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Mary K. Snyder
*District Engineer*Stan R. Dean
*Plant Manager*Wendell H. Kido
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Chief Financial Officer

March 10, 2008

Ms. Dianne Riddle
Staff Environmental Scientist
Hearings and Special Programs Section
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Sent via e-mail (driddle@waterboards.ca.gov)

Information for March 19, 2008 Workshop – Development of Strategic Work Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

The Sacramento Regional County Sanitation District (District) appreciates the opportunity to provide information to the State Water Resources Control Board (State Water Board) for its use in the development of the strategic plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary as outlined in SWRCB Resolution No. 2007-0079. The District is a regional sanitation district that serves over a million customers in the Sacramento metropolitan area and owns and operates the Sacramento Regional Wastewater Treatment Plant (SRWTP). The SRWTP discharges directly into the Sacramento River downstream of Freeport, which is part of the Delta Waterways (northern portion), in the Central Valley Regional Water Quality Control Board area.

The District has supported the Central Valley Clean Water Association (CVCWA) comments and oral testimony in response to the December, 2007 Water Board resolution, and provided comments and oral testimony for the January 22, 2008 State Water Board workshop on the Pelagic Organism Decline (POD) in the Bay-Delta, and the March 5, 2008 Central Valley Regional Water Board public meeting regarding actions to be included in the strategic plan. Copies of CVCWA's comments on Resolution 2007-0079 and our previous written comments on the POD are attached to this letter. The common themes in our prior written comments and oral testimony are as follows:

- Support for the concept of a comprehensive regional monitoring program for the Delta and tributaries
- Recommendations regarding the governance and funding for a regional monitoring program
- Concern for the quality of studies performed to date that form the basis for hypotheses about the impacts of ammonia in the Delta

- Concern for the lack of stakeholder involvement and peer review of the ammonia studies performed to date
- Request to be involved in the development of future contaminant-effect studies (ammonia and others) in the Delta
- Support for State and Regional Water Board leadership in the above activities, with the understanding that such leadership will lead to enhanced opportunity for stakeholder involvement, quality control, peer review and timely reporting of results

The District supports the oral comments and written request made by CVCWA that the State Water Board efforts to develop its strategic plan and implement its December 4, 2007 resolution regarding the POD and other Bay-Delta issues be done in an open and transparent public process. Together with CVCWA, we reiterate these comments and are awaiting positive statements from the State Water Board regarding structural and process changes that will be made in response to our requests. We have requested the formation of advisory and/or steering committees in the above areas and have pledged our support and participation in those processes.

Thank you again for your consideration of our input.

Sincerely,



Wendell H. Kido
District Manager

cc: Tam Doduc – California State Water Resources Control Board
Pamela Creedon – Central Valley Regional Water Quality Control Board
Linda Adams – California Environmental Protection Agency
Mike Chrisman – The California Resources Agency
Lester Snow – California Department of Water Resources
Debbie Webster – CVCWA



CVCWA

Central Valley Clean Water Association

Representing Over Fifty Wastewater Agencies

STAN DEAN – CHAIR, SRCSD STEVE HOGG – VICE CHAIR, FRESNO
MICHAEL RIDDELL – SECRETARY, CERES ED CROUSE – TREASURER, RANCHO MURIETA CSD

Sent via electronic mail to: commentletters@waterboards.ca.gov

November 28, 2007

Clerk to the Board
State Water Resources Control Board
PO Box 100
Sacramento, CA 95812-0100

Subject: 12/4/07 Board Meeting, Resolution specifying actions the Water Boards will take to protect beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

The Central Valley Clean Water Association (CVCWA) hereby submits comments on the proposed resolution specifying actions the Water Boards will take to protect beneficial uses of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary.

CVCWA's member agencies own and operate municipal wastewater treatment facilities, providing service to most of the sewered population in the Central Valley. A primary goal of our member agencies is to provide reliable treatment of wastewater while protecting the beneficial uses of receiving waters. CVCWA member agencies operate under NPDES permits and waste discharge requirements that are developed and adopted in accordance with the requirements of the Clean Water Act and the Porter-Cologne Water Quality Control Act. These permits and requirements are established consistent with the water quality control plan (Basin Plan) for the Central Valley, the California Toxics Rule, the State Implementation Policy (SIP), the Bay-Delta plan and other statewide plans. The express purpose of the regulatory program that governs our members is to protect and maintain beneficial uses in the surface waters of the Central Valley, including the Sacramento-San Joaquin Delta.

CVCWA appreciates the urgency of the situation that exists in the Sacramento-San Joaquin Delta related to the pelagic organism decline and the need of the Water Boards to address potential water quality-based impacts in the Delta. CVCWA is supportive of the concept of establishing a well-funded regional monitoring program for the Delta to address water quality issues, similar to the program established in the San Francisco Bay area through the San Francisco Bay Institute (SFEI). CVCWA has significant concerns, however, regarding the time frame given for review of this important document and the approach being taken in many other

elements of the proposed resolution. We recommend that the State Board and Regional Boards delay adoption of this resolution pending a workshop where aspects of this resolution could be more fully discussed with stakeholders. CVCWA's concerns include, but are not limited to, the following:

1. Initiation of a public trust proceeding
2. Lack of specificity in the description of the process to develop a long-term strategy and work plan for addressing the comprehensive, consistent, and coordinated protection of beneficial uses, including the relationship of that effort to the Basin Planning process.
3. Lack of mention or description of the process to reach decisions regarding short-term or immediate actions to be taken by the Water Boards.
4. Lack of acknowledgement of longstanding, ongoing regulatory programs and requirements that provide a current level of protection of beneficial uses in the Delta.
5. Establishment of firm deadlines in the resolution that have not been properly considered
6. Elevation of issues in the resolution based on incomplete scientific investigations and unproven working hypotheses.
7. Absence of effectiveness monitoring as a component of the actions to be implemented.
8. Lack of mention or description of a process to ensure that research and testing performed by the University of California or others will be properly planned, performed and peer reviewed.

