Biological Objectives Stakeholder Advisory Group

Meeting Summary

September 30, 2011

Note: The list of attendees follows the meeting minutes. Additional materials from the meeting (agenda, presentations) have been posted on the project website (http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml).

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 Group expressed general agreement are indicated **in bold**, although it is important to emphasize that the Group did not vote on these items and achieving consensus is not a goal of the Group. Specific commitments by State Board staff, SCCWRP, the facilitator, or Group members are also indicated **in bold**.

Meeting objectives

The objectives of the meeting were to:

- Provide a technical update, particularly on the development of the observed / expected model and the statewide stressor analysis
- Describe the pilot study and obtain feedback on the interim results

Notes on the discussion are organized according to the major topics addressed.

Defining reference condition

- The definition of reference condition and the selection of reference sites are not based on the biology at candidate sites; this would be circular. Instead, reference sites are defined based on the absence of anthropogenic disturbance; the biological condition at those sites is then the reference condition
- The Central Valley will have to be dealt with as a special case because there is only one site in that region that met the criteria for reference. These alternative methods are outlined in an earlier report on reference conditions
- There are geologic formations, and other natural features, throughout the state that have the potential to affect biological condition in ways that can mimic anthropogenic disturbance. The scoring tools used in the analysis of reference condition are capable of accounting for such natural sources of disturbance; in addition, the stressor identification step that will be part of local and regional assessments should be adequate to identify such natural sources of disturbance

Scoring: observed / expected and multi-metric index

- In terms of the comparison between the observed vs. expected and the multi-metric index approaches, they have complementary strengths and weaknesses; the advantages of one mirror the disadvantages of the other
- Both scoring approaches are only somewhat sensitive to relative abundance; they mostly reflect presence / absence

Causal assessment case studies

- The three case studies will follow the CADDIS protocol developed by USEPA and which is available at www.epa.gov/caddis
- One approach to causal assessment may not be readily applicable to all regions of the state; the project team is open to suggestions about how the causal assessment framework could be adapted to different situations, and this is one of the main goals of the case studies
- The case studies are also intended to provide generic insights about the process of causal assessment and are not meant to be deterministic methods applied rigidly everywhere
- The case studies will begin before the technical work on the assessment methods is completed, but this will not be critical. The causal assessment case studies can be productive with a less precise description of the range of biological conditions and the available tools are sufficient for that purpose
- The causal assessment case studies will progress as far as possible within the limits imposed by time, the available data, and the degree of participation by local partners. There are two metrics of success, one technical and one managerial. Case studies will be a technical success if they can identify a list of candidate causes and categorize them. They will be a management success if they produce results that provide a basis for decision making, i.e., what to do about causes of impairment
- In terms of how causes are identified, CADDIS produces a semi-quantitative description of causes, using a scoring system. Other potential approaches are more quantitative
- USEPA will provide support for the use of CADDIS and the project team will learn more about CADDIS once the case studies begin. But it is important to keep in mind that CADDIS is not a set of diagnostic criteria; it is a process and a set of technical tools

Pilot study results

The pilot study was conducted in response to the Science Advisory Group's request to do a complete assessment in a realistic setting. The pilot study looked at the four alternatives defined in the CEQA scoping document and applied the regulatory and assessment framework using results both with and without an uncertainty factor applied.

- One important issue is how many years of data to include in the assessment, or how many separate iterations of the assessment over successive years to conduct, before making a judgment about conditions
- One benefit of including an "uncertain" category in the assessment results is that it increases confidence in the "impaired" and "good" categories
- Another benefit of the uncertain category is that it identifies where more data / information, in an adaptive sampling framework, would be particularly useful
- There are several issues to consider in developing adaptive sampling designs, including how to deal with intra- and interannual variability, whether to conduct the assessment on individual sites or groups of sites, and whether to schedule assessments according to permit cycles
- It may be useful to include a "wait and see" option (a common option in formal decision analysis) as part of the regulatory and assessment framework; this would provide time for adaptive sampling to produce results
- The different timing of the moving parts in the system (e.g., permit cycle, assessment timeframe, ecological processes) may be difficult to accommodate, although there are exceptions built into the regulatory and assessment framework to help deal with such issues
- The pilot study results highlighted questions about how many results that fall into either "good" or "bad" categories would be needed to list / delist a waterbody. While permittees would have the option to collect additional samples in an attempt to delist, the results might depend on the sampling frequency and/or timing and might not reflect true natural variability. **The advisory group agreed that it would be worthwhile to work through an actual exercise**

