

**Sacramento River Watershed Program
Monitoring and Toxics Subcommittees
Joint Meeting**

**January 12, 2005
SRWP Coordinator's Office
Woodland, CA
9:00 a.m. – 3:30 p.m.**

Attendees

Stephen Clark, Pacific EcoRisk
Dennis Heiman, CVRWQCB
Ken Lerch, Stakeholder
Lori Webber, CVRWQCB
Kathy Russick, SRWP Coordinator
Claus Suverkropp, Larry Walker Associates
Jerry Troyan, SRCSD
Sheri Gill, DPR
Bill Crooks, City of Sacramento
Otis Wollan, SRWP
Carol Atkins, Harris & Company
Jerry Boles, DWR
Leslie Bryan, Western Shasta RCD
Barbara Washburn, OEHHA
Carmen Milanes, OEHHA
Karen Larsen, CVRWQCN
Fraser Shilling, UC Davis
Kristin Carter, CSU-Chico

Facilitation: Otis Wollan, SRWP
Minutes: Carol Atkins, Harris & Company

Agenda

- I. Introductions, Meeting Minutes, and Agenda Review
- II. Report on SRWP Board presentation by Ag Issues Work Group
- III. Presentation on UCD Proposals: Ecosystem Monitoring and/or Biological Indicators for the Bay-Delta
- IV. Presentation on EPIC Project
- V. Proposition 50 Grant Proposal and Phase X budget Update

- VI. Monitoring Matrix and Workplan for Year 7
 - VII. Strategic Plan
 - VIII. Watershed Public Workshop Planning
 - IX. Next Meeting
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I. Introductions, Meeting Minute Approval, and Agenda Review

Introductions: Meeting participants introduced themselves.

Agenda Review: The agenda was reviewed to familiarize everyone with the day's activities. Planning for next meeting was added as an agenda topic.

Minutes Approval: No changes were made to the minutes for the October 27th meeting.

Announcements:

Kathy Russick announced that she is wrapping up details for the Request for Proposals for the SRWP Education Coordinator. It will be advertised as a two year position. The announcement will be sent out shortly to entire email list.

Jerry Troyan announced that the SRTPCP Grants Subcommittee meeting in January will be rescheduled because the group could not meet on its regular date on January 10.

The SRWP Newsletter should be out shortly.

Butch Hodgkins is the new chairperson of the Board of Trustees. The Board is working on long term funding strategy for monitoring program.

II. Report on SRWP Board presentation by Ag Issues Work Group

Otis Wollan gave an update on the status of this group and the presentation he made recently to the SRWP Board of Trustees.. The Ag Issues Workgroup membership consists of Otis Wollan, Kathy Russick, Fred Thomas, and Debra Denton. This workgroup grew out of the Organophosphate (OP) Pesticide Focus Group.

In the forming days of the SRWP, the Toxics Subcommittee identified OP pesticides and mercury as topics for special focus. The OP Pesticides Focus Group formally disbanded two years ago, though an interest to reform as an Ag Issues Workgroup was identified.

Interviews: Otis has been interviewing various stakeholders involved in the previous OP Pesticide Focus Group. Within each stakeholder category (e.g., Registrants, Dischargers, Regulators, Ag Coalition, Environmental Interests, Sacramento Environmental Water Caucus, Ag Interests) he has interviewed four to seven individuals. Interview questions

include:

- § What next steps might be appropriate in the area of agriculture?
- § What are the most important ag issues?
- § What are the stressors in the watershed today?
- § What stressors would you expect to see in the next ten years?
- § What potential SRWP initiatives do you see?
- § What potential ag issues partnerships do you envision?
- § How would you take two dollars and make \$200?

