

# Biological Objectives Stakeholder Advisory Group

## Meeting Summary

November 18, 2010

Note: The list of attendees and the meeting agenda follow the meeting minutes. Additional materials from the meeting (PowerPoint presentations) have been posted on the project website ([http://www.waterboards.ca.gov/plans\\_policies/biological\\_objective.shtml](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 two primary objectives of the meeting were to present and discuss the Scientific Advisory Group's recommendations on the technical workplan, to review draft definition of terms, and to discuss some policy issues that were previously identified by the Stakeholder Advisory Group at their May 2010 meeting.

### ***Stakeholder Advisory Group membership***

Brock Bernstein stated that membership of the Stakeholder Advisory Group is nearly complete, with the exception of a few remaining gaps related to recreation, hatcheries, and resource management agencies. A number of interim tribal representative have been identified who will fulfill this role while tribes are implementing a more formal process for selecting permanent representatives to the committee.

### ***Scientific Advisory Group meeting***

(see presentation "Adv mtng bio-objectives 11-18-10 Science Advisory Group Debrief. pdf" distributed with this meeting summary and also posted on the project website [http://www.waterboards.ca.gov/plans\\_policies/biological\\_objective.shtml](http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml)).

Ken Schiff reviewed the results of the recent (October 20 – 21) meeting of the Scientific Advisory Group, focusing primarily on their recommendations (listed in the presentation). The presentation slides summarize the Scientific Advisory Group's membership, the State Water Board's overall charge to this Group, and the specific goals for their October meeting.

The Scientific Advisory Group highlighted the issue of whether stressor-response models (Task 2) should have a continuous or discrete (e.g., binning) structure but did not make a specific recommendation other than that the two approaches should be investigated in the pilot study. Stakeholders agreed, although there was no agreement about whether it would be simpler to begin with binning and then expand to continuous models as more information is gained or begin with a broader model and then implement binning if appropriate.

Stakeholders emphasized the value of the pilot study and described several criteria to consider in selecting candidates for the pilot study, including:

- Abundant data available
- Represents a major landuse type or ecoregion
- Includes a breadth of habitat types within this
- Includes a reasonable variability of impact conditions
- Takes advantage of strong gradients where they are available

It may be difficult to meet all these criteria within individual pilot study locations. In addition, a useful strategy may be to start with a smaller pilot study to “test drive” potential approaches and then scale up to larger scales with more habitat types and impact conditions.

The SAG emphasized the importance of identifying the policy’s priority programmatic goals in order to provide structure and direction for decisions about technical approaches. Stakeholders identified a number of concerns relevant to this issue:

- Compliance with the Clean Water Act is important, but equally so is development of tools with the ability to discriminate good and bad practices
- Having thresholds based on biology (e.g., width of buffers, length of permissible grazing periods) is key to implementation and to clarity for permittees
- A definition of impairment applicable to the 303d listing process

Karen Larsen emphasized that the State Water Board’s primary goal is to have a tool that will be useful in protecting streams that are not yet impaired. The State Water Board also recognizes the need for variable objectives that reflect the presence of well-established landuses (e.g., urban, intensive agriculture) that limit streams’ ability to achieve improved biological conditions.

### ***Definition of terms***

(see presentation “Adv mtng bio-objectives 11-18-10 Definition of Terms.doc” distributed with this meeting summary and also posted on the project website [http://www.waterboards.ca.gov/plans\\_policies/biological\\_objective.shtml](http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml)).

In response to requests from both the SAG and the stakeholders to develop more precise definitions of key terms, Eric Stein presented working definitions of several such terms. Four potential definitions of “reference” were included, with the intention that one of these will ultimately be selected and different thresholds or expectations developed for streams in different ecological / disturbance categories.