- The choice of the 90th percentile of the distribution of scores at each degree of anthropogenic disturbance as the cutoff for determining impairment was a policy choice; it is intended to establish the best attainable goal for that level of disturbance, although some considered that to be overly optimistic. On the other hand, use of low impact development and similar methods could reduce the effective impacts of impervious surface and make this threshold more attainable. Different thresholds could be modeled and the ultimate decision will be a policy decision
- While sites in the non-reference category must meet the 90th percentile expectation, sites in the reference category do not; they merely need to meet the minimum threshold of the parameters that define reference
- The pilot study presents results at the watershed scale, while most compliance monitoring programs look at a much more restricted scale relevant to individual discharges or to smaller drainage areas; Karen Larsen suggested it would be more useful to prioritize problems on the watershed scale, an approach that might require watershed permits
- Tier I and Tier III waters, as illustrated in the regulatory and assessment framework, would be defined with a broader set of criteria than just the results of the biological assessment used for this policy
- There were substantial concerns about the potential consequences of a prohibition of new discharges in a Tier III area, especially if this includes nonpoint sources. In such cases, this could have a significant impact on the timber industry. There are similar issues related to whether / when implementing the policy would require crossing into local landuse decisions. The eventual distribution of decision-making authority remains uncertain, and the regulatory and assessment framework at this point is a draft intended to elicit issues such as these
- The term "habitat" needs further definition, especially when/if applied to constructed habitats such as agricultural drains
- There must be more discussion about how far the policy (and other associated policies) will go in attempting to reverse built infrastructure; it may be appropriate to add offramps at certain points in the policy's decision framework, especially in the parts dealing with habitat
- It is not yet clear how a TMDL would be written to deal with biological impairment; it could, for example, apply a load allocation to a key causal factor / stressor, but not all stressors are amenable to loads calculations. The ultimate TMDL goal would probably be a biological target
- Objectives (e.g., biological objectives, toxicity) will be applied independently. However, regional boards have the flexibility to relax requirements on, for example, toxicity if other aspects of aquatic life, for example, macroinvertebrates are doing well. Such relationships across policies have not been resolved. In addition, the State Water Board's goal is to develop objectives for additional indicators, e.g., fish
- The policy should make allowances for moving from tier to tier if, for example, restoration efforts improve habitat conditions

Next meeting and next steps

The next meeting of the Stakeholder Advisory Group has not yet been scheduled.

Attendees

Name	Organization	Representing
Staff		
Brock Bernstein	Facilitator, Committee Chair	
Karen Larsen	State Water Board	
Peter Ode	CA Dept. Fish and Game	
Ken Schiff	SCCWRP	
Stakeholder group members		
Susie Santilena	Heal the Bay	Environmental Protection
Ed Struffenegger (P)	CA Forestry Association	Forestry / Timber
Perry LeBeouf (P)	CA Dept. Water Resources	Management Agencies
Mark Daniel	LA County Vector Control District	Mosquito Abatement
Theresa Dunham	Somach Simmons & Dunn	Pesticide Manufacturers
Phil Markle	LA County Sanitation Districts	POTW
Other participants		
Arne Anselm	Ventura County Watershed Protection District	
Lauren Bauer	Kern County Water Agency	
Steve Bay (P)	SCCWRP	
Jennifer Brown	City of Malibu	
Lucy Buchan	EOA, Inc.	
Lilian Busse (P)	San Diego Regional Water Board	
Rebecca Challender	USDA-NRCS	
Jan Dougall	Las Virgenes Municipal WD	
Christine Gracco(P)	Brown and Winters	
Bill Grieman	Orange County Public Works	
Ann Heil	LA County Sanitation District	
Emiko Innes	LA County Department of Public Works	
Bill Isham	Weston Solutions	
Jen Kovecses	San Diego Coastkeeper	
Ben Livsey (P)	Water Boards	
Kevin Lunde (P)	Water Boards	
Dan Merkley	Ca.Farm Bureau Federation	
Kelly Middleton (P)	San Gabriel Valley Mosquito Abatement	
Ewelina Mutkowska	County of Ventura	
John Netherwood	The Boeing Company	
Jeff Orrell (P)	Brown and Winters	
Karin Patrick	Aquatic Bioassay	
Travis Pritchard	San Diego Coastkeeper	
Robert Rodarte (P)	Orange County Public Works	
Jennifer Shepardson	City of San Bernardino Munic. Water Dist.	
Vicki Shidell (P)	City of Vacaville	
Marco Sigala(P)	Moss Landing Marine Laboratories	
Bethany Soto	Water Boards	
Tom Suk (P)	Lahontan Regional Water Board	
Jennifer Thiemann	EMR	
Becky Veiga (P)	Water Boards	
Jennifer Voccola (P)	City of Malibu	
Jo Ann Weber (P)	County of San Diego	
Lori Webber (P)	Water Boards	

Name	Organization	Representing
A. Wenzel (P)	Water Boards	
Josh Westfall	LA County Sanitation Districts	

(P) indicates remote participation by phone and Webex