Activities suggested during these interviews include:

- § Focus on best management practices with multiple solutions
- § Get all stakeholders around one table
- § Further track record looking at watershed holistically
- § Continued mainstem monitoring, but extend to ascertain baseline conditions in ag dominated waterbodies so that improvement can be determined
- § Develop more technical information
- § See the SRWP as a technical center and place where watershed monitoring group data can be integrated into other monitoring efforts
- § View SRWP as entity to provide training (e.g., SWAMP)
- § Water transfers are important
- § Focus on new environmental stressors (e.g., polybrominated diphenol esters)
- § Would like to see program in the Sacramento River Watershed similar to Regional Monitoring Program – namely a comprehensive and professional baseline monitoring program (extended to tributaries) paid for by dischargers
- § Would like to see SRWP host annual conference on best management practices targeting more than just the agricultural community

Otis noted that during the interviews he learned that many coalitions and environmental groups see the SRWP as an ag dominated organization.

Presentation to the Board of Trustees: Otis presented the results from the interviews to the Board of Trustees. It was noted that many of the suggestions coming from the interviews are in line with the activities going on in the Monitoring and Toxics Subcommittees. The SRWP Board of Trustees has asked these Subcommittees to integrate the results from the survey into their strategic planning. They also indicated that work should address ag issues within the valley floor, upper watershed, and the foothills.

Ag Issue Paper: Otis updated the Subcommittees on the status of the issue paper. He expects to integrate the Issue Paper with the strategic approach of the Subcommittees and anticipates having a draft by the middle of February.

III. Presentation on UCD Proposals: Ecosystem Monitoring and/or Biological Indicators for the Bay-Delta

Kathy Russick invited Fraser Schilling with the UC Davis Department of Environmental Science to give an overview of two proposals on environmental indicators that he is involved with and that were recently submitted to the California Bay Delta Authority for consideration for funding.

The first proposal discussed was focused on “Developing Environmental Indicators for the CALFED Solution Area”. Fraser reviewed that the CALFED solution area includes the bay area, the watershed for the Delta, and parts of Southern California. A goal of this proposal is to provide a science-based, scientifically robust, regionally based indicator system that can be used in decision making by managers of the California Bay Delta Authority, as well as other implementing agencies, and that is understood by interested and involved stakeholders. The proposal would develop and test protocols for testing and validating CALFED-wide prototype performance measures and environmental indicators and would test refinements in ecological indicators for water quality supply, habitat quality characteristics, and special status species populations in data rich watersheds in the CALFED solution area. It would also develop and test a preliminary set of candidate indicators for fiscal impacts of water conservation/management, employment, open-space, and public education/outreach potential inherent in restored watersheds and watershed functioning, as well as demonstrate a process for aggregating and synthesizing measures at a variety of space and time scales to inform environmental management and communication with the public and decision makers.

Fraser went through additional details of the proposal, highlighting that it would use existing data (targeting data rich areas) and existing efforts ascertaining local environmental indicators, with the purpose of broadening the scale of the indicators and ultimately to determine the performance of the CALFED Program.

Fraser noted that the immense scale of the CALFED Bay-Delta Program requires that a consistent protocol and a series of methodologies be developed to analyze the cumulative effects of the restoration projects and water management actions. He emphasized the variability inherent to working in natural systems, but also that associated with aggregating data and aggregating indicators. He also discussed having reference conditions for both good/desired conditions as well as bad/undesired conditions, which allows measuring improving condition.

The second proposal was submitted to the Ecosystem Restoration Program (ERP) and would be one of the sources of information for first proposal discussed. The work would

take place in the Sacramento Conservation Area and build off of existing sites and data collection. A goal of this project is to evaluate the ERP to determine whether the habitat and populations of certain (e.g., endangered and other at risk species) are recovering, and whether the ecological processes are being rehabilitated, protected, and restored.

The proposal would use an integrated monitoring program to evaluate the success of riparian restoration projects in restoring riparian and channel habitat. Two testable hypotheses would be used and a conceptual model for restoration effectiveness would be developed. CALFED actions that would be evaluated include acquisition, horticultural restoration, encouraged natural restoration, natural erosion restoration, and non-native plant control.