Subsequent discussion highlighted several issues and suggestions:

- Given interannual variability, extended droughts, and alternation between wet and dry periods. Combined with climate change, it is not clear what a “typical water year” would be; some sort of quantitative criteria might be useful
- “Perennial” requires a spatial context, e.g., there may be a perennial segment in a nonperennial stream, and it is possible to wade the Colorado River in some places
- Terminology should be consistent across all definitions
- Including a specific historical time in the first definition but not in the other three implies that these three refer to present time; references to time periods should be explicit

- Spatial scale should be included in the reference definition(s)
- Of the four potential definitions of reference, the “historical condition” category was included primarily to anchor the most undisturbed end of the condition gradient because the project team is focusing primarily on the middle two reference categories (minimally disturbed and least disturbed condition). However, potentially problematic issues that led the committee to recommend dropping this category from the definition of reference:
  - Selection of a “specific point in time” could easily be confounded by significant past events (e.g., fires, floods) that changed ecological conditions
  - Replacing “specific point in time” with “absence of human disturbance” could be difficult to implement because it does not define whether this refers to the present or the past, the ubiquity of human disturbance since deglaciation, and uncertainty about whether such disturbance is completely absent
- The use of “reference” in the Definition of Terms and in Pete Ode’s discussion of reference is inconsistent; Pete Ode uses “reference” to describe only the most undisturbed end of the condition gradient and “expectation” to describe the best available condition even in highly disturbed environments, while the Definition of Terms uses reference for all such cases
- “Controllable” is meant to refer to Water Board programs, not all CalEPA programs

To a large extent, revisions to the definitions will depend on the scale of application of the bio-objectives. In addition, any revised definitions must be relevant to the technical assessment tools being developed.

### **Technical update**

(see presentation “Adv mtng bio-objectives 11-18-10 Technical Update.pdf” distributed with this meeting summary and also posted on the project website [http://www.waterboards.ca.gov/plans\\_policies/biological\\_objective.shtml](http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml)).

Pete Ode summarized key aspects of the project’s approach to defining reference conditions and provided an update on progress in developing the database needed to begin analyses. He also described the extensive list of metrics being calculated for use in the stressor-response modeling.

### **Strawman assessment framework**

(see presentation “Adv mtng bio-objectives 11-18-10 Policy Issues.pdf” distributed with this meeting summary and also posted on the project website [http://www.waterboards.ca.gov/plans\\_policies/biological\\_objective.shtml](http://www.waterboards.ca.gov/plans_policies/biological_objective.shtml)).

Karen Larsen described key aspects of the biological objectives policy that will determine its basic structure and scope, as well as other, related State Water Board policies that the biological objectives policy should coordinate with. Discussion emphasized the importance of defining the policy implementation approach as early as possible. For example, if 303(d) listings will be based on results of the biological assessment, then there should be very high confidence in these assessment tools. On the other hand, if listings will only occur after the stressor identification is completed, then less confidence would be needed in the biological assessment tools.

The biological objectives policy will focus on a core set of beneficial uses related to aquatic life, including warm water habitat (WARM); cold water habitat (COLD); estuarine habitat (EST); migration (MIGR); spawning (SPAWN); rare, threatened, and endangered species (RARE); and wildlife (WILD), where these are assigned to perennial, wadeable streams. The Regional Water Boards’ Water Quality Control Plans (Basin Plans) define some of these uses (e.g., WARM, COLD) broadly enough to include

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benthic invertebrates. Beneficial uses are sometimes assigned specifically to streams and/or segments and sometimes more generally to waterbodies in a region, depending on the individual Basin Plan. However, there is no intent to reexamine or change existing beneficial uses as part of the development of the biological objectives policy. There is a possibility that disturbance could change the ecological condition (e.g., cause some benthic invertebrate species to be replaced by others) without changing the beneficial use (e.g., providing prey items for other species). It is not clear at this early stage how this might be addressed in the assessment tools.

There are at least three options for structuring the use of multiple lines of evidence and these, and any others developed in the course of the tool development, will be evaluated empirically as the stressor-response models develop.

