as desired raise the question of how the Phase II policy would be used in the TMDL context
 - The DST could be used to explore the implications of different management actions; however, this would likely require a Tier 3 type of assessment
- Chris Beegan wants to use this and additional case studies to ensure that he is asking the right questions about developing the policy, particularly the implementation guidance. This will include
 - Identifying and resolving issues related to the conceptual design of the policy
 - Evaluating and incorporating technical results from DST applications into the policy
 - Using the Stakeholder Advisory Committee as a discussion forum and sounding board

Participants agreed that the interaction with the Ports should be continued and used as an opportunity to explore and evaluate additional issues related to the DST's structure and to policy

implementation. This should be extended to include other case studies over the next year, with the goal of applying the DST and draft policy framework where adequate data are available.

Next meeting and next steps

A date for the next Advisory Committee has not been set.

Next steps include:

- Identify and implement additional case studies
- Steve Bay to follow up with the SSC and complete their input and recommendations
- Chris Beegan to produce a strawman policy framework in early 2013 that will serve as a starting point for more focused discussion with stakeholders, including preparation of draft language for the policy
- Schedule a joint meeting of stakeholders and regulators to enable them to think together about complex implementation issues

Attendees

Name	Organization	Representing	Position
<i>Staff</i>			
Steve Bay	SCCWRP		
Chris Beegan	State Water Resources Control Board		
Brock Bernstein	Facilitator		
<i>Committee</i>			
Chuck Anthony	Latham & Watkins	Legacy Pollutants	Primary
Karen Cowan	Larry Walker Associates	POTWs	Primary
Kathryn Curtis	Port of Los Angeles	Ports	Primary
Lisa Haney	Orange County Sanitation Districts	POTWs	Alternate
Susan Paulsen	Flow Science	Industrial Direct	Primary
<i>Other Participants</i>			
Shelly Angherea	Anchor QEA		
Matt Arms	Port of Long Beach		
Bob Brodberg	OEHHA		
Andrea Crumpacker	Weston Solutions		
Will Gala	Chevron		
Phillip Gibbons	Port of San Diego		
Rich Gossett	Physis Environmental Labs		
Dominic Gregorio			
Tom Grovhaug	Larry Walker Associates		
Joe Gully	Los Angeles County Sanitation Districts		
Karen Holman	Port of San Diego		
Sheila Hold	Weston Solutions		
Scott Johnson	Aquatic Bioassay & Consulting		
Anna Jones-Lee	G. Fred Lee & Associates		
Fred Lee (P)	G. Fred Lee & Associates		
Chris Lieder	Geosyntec Consultants		
Shokoufe Marashi	City of Los Angeles		
Danny McClure (P)	Central Valley Regional Water Board		
Laura McWilliams	Haley and Aldrich		
Chris Patton	Port of Los Angeles		
Jian Peng	County of Orange		
Ying Poon	Everest Environmental Consultants		
John Rudolph	AMEC		
Kasey Skrivseth	Nautilus Environmental		
Chris Stransky	AMEC		
Chi-Li Tang	LA County Sanitation Districts		
Clayton Yoshida	Los Angeles Dept. Water & Power		
Charlie Yu	City of Los Angeles		
Audrey Winters	Brown & Winters		

Agenda - CASQO Advisory Committee

Agenda

Sediment Quality Objectives Advisory Committee Meeting

October 9, 2012, from 9:30 to 3:00

Southern California Coastal Water Research Project

3535 Harbor Blvd., Suite 110, Costa Mesa, CA 92626.

9:30 – 9:45	Introductions	Brock Bernstein
9:45 – 10:15	SQO Development timeframe	Chris Beegan
10:15 – 10:45	Summary of issues identified at previous meeting	Chris Beegan, Steve Bay
10:45 – 12:00	Priorities and other issues	Brock Bernstein
12:00 – 1:00	Lunch (\$8.00)	
1:00 – 1:30	Local TMDL efforts related to indirect effects	Kathryn Curtis, Matt Arms
1:30 – 3:00	Process and future meeting schedule	Brock Bernstein