

Biological Objectives Stakeholder Advisory Group

Meeting Summary

April 6, 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 policy update, particularly on the upcoming CEQA scoping meeting
- Provide a technical update, particularly on the reference condition studies and plans for the pilot studies
- Preview the issues to be discussed at the upcoming Scientific Advisory Group meeting on April 20 – 21
- Discuss approaches for defining categories of stream modification and setting appropriate expectations for each category

Policy update

(see presentation “Biological Objectives for California Streams – Regulatory Update” posted on the project website http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml).

Karen Larsen summarized the intent of the policy and progress to date. She also described upcoming activities and the project’s overall timeline.

Discussion highlighted several issues and clarifications:

- The policy will include specification of standardized methods defined by SWAMP
- The accuracy and precision of these methods should be clearly described so that assessment results can be interpreted adequately; precision estimates are incorporated into the scoring tools but must be addressed as part of an overall site assessment result
- The policy or Implementation Plan will include numeric endpoints and tools for scoring raw invertebrate species counts. One approach being considered is similar to that already in use in northern and southern California and the eastern Sierra, based on IBI scores and the number of individuals of different major taxa. A second approach is based on modeling to establish the expected

species composition; the observed species composition at a site would then be used to calculate an Observed vs. Expected (O vs. E) ratio

- The policy's long-term goal is to include multiple indicators and endpoints, but it is beginning with macroinvertebrates because of the existing base of knowledge and experience
- Invasive species are being considered in the description of reference conditions and the Expected species composition, although this issue has not yet been completely resolved
- Management responses to a finding of impairment must be defined. While stressor identification is a logical first step, this can be difficult to accomplish and is not always completely successful. There may be a useful role for the state to play in defining a basic set of relationships that would identify a likely set of stressors for different types of biological responses in different situations
- Change due to natural disturbances and stressors will be considered in defining reference and setting expectations
- This would be especially helpful in the listing process where biological effects must be linked to specific pollutants; the existing listing process may need to be amended to respond to the assessment results of the bio-objectives policy
- How will the policy deal with situations where the stressor or cause of impairment is outside the spatial scope of the project or responsible party?
- Any finding of impairment that then results in mitigation requirements related to invasive species should account for the extreme difficulty and expense (e.g., \$50,000 - \$100,000 per acre for Arundo removal) involved in removing most invasive species. In addition, some well-established pervasive species cannot be completely removed, only managed
- What timeframe for response will be allowed?
- Will case by case exceptions to the assessment framework be allowed to help deal with complex situations?
- Policy implementation guidance should carefully consider the amount of responsibility placed on regional water board staff in terms of their interpretation of numeric limits
- The three main alternatives that will most likely be included in the CEQA scoping document include 1) no project, 2) identify only healthy streams and apply the antidegradation policy to ensure their protection, and 3) identify both healthy and degraded streams and implement plans to restore degraded streams

Technical update

(see presentation "Technical Progress Report and Scientific Advisory Group Update" also posted on the project website http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml).

Ken Schiff reviewed the project workplan and progress to date, focusing in particular on efforts to define reference condition and select metrics and thresholds that would result in an adequate number of reference sites throughout the state. Discussion highlighted several issues and concerns:

- For now, the project is using the default GIS layer for perennial, wadeable streams in NHD+, but recognizes that adjustments may need to be made to include local information. In fact, NHD is seeking local information to improve the database. Ultimately, the project must deal with distinctions among stream types such as effluent dominated streams or agricultural drainage ditches, which may fit the broader definition of perennial stream
- It will be important for programs to use common definitions; e.g., different buffer sizes are required for perennial vs. intermittent streams in forest management programs there is the potential for different programs to require the same manager or permittee to do different things
- The decision about where to set the thresholds that define "minimally disturbed" should take account of the following:

- Nitrogen and phosphorus have natural sources as well as inputs from aerial deposition, which may complicate their use as indicators of local or even regional anthropogenic disturbance
- The term “reasonable expectations” should be avoided because it is so open to different and conflicting interpretations
- Greater context is needed in order to properly evaluate the adequacy of the proposed “strawman” thresholds; for example, the distributions of the values for each metric. In this regard, the sensitivity analyses are very useful (slides 19 – 23)
- The sources of threshold values should be documented
- Some indicators of human disturbance, such as pesticides or perhaps toxicity, are potentially useful but are not widely enough measured to be applicable to this project

The two pilot study locations (southern California Mountains and coastal chaparral) are both relatively dry and do not have the range of elevational gradients seen in the Sierras. However, they have a larger variety of potential anthropogenic stressors, regulated entities, and regional water boards than do the Sierras.

Ken presented the names and affiliations of the members of the Scientific Advisory Group.

Biological objective terms

(see presentation “Refining Terminology” posted on the project website http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml).

Ken Schiff described alternative approaches to establishing thresholds and expectations within stream classifications. His intent was not to achieve a decision or consensus but to recognize areas of agreement and uncertainty, and then to identify the major potential strengths and weaknesses of the approaches and stakeholders’ highest priority concerns.

