Year Three Technical Review of the Environmental Water Account and Science Symposium on Environmental and Ecological Effects of Proposed Long-term Water Project Operations

October 15-17, 2003
The Grand Capitol Plaza Ballrooms
Temple Ballroom, 3rd floor
1025 9th Street, Sacramento, California

The California Bay-Delta Authority has conducted a series of symposia and workshops to present and discuss information related to the environmental and ecological effects of proposed long-term water project operations and strategies for managing environmental water, including the Environmental Water Account (EWA).

Technical reviews of the Environmental Water Account were conducted in 2001 and 2002. Symposia in April 2002 and June 2003 considered some of the key policy and science issues associated with water management strategies in the Sacramento-San Joaquin Delta and Central Valley watersheds. Workshops in July and August 2003 on Chinook salmon and delta smelt (respectively) considered new information on modeling and the population biology of these fish, and considered how actions under the EWA program benefit these fish.

The goal of the October symposium is to provide a synthesis of the scientific information we have gained, and describe how this information has affected (or could affect) management of environmental water to protect threatened and endangered fish species, habitat flow standards like X2, operation of the Delta Cross Channel, and Vernalis Adaptive Management Program (VAMP) implementation. The symposium agenda is designed to directly address the major issues raised in the last two years by the EWA technical review panel. New information will be presented in a few technical presentations, but much of the symposium is dedicated to synthesis presentations from agency staff and stakeholders to address specific questions and issues. In 2003 the EWA technical review panel will be asked to comment on responses to their earlier comments and recommendations. From that perspective the panel will be asked to identify and discuss:

1. The most important criteria for evaluating the EWA.
2. Key issues in managing environmental water in the future (e.g., are there things that could make or break an experiment like EWA).
3. The most important feasible steps to maximizing EWA effectiveness.

Day One: October 15, 2003

Session One: Welcome and Introduction

8:30 – 8:50: **Sam Luoma, CA Bay-Delta Authority.**
Welcome; logistics, symposium goals, context, EWA Panel Charge and approach.

8:50 – 9:10: **Patrick Wright, CA Bay-Delta Authority.**
Evolution of strategies for using environmental water and insights into the Integrated Key Milestones.

Session Two: Year Three EWA Review

9:10 – 9:30: **Roger Guinee (FWS)**
Use and evolution of b(2) environmental water: perspectives and prognosis.

9:30 – 9:50: **Jim White (DFG)**
The first three years of EWA: How were the assets used and what have we learned?

9:50 - 10:10: **Jerry Johns, CA Department of Water Resources.**
Integrated uses of environmental water and the role of the EWA: Where to from here?

10:10 – 10:30 Break

10:30 – 11:00: **Wim Kimmerer (CBDA Science Advisor) and Randy Brown (CBDA Science Advisor)**
Observations and findings on the use of science in the EWA: Where to from here?

11:00 – 12:00: **Salmonid Science Panel: Jim White (DFG), Sheila Greene (DWR), Pat Brandes (FWS), Bruce Oppenheim (NOAA-Fisheries), Roger Guinee (FWS), Alice low (DFG).**

The panel will have up to 30 minutes to address the questions listed below, followed by 30 minutes of discussion with the EWA review panel. The panel members will work together before the meeting to develop a single synthesis presentation to address each question, rather than individuals each expressing their views about the questions. Each presentation should consider: how environmental water has been used in the last three years? What have we learned? How has it affected management of the system? If alternative views exist, they should be presented as such. The questions are as follows:

1. What progress has been made in addressing the EWA technical panel's recommendations for:

    a. Developing a quantitative synthesis of the Chinook salmon life cycle?
    b. Developing EWA decision process criteria for salmon actions?
    c. Understanding juvenile salmon movement patterns and habitat use in the Sacramento River and Delta?
    d. Refining the relationship between indirect and total water project mortality of juvenile salmon in the Delta?
    e. Identifying feasible approaches to using EWA assets to manipulate stream temperatures and flows to benefit salmon spawning and rearing?

2. What are the best options for increasing the long-term cohort success for salmonids?

12:00 – 1:00 Lunch Break

1:00 – 2:00: **Delta Smelt Science Panel: Kevin Fleming (DFG), Ryan Olah (FWS), Bruce Herbold (EPA), Ted Sommer (DWR), and Mike Chotkowski (USBR).**

The panel will have 10 minutes to address each question (30 minutes total) followed by 30 minutes of discussion with the EWA review panel. The panel members will work together before the meeting to develop a single synthesis presentation to address each question, rather than individuals each expressing their views about the three questions. Each presentation should consider: how environmental water has been used in the last three years? What have we learned? How has it affected management of the system? If alternative views exist, they should be presented as such. The questions are as follows:

1. How should we treat carrying capacity and density dependence in developing water management strategies that minimize impacts to delta smelt?

2. What do we know about the physical factors that lead to substantial SWP and CVP entrainment events? Is environmental water a useful tool for managing these physical factors?

3. What role should water temperature play in managing water-project related impacts to delta smelt?

2:00 – 2:45: **Stakeholder Panel: Greg Gartrell (CCWD), Tim Quinn (MWDSC), Tom Clark (KCWA), Tina Swanson (Bay Institute)..**

Each panel member will have 5 minutes to respond to the question listed below. Twenty minutes is reserved for discussions with the EWA review panel.