There are several other State Water Board policies that could potentially relate to the biological objectives policy, because they use similar indicators, address the same habitats, and/or include indicators and assessment thresholds that are part of the cause-effect chain involved in interpreting the results of benthic macroinvertebrate (BMI) assessments. These policies include:

- Wetland and Riparian Protection Policy
- Hydromodification Policy
- Nutrient Numeric Endpoint Policy
- Toxicity Policy
- Sediment Quality Objectives Policy
- Delta Outflow Policy

Karen illustrated two possible frameworks for coordinating these policies, one a stepwise approach in which different policies are successively invoked to explain possible causes of BMI impacts. The other approach includes use of the Anti-degradation policy to protect locations where BMI is not impacted, with the other policies part of a package of stressor identification actions to address the cause (s) of BMI impacts. No decision has yet been made about how such coordination would be structured and implemented. Thinking about such coordination is at a very early stage, but the State Water Board is committed to fostering coordination among related policies.

Discussion highlighted potential benefits of integrating related policies, as well as challenges involved in such integration, including:

- BMI assessment tools focusing on biological conditions may provide more insight into the nature of any impairment, thus providing a more informed starting point for subsequent remediation actions which could therefore be more efficient
- BMI assessment of biological condition could reduce other monitoring requirements, such as for aquatic chemistry or toxicity, by providing a relatively inexpensive overall picture of conditions; in such instances, other monitoring (e.g., chemistry, toxicity) would only be required if BMI assessment indicated an impact
- The Sediment Quality Objectives (SQO) policy illustrates possible approaches to policy integration, by encouraging coordinated regional monitoring and by requiring stressor identification after identification of an impact before 303d listing or TMDL development
- The new Toxicity Policy and existing permit conditions, by requiring aquatic toxicity testing, would prevent such flexibility, highlighting the importance of improved coordination among related policies
- Permittees may not have direct control over the ultimate cause(s) of impairment upstream or elsewhere in the watershed; in such cases, the sort of regional assessment encouraged by the SQO

policy, as well as the more formal source identification and allocation in the TMDL policy could be appropriate approaches

- The 303d listing policy is another important policy, since a listing would trigger action under several other policies; it is therefore important to define the listing process, e.g., whether a listing would occur after the BMI showed a biological impact or not until the stressor identification had pinpointed the cause of the impairment
- It will be important to build in incentives to fix problems

### ***Next meeting and next steps***

The next meeting for the SAG will be in late March or early April, when the reference condition studies have produced products that are ready for review. The Stakeholder Advisory Group will meet prior to the SAG meeting, perhaps in February, with another committee meeting after the SAG meeting, depending on the outcome of the SAG meeting.

State Water Board staff will be deciding on a time for the CEQA scoping meeting, the next major milestone in development of the policy.

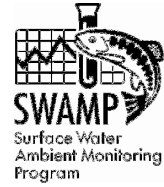
The project team will shortly establish the Regulatory Advisory Group, made up of staff from the State and Regional Water Boards. There will be opportunities for close interaction between the Stakeholder and Regulatory Advisory Groups.

## 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	
Eric Stein	SCCWRP	
<i>Committee members</i>		
Chris Sommers (P)	SCVURPPP	Flood / Munic / SW
Ed Struffenegger	CA Forestry Association	Forestry / Timber
Rachel McNeal (P)	CA Dept. Fish and Game	Management Agencies
Perry LeBeouf (P)	CA Dept. Water Resources	Management Agencies
Joe Furnish	US Forest Service	Management Agencies
David Arrieta	Western States Petroleum Assoc.	Manuf. / Effluent Dominated
Dsirea Haggard	CalPortland Company	Mining
Chindi Peavey	San Mateo County Mos. Ab. District	Mosquito Abatement
Theresa Dunham	Somach Simmons & Dunn	Pesticide Manufacturers
Phil Markle	LA County Sanitation Districts	POTW
Richard Hill	Caltrans	Transportation
<i>Other participants</i>		
Karen Ashby	Larry Walker Associates	
Zora Baharians (P)	City of LA Public Works	
Jody Brown (P)	Caltrans	
Beckie Chaledler (P)	CA Dept. of Agriculture	
Lisa Haney (P)	Orange County Sanitation Districts	
Jim Harrington	CA Dept. Fish and Game	
Emiko Innes	LA County Flood Control District	
Nardy Khan	Orange County Public Works	
Abimael Leon (P)	CA Dept. Water Resources	
Adam Link	Somach Simmons & Dunn	
Phil Markle	LA County Sanitation Districts / Tri-Tac	
George Nichol	State Water Board	
Jeff Orrell	Brown and Winters	
Cece Sellgren	Contra Costa Cnty. Flood Control District	
Theresa Shelton		
Jay Shrake (P)	MACTEC	
Marco Sigala (P)	Moss Landing Marine Labs	
Tom Suk (P)	Lahontan Regional Water Board	
Dawit Tadesse	State Water Board	
Jennifer Voccola (P)	City of Malibu	
Jo Ann Weber (P)	County of San Diego	
David Williams (P)	Water Boards	