Q: What tools are being put in place so that you have independent review of actions?

A. The people involved in this proposal were not part of the original actions (i.e., the restoration work). That work was largely done by The Nature Conservancy.

Q: How would this proposal account for/take into consideration success such as those demonstrated as “maintenance”, rather than improvement?

A. That is not part of this work.

IV. Presentation on EPIC Project

Barbara Washburn and Carmen Milanés with the Office of Environmental Health Hazards Assessment made a presentation on Environmental Protection Indicators for California (EPIC). The EPIC project was launched in 2000, as a result of the CALEPA Secretary’s office asking what success the State was having with their environmental programs. EPIC involved all state environmental agencies and the Department of Health Services. As the project launched, there was both a policy group and stakeholder group assisting the program. In addition, EPIC was initiated along side with building a strategic vision. The report “Environmental Protection Indicators for California” was a product of this effort. Currently, the EPIC program is not funded.

The presenters noted that environmental indicators can be used to:

- § Track changes in the environment
- § Communicate environmental info
- § Provide early warning signals
- § Identify or validate cause and effect
- § Evaluate performance
- § Support “results based management”

They reviewed the definition of an environmental indicator as an “objective, scientifically

based measure that presents information on the status of and trends in environmental releases, conditions, or effects”. They noted that USEPA defines an indicator as “a sign or signal that relays a complex message, potentially from numerous sources, in a simplified and useful manner. An ecological indicator is defined here as a measure, an index of measures, or a model that characterizes an ecosystem or one of its critical components. An indicator may reflect biological, chemical, or physical attributes of ecological condition.

The presenters reviewed “The information pyramid” for development of an indicator or index. For this pyramid, primary data is the base of the pyramid; analyzed data sits atop of the primary data; indicator is next, followed by index in the apex. Data is synthesized as one moves up the pyramid. The presenters also reviewed the Pressure-State-Response conceptual model (Source: Organization for Economic Cooperation and Development) and the Hierarchy of Indicators used by the Chesapeake Bay Program.

Environmental indicators were developed for significant environmental issues in the following broad areas:

- § Air quality
- § Water
- § Land, waste, and materials management
- § Pesticides
- § Transboundary issues
- § Environmental exposure impacts upon human health
- § Ecosystem health.

An additional set of background indicators was also developed. These indicators reflect trends in certain demographic, economic, human health, and other parameters that can provide a meaning full context with which to interpret some of the environmental indicators. Indicator selection relied on primary criteria designed to ensure that the indicator is based on data collected using scientifically acceptable methods, closely represents the issue, is sufficiently sensitive to distinguish change, and provides a meaningful basis for policy decisions. A set of secondary criteria highlight additional desirable attributes of an environmental indicator; ability to provide early warning, comparability to indicators in other systems, cost-effectiveness, and the availability of a point of reference or a benchmark value.

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EPIC classification of indicators was based on data availability. Type I and Type II indicators are supported by ongoing, systematic monitoring or data collection. For Type I indicators, adequate data are available to present a status or trend graphically. Type II indicators require further data collection, analysis, or management. Type III indicators are conceptual (sometimes based on a one-time study), and reveal areas lacking systematic data

collection.

The EPIC report findings were:

- § Established environmental monitoring and data collection activities do not always support indicator development
- § The degree by which indicators met EPIC's selection criteria was highly variable.
- § Statewide indicators cannot adequately represent regional/local conditions
- § Effects of various factors on environmental conditions are generally not quantified.
- § Data are lacking for many significant issues

An example of EPIC Ecosystem Health Indicators was given for aquatic ecosystem

- § Land use/land cover
- § TES
- § Central valley Chinook
- § Least tern
- § Lake Tahoe clarity
- § Benthic macro invertebrate index
- § Endocrine disruptors (Type 3)
- § Persistent organic pollutants in marine mammals (Type 3)

Examples were also given for USEPA Aquatic habitat indicators, Watershed Indicators, and Administrative indicators.

