

ITEM 9-9
Environmental Water Account
Technical Review Panel Report

Informational Item

**Bay Delta Authority and Public Advisory
Committee**

February 9, 2005

Fourth Annual Technical Review of the EWA

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Outline

- Panel and process
- Charge
- Acknowledgements
- Stage setting
- Consequences
- Positives
- Examples of negatives
- General suggestions
- Concluding remarks

EWA Review Panel

- Met annually – this is the fourth time
- Current members: Anderson, Chesney, Erman, Cowan, Freyberg, Ingram, Monismith, Rhoads, Rose, Thompson

Process

- Workshop in November 2004
- Oral preview of panel report at workshop
- Final written report issued January 2005

Charge

- Science underlying the decision-making
- Incorporation of new information
- Technical basis of water-related decisions
- Fourth year: long-term EWA

Acknowledgements

- Panel recognizes the significant efforts of the many people involved
- Panel appreciates the frank presentations and exchanges with agency, staff, and stakeholders

Stage Setting - 1

- EWA is poised to move beyond initial experimental phase
 - Long-term
 - South Delta Improvements
- Presumed shift in financing

Stage Setting - 2

- Increased scrutiny
 - Users get their water
 - Prove fish benefits of small amounts of water
- Panel is aware of the budgetary constraints
- Eventually, biological benefits and cost effectiveness of EWA will be questioned

Consequences

- “As the EWA evolves from an experiment to a formal long-term program, many science issues continue to need attention if EWA is to be managed with a sound scientific basis” (from page 14 of written report)
- Panel felt that the EWA was scientifically vulnerable in how EWA actions affect fish protection and restoration (“Achilles” in the written report)

Positives - 1

- Water supply reliability
- Reduced conflict
- Water acquisition and utilization
- Significant progress since year 1 in:
 - Documentation
 - Communication and cooperation
 - Hotspots of excellent science (JPE, genetics, delta smelt)

Positives - 2

- Some examples of integration and communication among water programs
- Possible coordination of Interagency Ecological Program into Science Program
- Idea of using gaming and models to explore EWA needs
- Issuance of the Science PSP
 - Many of the scientific issues listed in previous Panel reports were included in the PSP

Positives - 3 Delta Smelt

- Good progress
- Alternative models fueling critical and creative thinking about the life cycle
- Biological Opinion moving away from simple take
- Revised decision tree

Example of a Negative - Gaming

- Alternative analyses might give better information
- Fuzzy descriptions of analyses, especially for unconstrained fish needs and sizing
- Suggestions:
 - Careful documentation
 - Biological models in addition to decision trees
 - Explicit consideration of uncertainty

Example of a Negative – Use of Models

- Over-emphasis on prediction, too little
 - Use of models for synthesis
 - Comparing alternative conceptual models
- Little dealing with uncertainty
- Lack of sufficient progress and peer-review
 - Insufficient people and missing expertise

Example of a Negative – Use of Models

- Suggestions:
 - Population models alone and linked with other water use and transport (movement) models
 - Account for stochasticity and uncertainty
 - More sophisticated salmon survival analysis
 - Emphasize documentation and peer-review
 - Mobilize the people resources (agency and outside)

Suggestions for Review Process

- More interaction of Panel with presenters and non-agency people
- More involvement of Panel in defining agenda
- Continued feedback from Lead Scientist
- Clarification of role of science advisors

Suggestions for Review Process

- Observations:
 - Significant improvements in science over 4 years
 - Decreasing effectiveness of Panel without influx of resources for research
- Perhaps Review panel meets:
 - 6 months for input into long-term planning
 - 2 years from now (to maintain momentum)
 - Every other year after that
 - Smaller groups for special issues in off years

General Suggestions

- Wider viewpoints and transparency are critical – almost getting too cozy and comfortable
- Documentation is better, peer-review of critical components and analyses is needed

General Suggestions

- Systematic approach to integration opportunities
 - Critical to maximize benefits and for evaluation
- Ensure that water purchasing and actions fully account for biological benefits and costs

General Suggestions

- Needed infusion of science (modeling, statistics, competing hypotheses), originate in the Science Program
- Must be embraced by agency people but also minimal time commitment

General Suggestions

- More people and addition of certain key areas of expertise
- A little short-term investment by existing people and willingness to share, with infusion of people-related resources, will return large benefits in the long-term

Concluding Remarks

- Panel has completed their initial 4 year term
- Much progress in many areas; science underlying quantifying biological benefits is lagging
- Thanks to:
 - CALFED
 - Especially to all the presenters and contributors
- We appreciate the effort involved and hope we have helped

**Agency efforts to improve the
science basis for EWA and the
effectiveness of EWA
management**

Diana Jacobs, DFG

Monitoring

- Purposes :
Yearly input into decision process; real-time operations; long-term assessment
- New Efforts:
Improved Winter-run salmon spawner abundance estimate
New Delta smelt monitoring for adults and small larvae

Decision-Making Processes

- Purposes:

Identify fisheries concerns; trigger possible actions

- New Directions:

Delta Smelt Risk Assessment Matrix (DSRAM)

Modifications of Salmon Decision Process

- Criteria for action incorporate abundance
- Potential to ID race of salmon using genetics

Improve Effectiveness

Short-term

- Rethinking timing of EWA actions for Delta Smelt
 - flexibility which increases winter and spring pumping for EWA vs. impacts
 - Early spring vs. late spring actions
- Coordinate EWA with other environmental water and ecosystem restoration programs

EWA Planning and Implementation

Long-term

- More sophisticated gaming/modeling
- ERP monitoring and Science Program PSPs
- Additional expertise in quantitative ecology
- EWA Science included in finance plan/work plan
- Continue collaboration with Science Program