



CVCWA Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

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Sent via electronic mail

January 11, 2008

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**Re: Comments on Matters to be Addressed at January 22, 2008 Workshop –
Consideration of the Pelagic Organism Decline in the San Francisco Bay/Sacramento-San
Joaquin Delta Estuary**

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to provide comments regarding the State Water Resources Control Board's (State Water Board) January 22, 2008 workshop to receive information regarding the Pelagic Organism Decline (POD) in the Bay-Delta. CVCWA is an association of public agencies whose members own and operate municipal wastewater treatment systems in the Central Valley. CVCWA members provide the funding and resources necessary to remove pollutants from municipal wastewater on a continuous basis to levels that are protective of water quality and beneficial uses in accordance with the requirements of the Clean Water Act and the California Water Code.

CVCWA provided testimony at the December 4, 2007 Board hearing where Resolution No. 2007-0079 was adopted. That resolution describes water quality and water right activities that the State Water Board, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and the San Francisco Bay Regional Water Board will undertake to address the POD and other Bay-Delta issues. CVCWA has indicated its concern for the need to take appropriate and timely actions to address the POD and its willingness to be an active participant in the development and implementation of a solution to this problem. CVCWA will continue to be actively involved in this ongoing public process.

In the Notice of Public Workshop, the State Water Board indicated that it is seeking information and recommendations for actions to improve fishery resources in specific areas. Areas of specific interest to CVCWA include:

- Status of the National Center for Ecological Analysis and Synthesis (NCEAS) report summarizing the latest POD work team efforts;
- Findings of toxicological studies related to the POD, including ammonia discharge and its effect on the lower trophic level of the Delta food chain;
- Any new findings related to effects of water exports, invasive species and contaminants on the POD; and,
- Short-term and long-term actions the State Water Board should consider to improve habitat conditions for fishery resources.

Our comments preceding the workshop fall into three categories: (1) comments regarding the process for implementing actions under State Water Board's Resolution No. 2007-0079 and the relationship of the State Water Board's activities to other State agencies, (2) questions and concerns regarding the information available for review prior to the January 22, 2008 workshop, and (3) specific technical comments on information that has been obtained to date.

Process for Implementation of Resolution No. 2007-0079

As stated in our testimony for the December 4, 2007 hearing regarding State Water Board Resolution No. 2007-0079, CVCWA strongly supports the establishment of a well articulated, long-term strategy for the determination of actions the State Water Board or Regional Water Boards will propose to improve fishery resources in the Bay-Delta. CVCWA has requested that the process to develop that strategy be open to stakeholder involvement given its potential regulatory implications. In the short-term, CVCWA requests written descriptions of the following elements (preferably to be distributed at or before the workshop) that are necessary to establish a sound framework for the strategic planning effort:

- a. The process and schedule that will be used to develop the long-term strategy and associated project level work plans;
- b. The opportunities for public input and the process that will be used to reach decisions regarding short-term or long-term regulatory actions in the Bay-Delta; and
- c. Assurance that adequate independent peer review will be performed on research to ensure that the science supporting any proposed regulatory actions is sound.

CVCWA is concerned by the lack of clarity regarding the coordination of State Water Board efforts with other State and federal agency efforts related to POD. The State Water Board has adopted its Resolution No. 2007-0079, but it is unclear how and to what extent other agencies are coordinating with the State and Regional Water Boards. For instance, offices and agencies responsible for the Delta Vision Report, Bay Delta Conservation Plan, CALFED Bay-Delta Program's Delta Risk Management Strategy, Interagency Ecological Program POD Synthesis Report, and the work of the National Center for Ecological Analysis and Synthesis at UC Santa Barbara appear to be moving on separate tracks, outside of the direct influence of the State Water Board.

CVCWA supports the State Water Board's effort to exert leadership to unify these various POD-related activities into a coherent and coordinated research effort.

Information for Review and Comment Prior to January 22, 2008 Workshop

CVCWA is concerned that important materials (e.g., work plans and other documents) related to work on water exports, invasive species and contaminant effects have not been distributed for review during the written comment period. We hope these materials will be available prior to the workshop. Furthermore, a workshop agenda with a list of presenters has yet to be made available. This absence of information severely limits the ability of CVCWA and other stakeholders to provide effective written or oral testimony at the workshop.

CVCWA is also concerned that researchers from other agencies (Department of Water Resources, UC Davis, UC Riverside, USGS, SFEI, NOAA Fisheries, and other members of the IEP POD work group) are meeting during the State Water Board's scheduled workshop in a separate "closed-door" meeting to discuss contaminant effects studies. As contaminant effects are directly under the State Board's purview, CVCWA is concerned of the lack of involvement of these researchers in the State Water Board's process. We are also disturbed by the lack of demonstrated commitment to stakeholder involvement and an open public review process by these other agencies and researchers. Some of the studies being developed pertain directly to CVCWA's membership. However, these agencies have not sought CVCWA's and its members' input the development of the studies.

