

Key Outcomes

San Joaquin River Dissolved Oxygen TMDL Stakeholder Forum
Modesto Irrigation District Office, Modesto, CA
April 12, 2004, 1:30 PM - 4:30 PM

PURPOSE of the FORUM and KEY OUTCOMES MEMORANDUM

The purpose of the April 12, 2004 Stakeholder Forum was to provide Central Valley Regional Water Quality Control Board (RWQCB) staff the opportunity to brief concerned stakeholders on the details of the Basin Plan Amendment Proposal regarding the total maximum daily load (TMDL) for dissolved oxygen (DO) in the San Joaquin River (SJR), and to allow stakeholders to ask questions and express concerns on the Proposal to RWQCB and California Bay-Delta Authority (CBDA) staff.

This Key Outcomes Memorandum is not intended to be a transcript of the Forum. Rather, it is organized around key themes that emerged during the Forum. Presenters at the Forum included Mark Gowdy from the Central Valley RWQCB and Barbara Marcotte from the CBDA. Scott McCreary of CONCUR, Inc. facilitated the Forum. Attendees included individuals and representatives from various local water authorities, irrigation districts, cities, resource agencies, environmental organizations, and environmental consulting firms. See Appendix 1 for a list of attendees.

PRESENTATIONS at the FORUM

Mark Gowdy gave a PowerPoint presentation (see Appendix 2) that reviewed the DO TMDL efforts in the SJR to date and introduced the RWQCB Basin Plan Amendment Proposal. He began by describing the nature of the DO impairment and the Basin Plan Amendment process. He then discussed the Basin Plan Amendment Proposal, where he outlined the RWQCB's determination of contributing factors, loading capacity, and program of implementation. Barbara Marcotte then gave a PowerPoint presentation (see Appendix 3) on the CBDA's actions in conjunction with the development of the DO TMDL. Both presenters invited comments during their presentations, which elicited a lively exchange of views.

TOPICS of DISCUSSION

Discussion was focused around the following six topics, which generally followed the outline of Mark Gowdy's presentation:

1. Contributing factors to low DO
 - a. Logic of the three-way allocation of responsibility between the three contributing factors
 - b. Loads of oxygen demanding substances
 - i. Studies needed to more accurately assess and allocate loads
 - ii. Relative contribution of various oxygen demanding substance sources and their variability
 - c. Deep Water Ship Channel (DWSC) Geometry
 - d. Flow through the DWSC
2. Loading Capacity
 - a. Equation used to estimate loading capacity
 - b. Impact of flow variation on loading capacity
3. Implementation actions and the need to establish assurances, milestones, and benchmarks
4. Aeration feasibility studies and projects
5. Independence of studies and role of peer review
6. Sequencing and timing of decisions on TMDL relative to other agencies' decisions

1. **Contributing factors to low DO**
 - a. **Logic of three-way allocation of responsibility between the three contributing factors**
 - b. **Loads of oxygen demanding substances**
 - i. **Studies needed to more accurately assess and allocate loads**
 - ii. **Relative contribution of various oxygen demanding substance sources and their variability**
 - c. **DWSC geometry**
 - d. **Flow through the DWSC**
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- a. **Logic of the three-way allocation of responsibility between the three contributing factors**

Mark Gowdy discussed how a reasonable technical argument exists to support the position that each of the three contributing factors (load of oxygen demanding substances, Deep Water Ship Channel (DWSC) geometry, and reduced flow through the DWSC) are 100% responsible for the DO impairment. This position has sometimes been referred to as the "three legged stool." Les Grober, of the RWQCB, further stated that there is sufficient science to show that any one of the three components could, independently, solve the DO impairment of the DWSC.

The logic of allocating responsibility equally among the three contributing factors was questioned by several attendees, who stressed the differences in responsibility between the three factors.

Bill Jennings of Deltakeeper noted that the current TMDL process is not structured to address non-load factors such as flow and geometry. He was concerned that the burden for repairing the impairment would disproportionately fall on those responsible for load, and wanted "reasonable assurances" that the RWQCB would also allocate responsibility to those responsible for flow and geometry.

Mark Gowdy responded that the TMDL allocates responsibility equally between load, flow, and geometry.

- b. **Loads of oxygen demanding substances**
 - i. **Studies needed to more accurately assess and allocate loads**
 - ii. **Relative contribution of various oxygen demanding substance sources and their variability**

Mark Gowdy discussed the sources of the loads of oxygen demanding substances in the lower SJR and detailed how the 1/3 of overall responsibility apportioned to loads of oxygen demanding substances would be allocated to algae (70%) and the Stockton RWCF (30%). He stressed that further study needs to be done before allocations are made to specific sources, that further studies will be required from those responsible for those sources, and that more detailed allocations would be made based on the results of these studies, which will be required to be finished in 2008.

A question was raised about whether the RWQCB was prepared to cap loads from new sources. Mark Gowdy answered that it was, if it could determine what their effect is on DO.

Bill Jennings and G. Fred Lee both noted that loads vary depending on season, flow, the activity of the Stockton RWCF, and other factors. They questioned whether load allocations would take

account of this variability. Mark Gowdy responded that it would depend on whether studies warrant it. He stated that modeling data would be available in a couple years, and that in 2008 the RWQCB would be able to do detailed load allocations.

G. Fred Lee pointed out that it is currently known that ammonia from the Stockton RWCF's is sometimes a major contributor to loads, and questioned why it could not be regulated earlier than 2008. His concern was that there was no action in the TMDL that addresses the impairment for four years. Mark Gowdy reiterated that more studies needed to be done to assess detailed allocations.