Discussion highlighted the following:

- Stream classification and threshold development is NOT intended in any way as a use attainability analysis or to modify established beneficial uses
- Hybrid approaches could be created by adding functional geomorphology elements to either the remote sensing or modeling approaches
- The selection of metrics to define categories of streams is limited by the availability of data; for example, it is not possible to identify, statewide, where all concrete lined channels or agricultural return ditches are located
- One benefit of using remotely sensed data is that it is available everywhere
- It is important to keep in mind that the goal in selecting metrics is to choose metrics that are most closely related to changes in biological condition, not other metrics such as flow
- The relationship between the metrics used to define degree of modification at the local scale (e.g., concrete lined, rip rap) can be confounded by processes or features at larger scales; for example, local channel restoration may not improve biological condition if upstream conditions lead to higher flow
- Defining expectations for each category or bin based on a population estimate (e.g., 90th percentile of observed conditions) may lead to lower than needed expectations if current conditions do not include the best possible for that category (for example, if management practices are not ambitious enough)
- Ken noted that setting the expectation within a category or bin based on population estimates (i.e., percentiles) means that all streams below that percentile will automatically be out of compliance
- The validity of both the empirical and the modeled approach depends in part on the breadth of the dataset used to develop expectations; for example, an unrepresentative number of wet or dry years

could bias the expectations, or using expectations based on data from wet years could lead to widespread noncompliance in a dry year; the project is using a 15-year dataset and has the ability to model uncertainty and variability, and implementation guidance could include a requirement that compliance be based on multiple samples spread over some amount of time, which could involve adjustments to the current listing process

- Current regulatory and compliance approaches, based on determining whether a chemical or toxicity value is above or below a certain line, may not be well suited to assessing biological condition with its inherent interannual variability; addressing this is one key to the success of the policy
- The technical team will ask the Science Advisory Group for advice on how best to deal with spatial, temporal, metric, model, and sampling uncertainty / variability
- The science team is investigating tradeoffs between the empirical vs. modeled approaches, as well as with increased variables and complexity
- Participants in general preferred a combination of remote sensing adjusted with local data; however, local data would have to be collected in comparable ways throughout the state

Next meeting and next steps

There are two upcoming meetings. The Science Advisory Group will meet on April 20 – 21 at SCCWRP. The Stakeholder Advisory Group will meet May 18 in Sacramento. Agendas for both meetings will be posted on the project website.

The CEQA scoping meeting has not yet been scheduled.

Attendees

Name	Organization	Representing
<i>Staff</i>		
Brock Bernstein	Facilitator, Committee Chair	
Karen Larsen	State Water Board	
Toni Marshall	State Water Board	
Peter Ode	CA Dept. Fish and Game	
Ken Schiff	SCCWRP	
<i>Stakeholder group members</i>		
Parry Klassen	E. San Joaquin Water Quality Coalition	Agriculture
Chuck Katz	US Navy	Department of Defense
Susie Santilena	Heal the Bay	Environmental Protection
Chris Sommers	SCVURPPP	Flood / Munic / SW
Ruth Kolb	City of San Diego	Flood / Munic / SW
Ed Struffenegger (P)	CA Forestry Association	Forestry / Timber
Kim Anthony	Southern California Edison	Hydro / Utilities
Ed Cheslak (P)	Pacific Gas and Electric	Hydro / Utilities
Perry LeBeouf (P)	CA Dept. Water Resources	Management Agencies
Joe Furnish (P)	US Forest Service	Management Agencies
Desirea Haggard (P)	CalPortland Company	Mining
Mark Daniel	LA County Vector Control District	Mosquito Abatement
Theresa Dunham	Somach Simmons & Dunn	Pesticide Manufacturers
Phil Markle	LA County Sanitation Districts	POTW
Richard Hill (P)	Caltrans	Transportation
<i>Other participants</i>		
Geremew Amenu	LA County Dept. Public Works	
Karen Ashby (P)	Larry Walker Associates	
Adam Ballard (P)	State Water Board	
Shirley Birosik (P)	Los Angeles Regional Water Board	
David Bolland (P)		
Livia Borak (P)	Coast Law Group	
Lilian Busse (P)	San Diego Regional Water Board	
Christine Couch (P)	LA County Flood Control District	
Richard Davis (P)	MACTEC	
Betty Fetscher	SCCWRP	
David Gillett	SCCWRP	
Christine Gracco	Brown and Winters	
Gerry Greene	City of Downey	
Betty Gustafson	City of San Bernardino Munic. Water Dist.	
LeAnne Hamilton (P)		
Nardy Khan	Orange County Public Works	
Jon Lewengrub (P)	Orange County Public Works	
Cindy Lin (P)	US EPA Region IX	
Kevin Lunde (P)	Water Boards	
Michael Lyons (P)	Los Angeles Regional Water Board	
Phil Markle	LA County Sanitation Districts / Tri-Tac	
Raphael Mazor	SCCWRP	
Heather Merenda	City of Santa Clarita	

Name	Organization	Representing
Kelly Middleton (P)	San Gabriel Valley Mosquito Abatement	
Jeff Orrell (P)	Brown and Winters	
Robert Rodarte (P)	Orange County Public Works	
Jennifer Shepardson	City of San Bernardino Munic. Water Dist.	
Vicki Shidell (P)	City of Vacaville	
Tom Suk (P)	Lahontan Regional Water Board	
Becky Veiga (P)	Water Boards	
Jennifer Voccola (P)	City of Malibu	
Jo Ann Weber (P)	County of San Diego	
Lori Webr (P)		
A. Wenzel (P)	Water Boards	
Josh Westfall	LA County Sanitation Districts	

(P) indicates remote participation by phone and Webex