(P) indicates participation by phone and Webex

**State Water Resources Control Board  
Office of Information and Analysis**



Agenda- Bio-objectives Stakeholder Advisory Group  
**Thursday, November 18, 2010 – 9:30 AM to 3:30 PM**  
University of California Center Sacramento  
located at corner of 12<sup>th</sup> and K St.  
1130 K Street, Lower level Room 3  
Sacramento, CA. 95814

**IMPORTANT INFORMATION!!**

Times indicated on the agenda are approximate. The order of agenda items is subject to change. Remote access to the meeting will be available via WebEx. To join the WebEx on-line meeting, go to <https://waterboards.webex.com/waterboards/j.php?ED=139356882&UID=0&PW=NNDQ5MTYxZDVm&RT=MIM0> enter your name and email address; enter the meeting password "bio"; click "Join Now" and follow the instructions that appear on your screen. You may log on up to 15 minutes before the meeting starts to allow WebEx to set up the meeting connection. WebEx will automatically set up Meeting Manager on your computer the first time you join a meeting. Participation by teleconference only is available by calling (866) 905-0102 and entering the attendee access code 650 465 4.

For updates, please self-subscribe to the email list for Biological Objectives.  
[http://www.waterboards.ca.gov/resources/email\\_subscriptions/swrcb\\_subscribe.shtml](http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml)  
Scroll down and check the Biological Objectives list.

Please see the 'Biological Objectives' website posted on the State Water Board website under Policies Under Development for more information:  
[http://www.waterboards.ca.gov/plans\\_policies/#development](http://www.waterboards.ca.gov/plans_policies/#development)

<b>OPENING REMARKS</b>		<b>ASSIGNED TO:</b> B. Bernstein	<b>9:30- 9:45</b>
<b>Purpose:</b>	Welcome, introductions, meeting objectives.		
<b>MEMBERSHIP</b>		<b>ASSIGNED TO:</b> B. Bernstein	<b>9:45- 10:00</b>
<b>Purpose:</b>	Update on stakeholder committee membership.		
<b>SCIENTIFIC ADVISORY GROUP UPDATE</b>		<b>ASSIGNED TO:</b> K. Schiff	<b>10:00- 10:30</b>
<b>Purpose:</b>	Report on Scientific Advisory Group meeting.		

<b>TECHNICAL UPDATE</b>		<b>ASSIGNED TO:</b> K. Schiff	<b>10:30-11:30</b>
<b>Purpose:</b>	Report on technical progress.		

<b>BIOLOGICAL OBJECTIVE TERMS</b>		<b>ASSIGNED TO:</b> K. Schiff	<b>11:30-12:00</b>
<b>Purpose:</b>	Discussion of definition of terms.		

**Lunch** (on your own) 45 minutes

<b>FRAMEWORK</b>		<b>ASSIGNED TO:</b> B. Bernstein	<b>12:45-3:15</b>
<b>Purpose:</b>	Strawman Assessment Framework.		

<b>PUBLIC FORUM</b>		<b>ASSIGNED TO:</b> B. Bernstein	<b>3:15-3:30</b>
<b>Purpose:</b>	Public forum and discussion of next steps.		

**\*\* Adjourn\*\***