V. Proposition 50 Grant Proposal and Phase X budget Update

Kathy Russick reported that the Proposition 50 grant agreement has been written up and is going through internal review at the State Water Resources Control Board. She indicated that the start date would be January 1, 2005. Kathy is working on getting contracts in place. She anticipates starting the monitoring in July. All work will need to be completed by March 2008.

Funding under Phase X is moving along. The USEPA has the grant application and should approve it within the next month. There is little in this grant for the Monitoring Subcommittee; however, there is \$96,000 in the Phase X grant for the Toxics Subcommittee for an update of the unknown toxicity workplan and for advanced toxicity identification evaluation work for toxic samples. This work will be done in partnership with the Regional Board. It was noted that it will be necessary to have a QAPP ready for this work.

Jerry Troyan reminded the group that Phase VII funds need to be spent by October 31, 2005.

VI. Monitoring Matrix and Workplan for Year 7

Claus Suverkropp reported that most of the monitoring for Year 7 has been determined. A couple of issues remain, including finding a new urban site for monitoring. At the last meeting (October 2004), the group suggested that an urban creek outside of the Sacramento area should be used. They agreed to define an urban creek as a watershed that is primarily influenced by urban development. The group brainstormed several criteria that could be used to select this new waterbody. These criteria include:

- § Augment where there is funding in place
- § Preferably not in the Sacramento metropolitan area
- § Place that invites us; place where a working partnership with a watershed group or surrogate can be established
- § Stream in metropolitan area where we would see an effect
- § Stream with significant aquatic resources

Currently, the following creeks would fall under these criteria:

- § Big Chico Creek
- § Other Chico streams –Little Chico
- § Churn Creek in Redding
- § Stillwater Creek, which will receive Proposition 50 funds

Jerry Boles noted that there was already a lot of information on Big Chico Creek and suggested that the group should look to other urban streams where data are needed.

The group revisited the goal for having an urban creek outside of Sacramento. Discussion included recognizing that not all urban watersheds are similar to Arcade Creek or Strong creek (two streams in the Sacramento area). They discussed:

- § Selecting a stream in an area with an intermediate level of urbanization, noting that Arcade Creek is the “bottom” benchmark and that the selected site does not need to be similar to Arcade Creek.
- § Selecting a stream in an area that is still developing such as Auburn Ravine or Dry Creek
- § Selecting Churn Creek/Stillwater watershed in Redding or one of the Shasta-west creeks. It was noted that both creeks have watershed groups that are forming.

The group determined that the urban creek will be selected between this meeting and the next. Kathy indicated that she would check with the Board members as well as Mary Schroder, the Western Shasta RCD District Manager. Dennis Heiman asked to be kept in

the discussion loop.

Claus indicated that he had followed up with Jim Harrington regarding deep water bioassessment methods. Jim recommended using the EMAP methodology for deep water bioassessment. This method is much more expensive than the budget would permit. It was suggested that we explore other options; Claus will follow-up with Jim. It was noted that the State Board and Regional Board are moving toward biological monitoring.

ACTION ITEMS:

- (1) Kathy will check with the Board members as well as Mary Schroder, the Western Shasta RCD District Manager, regarding urban creeks in the Redding area. Claus will keep Dennis Heiman in the discussion loop.
- (2) Claus will further his discussions with Jim asking how best the limited funds can be used.

VII. Strategic Plan

Otis Wollan noted that the Subcommittees have been using a segmented strategic planning process. He took the opportunity to review work that began in the June workshop and continued in the August and October Subcommittees' meetings (refer to detailed meeting notes for discussions).

Otis asked the group to consider a problem statement for watershed health. The following statement emerged:

Large amounts of public expenditures within CALFED watershed demand validating that those expenditures are good. There is a need to track expenditures and to search for and develop meaningful and useful indicators.

