

**CALIFORNIA URBAN WATER AGENCIES
STUDY OF DRINKING WATER QUALITY IN DELTA TRIBUTARIES
SUMMARY OF JULY 7, 1994, PROJECT ADVISORY COMMITTEE MEETING**

July 26, 1994

The third Project Advisory Committee (PAC) meeting for the Study of Drinking Water Quality in Delta Tributaries was held on July 7, 1994. The meeting agenda and list of attendees are attached.

INTRODUCTION--Lyle Hoag

Lyle Hoag began the meeting by asking all attendees to reintroduce themselves. Lyle asked PAC members to identify any changes to the PAC mailing list.

PROJECT OVERVIEW--Elaine Archibald

Elaine Archibald reiterated that the objective of the study is to determine whether control of contaminant sources upstream of the Delta would result in improved Delta drinking water quality. She handed out a flow chart that illustrates the various tasks involved in the study. Task 2 is complete. The project team is now moving back and forth between Tasks 3 and 5. Tasks 4 and 6, not shown on the flow chart, are to potentially conduct monitoring for selected contaminants and to complete a Phase I project report, respectively. Lyle stated that monitoring would not be conducted as part of this project and a Phase I report will be requested.

PROJECT MANAGEMENT--Dave Jones

Dave Jones of Brown and Caldwell (BC) discussed the recent departure of Elaine and Jeanne Wallberg from BC to form Archibald & Wallberg Consultants (AWC). Elaine will continue as technical project manager on this study. Paul Selsky with Brown and Caldwell will act as contractual project manager and will also be involved in any work involving engineering analysis of the management alternatives.

Elaine handed out a revised project schedule. The study is behind schedule and will be completed by the end of the year rather than mid-year. Lyle stressed the importance of meeting the revised schedule. Elaine stated that the project team was committed to meeting this schedule.

Dave then distributed a budget summary table that shows the budget split among BC and the three project subconsultants.

PESTICIDE TECHNICAL MEMORANDUM--Jeanne Wallberg

Jeanne presented the key elements of the Pesticide Technical Memorandum including the objectives, AWC's assumptions and approach, and the conclusions. The conclusions are that (1) pesticides are detected in the Delta tributaries but not at concentrations greater than drinking water standards, (2) only two pesticides (molinate and diazinon) have occasionally been detected at concentrations greater than drinking water standards in agricultural drains, (3) no pesticide monitoring is recommended to be done as part of this study, and (4) pesticides are not recommended to be included in the mass loading being conducted for this study.

The PAC had considerable comments on the Pesticide Technical Memorandum. Those comments were:

- Control of pesticides benefits drinking water quality and CUWA supports such controls.
- Control of pesticides affects a drinking water utility's own use of "pesticides", namely copper sulfate and chlorine. A discussion should be added regarding the handling, discharge, etc., of pesticides at water treatment plants.
- The Bay Delta Oversight Committee has recently contracted with the University of California, Davis, to report on the effects of pesticides on aquatic life.
- The fact that the aquatic resources issue is driving water management and the pesticide work is important in driving the aquatic resources issue is not clearly stated.
- Taste and odor problems related to pesticides need to be discussed.
- A discussion of the continued lowering of detection limits in pesticide monitoring should be included.
- The term "toxic" needs to be specified as toxicity to aquatic life.
- Bruce Macler asked to review the numbers being presented for the Phase VIB pesticides.
- The comparison to drinking water standards made in this memorandum is based on raw water data. The Technical Memorandum should include a discussion of the conservative nature of this approach due to removal of pesticides in water treatment processes.

- Rick Woodard requested a copy of the data referenced in the memorandum.
- The memorandum does not credit the rice growers for the advances they have made in reducing pesticide loads to the Sacramento River. The decrease in pounds of pesticides discharged to the Sacramento River should be cited.
- The work currently being done to manage pesticides for aquatic resources will keep the pesticide numbers below drinking water standards and should be the clearly stated reason for recommending no further work under this study.