Another attendee mentioned wildlife refuges as a potential load source.

c. DWSC geometry

Mark Gowdy explained how the DWSC's geometry reduces loading capacity.

Bill Jennings noted that the US Army Corps of Engineers has never fully mitigated the impacts of building the DWSC, and asked when a demonstration project is supposed to begin. Mark Gowdy responded that the RWQCB does not have authority over the Corps.

Hicham Eltal also noted that low DO only occurs in the DWSC portion of the SJR.

d. Flow through the DWSC

Mark Gowdy explained how lower flows in the DWSC reduce loading capacity. He stated that the two main activities affecting flow in the DWSC were consumptive use and diversion.

Alex Hildebrand of the SDWA noted that the EIS/EIR for the South Delta Improvement Project will consider recirculation of flow from the Delta through the Delta Mendota Canal, which would increase flows in the DWSC to levels that would obviate DO impairment. He also mentioned that recirculated water would increase flows.

Mark Gowdy responded that these issues should be addressed by proponents of the South Delta Improvements Project and that the RWQCB believes it needs to consider DO TMDL as part of their environmental documentation and mitigation measures.

Bill Jennings noted that there is a clear link between low flow and low DO. G. Fred Lee noted that reducing loads has not been successful and suggested taking land out of production and focusing on increasing flows to most quickly increase DO levels.

Mark Gowdy and Les Grober responded that allocating responsibility solely to flow would not be an equitable way to increase DO levels and explained that their "three-legged stool" approach allows the RWQCB to implement corrective actions most quickly for factors that are currently understood.

Lowell Ploss asked whether the RWQCB would give credit to stakeholders who take measures to address the DO issue (e.g., by increasing recirculation flows) before implementation of the TMDL. Mark Gowdy said that the RWQCB would be willing to consider a trading program.

Barbara Marcotte recommended that people contact the DWR for questions related to the timetable on construction of barriers to increase flow in the DWSC.

2. Loading Capacity

- a. Equation used to estimate loading capacity**
 - b. Impact of flow variation on loading capacity**
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a. Equation used to estimate loading capacity

Russ Brown of Jones & Stokes and G. Fred Lee both questioned the structure of the equation for loading capacity and stressed the importance of including a term for assimilative capacity. Russ Brown stated that without assimilative capacity in the loading capacity equation, oxygen demand would be difficult to determine accurately.

b. Impact of flow variation on loading capacity equation

Several attendees noted that seasonal or human-induced variations in flows were not a factor in the calculations for loading capacity in the equation used in the CVRWQCB staff report.

3. Implementation actions and the need to establish assurances, milestones, benchmarks

Mark Gowdy outlined the Phased Implementation Plan, which calls for study plans to be completed by Feb. '05, the studies to be done by Dec. '08, and detailed load allocations to be made soon thereafter.

Several attendees questioned the lack of assurances, milestones, and benchmarks within the Plan. They noted that the recommendations in the TMDL were not binding and that load allocations were largely dependent on studies that would not be completed until 2008. Attendees wanted assurance that appropriate data will be collected in a timely manner, that responsibility will be allocated, and that there are consequences for noncompliance.

Mark Gowdy and Les Grober responded that the studies are necessary for the TMDL to be scientifically defensible and for responsibility to be allocated fairly.

Two attendees asked about the State Water Resources Control Board's (SWRCB) involvement in regulating flows. Mark Gowdy responded that this should happen as soon as possible, but that it is solely the SWRCB's responsibility.

One of these attendees asked about the type of detail that will be provided to the SWRCB regarding flows. He questioned whether the SWRCB can address the water rights process without addressing flows, and if the RWQCB can influence the SWRCB's timeline.

Mark Gowdy responded that the RWQCB does not have the control to address this issue.

4. Aeration feasibility studies and projects

Attendees discussed the timeline and responsibility for a demonstration aeration project and a long-term aeration project. Several attendees mentioned that an aeration project would help boost DO levels. Bill Jennings, however, noted that aeration has not yet been proven to be able to solve all of the DO problem. He cautioned that anything that justifies increased loading and diversions is "a problem and not a solution."

Byron Buck, representing a consortium of water users, indicated that a letter has been sent to the RWQCB and CBDA indicating the commitment by several stakeholders—including State Water Contractors, the Port of Stockton, the San Luis and Delta Mendota Water Authority, and the San Joaquin River Group Authority—to create a joint powers authority (or similar body) that would assume long-term responsibility for aeration (i.e., fund the ongoing annual operating costs). These stakeholders would assume responsibility from the Army Corps of Engineers upon successful completion of an aeration demonstration project.

Barbara Marcotte discussed the funding of the aeration demonstration project. She responded in the negative to Alex Hildebrand's question about whether there was any analysis of costs for this project.

5. Independence of studies and role of peer review

A few attendees questioned the decision to require those responsible for DO impairment to design their own studies on sources and linkages. Mark Gowdy responded that the RWQCB will review the design of these study plans, and that the RWQCB is asking primarily for objective data collection.

6. Sequencing and timing of decisions on TMDL relative to other agencies' decisions

Participants noted that the TMDL impinges on, and is affected by, several other important agency decisions, and that there is a strong relationship between decisions made by the RWQCB, SB, CBDA, USACE, and other agencies.

FINAL QUESTIONS

A few final questions were raised regarding RWQCB action after the April 23rd meeting and the opportunity for another stakeholder forum before the May 14 comment deadline.

APPENDICES

- Appendix 1: Attendees of the Stakeholder Forum
- Appendix 2: RWQCB staff (Mark Gowdy) PowerPoint Presentation
- Appendix 3: CBDA staff (Barbara Marcotte) PowerPoint Presentation