VIII. Watershed Public Workshop Planning

This agenda item consisted of (1) developing logistics for the workshop and (2) discussion on what "watershed health" means.

WORKSHOP LOGISTICS

Purpose of workshop – The purpose of the workshop is to report on the SRWP and provide a menu for watershed indicators and tools to watershed groups. It was noted that the workshop announcement should be clear that the indicators are for the Sacramento River watershed, but may be of value to local watersheds

Audience: The audience for this workshop was identified as watershed coordinators and other groups interested in water quality.

Format: The agenda will have presenters (no more than 3) and will have time for networking. A draft agenda might look like:

- § Presentations
- § Facilitated discussion
- § Then define indicators for Sacramento River Watershed
- § Time for Dialog
- § Winnow extensive list to indicators list
- § Additional afternoon activities could include a funding charrette, development of an indicators tool chest, and discussion on further communication and education needs

Meeting participants favored asking watershed groups/watershed group representatives to complete a one page survey. Questions to be considered for the one-pager include:– do they do a watershed assessment, what does it look like, what is the status; do they have a set of indicators; what services are they focusing on. Each group would need to provide their responses prior to the workshop. Time would not allow for the SRWP to develop a straw proposal of indicators of watershed health, so this will be a work product of the workshop

Location: to be determined

Potential Dates: March 15-18; check when the Department of Conservation (DOC) is holding their Watershed Coordinator Workshop. The goal is to avoid a scheduling conflict. If the DOC workshop is in March, the SRWP may push this workshop into April.

Desired Outcomes:

- § Thread watershed groups together
- § Broaden SRWP purview outside the water column
- § Develop a good set of watershed health indicators that can be used by various groups of people and at different geographic scales (watershed vs regional vs local)
- § Develop a list of training that would be useful to the coordinator
- § Develop a report that SRWP could use to communicate the health of the watershed – similar to EPIC but focused on the Sacramento River watershed
- § Develop menu of indices that local watershed groups could use

WATERSHED HEALTH

What does the term watershed health mean? Is it function, structure and process which then allows us to ask: “Is it working?”. The group discussed this topic and responses include:

- § USEPA talks about watershed health with respect to ecosystem services that a watershed provides

§ If trying to develop overall index of health, then can't get watershed specific as one needs a broader overall measure

§ How do overall watershed health and the set of indicators differ for the tributaries?

Meeting participants further evaluated what is meant by function, structure, and process. Comments are below:

Function – What do we mean?

§ Quantity and quality of the water and habitat

§ Ability to support aquatic life

§ Support of beneficial uses/ecosystem services

§ Is it capable of supporting all beneficial uses that depend on the water and the land? Problem with term beneficial uses because of its regulatory tie

§ Support economic health/well being of the region

Structure – What do we mean?

§ Are there sufficient acres of a certain land type?

§ Does it support diversity (animal populations)?

§ Human modifications conveyance and disturbance

§ Degree of disturbance by human and upland habitats; is there a balance?

§ Groundwater and aquifers – where does it fit – watershed function issue

§ Is the ground water basin both quality and quantity “healthy”; is it working (providing water, refreshing streams, no ground subsidence)?

Process – What do we mean?

The group listed ecosystem services beginning with beneficial uses and adding others including wastewater discharge, migratory corridor, flood control, power generation, timber.

Summary: Following this discussion, the group members recognized that the expertise of those around the table was primarily within the water column, and that the purpose of the workshop was to inquire of the watershed coordinators this same question, namely “What is watershed health?”. It was proposed that a clear connection to the aquatic environment should be set as a boundary for any scorecard generated by the SRWP.

ACTION ITEMS: Otis and Kathy will put together a more understandable design for the workshop and design the format for “the one pager”.

IX. Next Meeting

The group set their meeting schedule for the year. Meetings are planned for:

March 16 – note that this meeting could be cancelled if the Watershed Health workshop is scheduled on this week.

May 18

July 20

Sept 21

Nov 16