Jeanne collected written comments from the PAC. She will send the draft Pesticide Technical Memorandum for outside agency review. Following receipt of the outside agency review comments, she will revise the draft based on those comments, the written comments received from PAC members, and the discussion at the PAC meeting. Jeanne will also compile a series of data tables copied from the reports referenced in the Technical Memorandum for limited distribution to interested PAC members.

MASS LOADING RESULTS--Marv Jung

Marv presented the work done on the Mass Loading Methodology Technical Memorandum. As agreed to at the last PAC meeting, he calculated mass loads for total dissolved solids (TDS) and dissolved organic carbon (DOC) at Banks Pumping Plant, Greene's Landing, and Vernalis using the project team's proposed methodology and based on the MWQI data.

The ensuing discussion principally addressed the "readability" of the cumulative frequency curves. After much discussion on the presentation and terminology, the PAC requested a simpler evaluation method and presentation. The data for each contaminant at each location will be shown in a series of three graphs. These will be (1) concentration versus month, (2) flow versus month, and (3) load versus month.

DATA EVALUATION--Jeanne Wallberg

Jeanne distributed two tables summarizing the amount of data available for each contaminant at both instream and discharge locations. Jeanne discussed several features of the tables including the surrogate locations and the correlation of the discharge locations to the management alternatives. The project team used these tables to determine which constituents were potential candidates for mass load calculations. There is a general ability to evaluate trihalomethane formation potential (THMFP), trihalomethane formation potential carbon (TFPC), total and/or dissolved organic carbon, bromide, alkalinity, selected nutrients, arsenic, and TDS. There are insufficient data to evaluate any biological constituents.

RECOMMENDATIONS FOR FURTHER ANALYSIS--Elaine Archibald

Elaine reviewed the mass loading work completed by the project team to date. The team has identified management alternatives, collected and organized the data for the selected contaminants of concern, developed the mass load methodology, and calculated mass loads for TDS and DOC at three benchmark locations using the proposed methodology.

Recommended next steps (as discussed and agreed to by the PAC) are to:

1. Calculate mass loads for TDS and DOC at all the benchmark locations and the discharges using the three graph series agreed upon at this meeting.
2. Discuss these results with Lyle and possibly some of the PAC members before proceeding.
3. Construct the three graph series for DOC, alkalinity, bromide, selected nutrients (selected at the discretion of the project team), arsenic, and TDS at all benchmark locations and discharges as feasible.

Elaine then discussed the advisability of proceeding to the health risk analysis work. Mike McGuire suggested that the model will not be sensitive enough to distinguish between the range of realistic contaminant concentrations. Bruce agreed it was probably premature to analyze health risks. This will be discussed at the next PAC meeting.

There was some discussion about the content of the Phase I report. Recommendations were made by various PAC members:

- Include a qualitative discussion of health risks.
- Include a discussion of THMFP and TFPC relationship to organic carbon.
- Include a discussion on the Information Collection Rule.
- List examples of how organic carbon differs depending on the source.
- Little further work should be done on the alternatives during Phase I.
- The discussion on monitoring should be general in terms of what data would be needed to complete all the mass loads calculations.
- There should be a description of the monitoring programs and data collected.

SUMMARY OF DECISIONS AND ACTION ITEMS--Elaine Archibald

1. Pesticide Technical Memorandum
 - Will be sent out for outside agency review.
 - A revised draft will be submitted for PAC review.
2. Mass Loading Work
 - The methodology and presentation will be changed to the three graph series.
 - Lyle and a subset of the PAC will review the three graph results for TDS and DOC before the project team proceeds with additional constituents.
 - The list of constituents to be evaluated are DOC, bromide, alkalinity, selected nutrients, arsenic, and TDS.
 - The existing Mass Loading Methodology Technical Memorandum will not be revised.
 - A Mass Loading Results Technical Memorandum will be prepared to reflect the changed method/presentation, the results of evaluating the selected contaminants, and a discussion of the monitoring programs and data sources.
3. Next PAC Meeting
 - The next meeting is scheduled for September 28, 1994, at 9:00 a.m. at the CUWA office.
 - Discussion items will include the mass loading results, monitoring recommendations, a discussion of the health risk analysis work, and the significance of this work to the alternatives.