Comments on Information Obtained by CVCWA

CVCWA offers the following input regarding specific documents, informally obtained, that describe proposed research regarding (1) ammonia toxicity and (2) ammonium inhibition impacts on the Delta food web.

Work Plan for the Investigation of the Hypothesis that Ammonia is causing Toxicity to Delta Smelt in the Sacramento River [proposed work by Inge Werner at UC Davis]

The work plan is lacking in a number of key areas and appears to be insufficient to address the working hypothesis. A sampling of these deficiencies is described below.

- The work plan does not articulate how pH and temperature will be properly accounted for in proposed ammonia toxicity studies. Drift in pH and temperature during testing must be controlled, given the significant effect these parameters have on ammonia toxicity. The work plan further does not address how well the testing procedure will simulate actual conditions in ambient waters.
- The work plan fails to address key issues regarding the performance of non-standard toxicity tests with endemic organisms. Proper information and protocols for the use of Delta smelt as test organisms are lacking. Test organisms must meet acceptability criteria based on control charts developed from reference toxicant tests. Neither the availability of these criteria nor the associated procedures to ensure acceptability is addressed. The relative sensitivity of the test organisms compared to the wild population is not addressed.
- The work plan does not address the statistical analyses that are to be used, nor does it demonstrate whether four replicates will provide sufficient statistical power.

- The work plan does not describe how the study design and/or conclusions will be impacted if upstream water causes toxicity.
- The work plan does not fully explain the information used to derive Figure 1, including methods and results from studies that led to these data. The depicted trend is heavily weighted by one result, and the data vary widely.

These deficiencies highlight the need for proper review and input into the entire suite of research activities.

Investigation of Hypothesis that Ammonium Inhibits Primary Productivity in the Delta [ongoing work by Anke Mueller-Solger at DWR]

The work by DWR regarding the potential ammonium inhibition of primary productivity in the Delta and subsequent connection of these effects to the POD is very preliminary and incomplete. The following key issues remain with this work effort:

- The relative importance of ammonium inhibition on primary productivity in Northern San Francisco Bay (existing work by Dugdale *et al.*) has not been well established. Clearly light limitation and invasive species impacts are significant factors affecting annual phytoplankton primary productivity.
- The alleged inhibition effect in Northern San Francisco Bay has not been linked to wastewater dischargers. Connections to wastewater are based on an unquantified assessment which fails to address ammonium conditions or trends over time.
- The ammonium inhibition effect in the Delta alleged in the work by DWR is extrapolated from the work in Northern San Francisco Bay. Similar work has not been performed in freshwater areas of the Delta. It is entirely premature to conclude that the existence of this effect occurs Delta.
- Differences in levels of nitrates and ammonium in the Delta versus the levels of these constituents observed in Northern San Francisco Bay have not been studied.
- The importance of an alleged inhibition effect on primary productivity in the Delta has not been quantified in comparison to light limitations and invasive species impacts.
- The linkage between changes in primary productivity and POD has not been clearly established. Presumed impacts on the Delta food web related to ammonium concentrations have not been demonstrated. A holistic assessment of ecosystem linkages relating the POD to food web changes has not been documented.

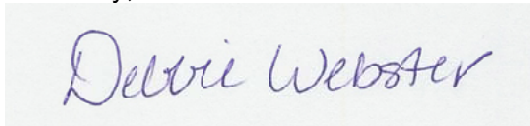
These issues should be clearly identified and properly addressed before serious consideration is given to management actions to address alleged ammonium impacts on Delta fisheries.

Conclusion

CVCWA understands that time is of the essence in seeking remedies to the POD. However, with regard to the requirement of specific management actions and major resource commitments, the need exists to perform meaningful, scientifically defensible studies that have been considered in a transparent public process. It is key that independent peer review of work plans and study results be performed prior to the finalization of technical or policy determinations. The State Water Board needs to coordinate with the other State agencies that are involved in this effort to craft a unified approach that will lead to timely management decisions consistent with the current regulatory structure. The State Water Board needs to exert leadership to avoid the continuation of the current confusing and uncoordinated approach to research and management planning.

CVCWA again offers its resources to assist the State Water Board in its strategic planning effort related to the POD and in the review of relevant work plans and research. In particular, CVCWA seeks involvement in ongoing studies that are targeting POTW discharges as the source of significant impacts to fisheries resources in the Delta. Such findings are not consistent with historic monitoring results and impact assessments in the Delta.

Sincerely,

A handwritten signature in blue ink that reads "Debbie Webster". The signature is written in a cursive style and is centered within a light gray rectangular box.

Debbie Webster
Executive Officer
CVCWA

Cc: Mike Chrisman, Resources Secretary
Linda S. Adams, CalEPA Secretary
Pamela Creedon, RWQCB (5)
Bruce Wolfe, RWQCB (2)
Lester Snow, DWR