What are the key issues surrounding future uses of environmental water in water management strategies for the Sacramento-San Joaquin Delta and Central Valley watersheds?

2:45 – 3:00 Break

3:00 – 4:00: **Management Panel: Diana Jacobs (DFG), Mike Aceituno (NOAA-Fisheries), Dave Harlow (USFWS), Chet Bowling (USBR), and Jerry Johns (DWR)**

The panel will have about five minutes to address each question (30 minutes total) followed by 30 minutes of discussion with the EWA review panel. The panel members will work together before the meeting to develop a single synthesis presentation to address each question, rather than individuals each expressing their views about the questions. If alternative views exist, they should be presented as such. The questions are as follows:

1. The 2002 EWA technical review suggested the EWA lacks both the resources and flexibility to respond to extreme events. What have the agencies done, or what can be done to address this challenge?

2. The 2002 review also suggested that a greater burden is being placed on EWA because of reductions in other sources of environmental water. What has been done or what can be done to manage a reduced amount of environmental water without changing the balance between water supply reliability and ecosystem protection?

3. Is storage capacity for EWA water the main limit to providing greater temporal flexibility in the EWA? What has been done or what can be done to address this challenge?

4. Can we more fully integrate water management actions targeting habitat quality (e.g., flooding the Yolo Bypass with more water in some years) with actions to reduce SWP and CVP entrainment of fish species in the delta? What are the pros and cons to such integration?

5. Is it possible to conduct meaningful experiments with EWA assets, or do the contractual and regulatory obligations prevent this from happening?

What experiments do you think would be both feasible and most informative?

4:00 – 5:00: EWA Technical Panel and Audience Question and Answer. Speakers from day one will be available to answer questions from the Panel or audience.

Day Two: October 16, 2003

Session Two, Continued: Year Three EWA Review

8:30 – 8:50: **Pat Brandes (FWS)**
EWA for salmon: Goals, Conceptual Models, Objectives, Performance Measures and Relevant Analyses Plan.

8:50 – 9:20: **BJ Miller, Dave Briggs, Tina Swanson, and Zach Hymanson.**
Methods and Criteria for a Comprehensive Review of the EWA.

9:20 – 10:00: **Speakers and EWA Technical Review Panel**
Open discussion of approaches and methods for evaluating the EWA.

10:00 – 10:15 Break

Session 3: How has science over the last ten year affected the Regulatory Baseline for Water Operations?

CALFED developed a regulatory baseline above which the EWA operates. The baseline includes the 1993 winter-run biological opinion; 1995 Delta Water Quality Control Plan; 1995 delta smelt biological opinion; and full use of 800 TAF of water pursuant to Section 340(b)(2) of the CVPIA, in accordance with the Department of Interior's October 5, 1999 Decision.

One policy challenge has been to reduce our reliance on prescriptive standards for regulating water operations and increase regulatory flexibility through the development of new tools (e.g., the EWA) and more flexible application of existing standards (e.g., varying Delta Cross Channel Gate operations). This session will focus on describing how science has helped to meet this policy challenge.

10:15 – 10:30: **David Fullerton, MWDSC**
New propositions for water operations and environmental protection: an update from the Napa meetings.

10:30 – 11:15: **Jon Burau, USGS**

New science and understanding of physical process in the central and south Delta: How can this information help us manage the Delta?

11:15- 12:00: **Bruce Herbold, EPA**
Balancing water supply, fish protection, and water quality: what have we learned from VAMP and DCC Experiments, and how can we use this knowledge in existing water management strategies?

12:00 – 1:00 Lunch Break

Session Four: X2

1:00 – 1:05: **Wim Kimmerer, RTC**
Introduction: the X2 relationships

1:05 – 1:15: **Bruce Herbold, EPA**
A brief history of X2

1:15 – 1:30: **Russ Brown, Art Hinojosa, DWR**
Water costs of X2 in relation to other standards

1:30 – 1:45: **Stephen Monismith, Stanford University**
Physical dynamics of the estuary in relation to X2

1:45 – 2:00: **Bruce Herbold, EPA**
X2 as physical habitat

2:00 – 2:15: **Wim Kimmerer, RTC**
Other potential mechanisms, and next steps

2:15 – 2:30: Questions and discussion

2:30 – 2:45 Break

2:45 – 4:00: **Panel discussion: Dave Harlow (FWS), Curtis Creel (DWR), BJ Miller (Stakeholder), David Fullerton (Stakeholder), and Tina Swanson, (Stakeholder).**

Each panel member will have 15 minutes to address the three questions listed below:

1. How has science over the last 10 years affected existing water management strategies and application of prescriptive standards in the regulatory baseline for EWA? What are key issues for the future?

2. Are there instances where increasing water management flexibility would be warranted? What are the benefits and risks?

3. What is the most important new science needed to further increase system management flexibility or improve our ability to manage environmental water in the future?

4:00 – 4:30: **Sam Luoma (CBDA/USGS)**
The Science Program's agenda for obtaining the technical information needed to improve water management strategies in the future?

4:30 – 5:00: Audience Question and Answer. Speakers from day two will be available to answer questions from the audience.

Day Three: October 17, 2003

Session Five. EWA Technical Panel Initial Report and Findings

10:30 – 11:30: Panel Chair presents initial finding from the year three technical review.

11:30 – 12:30: Audience Question and Answer