CVCWA's specific comments on the above areas are provided below:

Public Trust Proceeding

Resolved #6 states that "[t]he Water Boards will initiate a public trust proceeding to: (1) consider the protection of public trust resources and the balancing of the competing demands for water in and from the Bay-Delta; and (2) evaluate the reasonableness of the SWP's and CVP's method of diversion from the Delta." (Resolution at p. 8.) The Resolution, its findings and the staff's summary of the Resolution (i.e. "Buff Sheet") do not provide any further information regarding the Water Boards' collective intents or reasons for initiating a public trust proceeding. We can surmise from our understanding of the public trust doctrine that the State Water Board intends to reevaluate or reexamine all previous water right allocation decisions to determine if water appropriations are harming interests protected by the public trust. (See *National Audubon Society v. Superior Court of Alpine County* (1983) 33 Cal. 3d 419, 447. "Once the state has approved an appropriation, the public trust imposes a duty of continuing supervision over the taking and use of the appropriated water. In exercising its sovereign power to allocate water resources in the public interest, the state is not confined by past allocation decisions which may be incorrect in light of current knowledge or inconsistent with current needs.")

If that is the State Water Board's intent, we are uncertain as to why the Resolution refers to the "Water Boards", as water right allocation authority vests solely with the State Water Board and not the Regional Water Boards. If the Water Boards intend to expand the public trust doctrine to include a review of activities unrelated to water allocations (e.g. NPDES permits, WDRs, waivers from waste discharge requirements, etc.), the Water Boards should clearly indicate this intent and provide the authority to do so.

Regardless, CVCWA is opposed to the stated intent to initiate a public trust proceeding. Such a proceeding would most likely be a time-consuming and resource intensive effort that yields little benefit for actually improving water quality and protecting the Delta's beneficial uses.

Process to develop a long-term strategy and work plan

The resolution should clearly articulate that any process to develop a long-term strategy and work plan to coordinate and synthesize the multiple ongoing research and management activities in the Delta will directly involve affected Central Valley stakeholders, such as CVCWA, agricultural interests, wetland managers, municipal stormwater agencies and others. It should be noted that, to our knowledge, none of these parties have participated to date in the development of the proposed resolution.

Process to reach decisions regarding short-term or immediate actions

The resolution should describe the need for and the process to be used in reaching decisions regarding short-term or immediate management decisions affecting regulated entities in the Central Valley.

Failure to acknowledge existence or impact of ongoing water quality regulatory programs

The findings section of the resolution should be modified to describe and explain the regulatory plans, policies and requirements that are currently in place, and the existing benefits of that regulatory program. The resolution should also describe the relative contributions made by various sources and the impact of water diversions in comparison to these sources (refer to the attached Table 6.1 excerpted from the draft Delta mercury TMDL dated June 2006).

Establishment of Deadlines in the resolution

Examples of deadlines that appear to be established inappropriately in the resolution without proper consideration of factors impacting the ability to achieve the deadlines are the Central Valley Basin Plan amendment for a drinking water policy (2009) (Resolved # 15) and the adoption of the Phase II sediment quality objectives for the Delta (2010) (Resolved #16).

Inclusion of Issues based on incomplete science

One example is the issue of the inhibition of primary productivity by ammonia (Resolved #9), which, to date, is based on incomplete science and information regarding the occurrence of the alleged effect, food chain implications, and linkage to population level impacts on fish species of concern. The implication in the resolution that this issue may lead to regulatory controls in the short-term is inappropriate and should be eliminated.

Another example is blue-green algae (Resolved #10), where essential information is currently incomplete. Investigation of this issue must include an evaluation of the presence and amount of blue-green algae-produced toxin in Bay-Delta waterways, the effect of ambient toxin concentrations on beneficial uses, the drivers/controls for blue-green algae production, and the effectiveness of management alternatives. Again, the implication that short-term regulatory controls for this issue may be appropriate should be eliminated.

Absence of Effectiveness Monitoring and Evaluation

The resolution should be modified to include a statement that effectiveness monitoring programs will be included in the development and implementation of the programs to be included in the long-term and short-term work plan.

Absence of process to ensure proper planning, performance and review of research and testing

Given the significance of the outcomes of research and testing efforts by the University of California and others to address Delta issues, it is vital that procedures be established to ensure that studies are properly planned, performed and peer reviewed. Studies to be used in regulatory decision making should be held to the established standards of quality control that are used by USEPA and others in the development of water quality objectives and ambient water quality criteria.

While CVCWA acknowledges the importance of many of the issues put forth in the proposed resolution, we believe an effort of this magnitude must be carried out in a well-reasoned, scientifically sound, and unified manner if it is going to succeed in identifying, understanding, and resolving the causes of the recent pelagic organism decline (POD) and other significant Bay-Delta issues. CVCWA is an important stakeholder in these issues and requests to be included at the steering committee level in the development of the strategy and work plan for implementation of coordinated short- and long-term activities in the Bay-Delta.

Thank you for the opportunity to make these comments. We will also be providing oral testimony at the hearing scheduled for December 4, 2007, which may elaborate or expand on the above. If you have any questions regarding our letter, please contact us at (530) 268-1338.

Sincerely,



Debbie Webster
Executive Officer

c: Pamela Creedon, Central Valley RWQCB (via electronic mail)
Bruce H. Wolfe, San Francisco Bay RWQCB (via electronic mail)
Michele Pla, BACWA (via electronic mail)

Table 6.1: Average Annual Water Volumes for Delta Inputs and Losses

Inputs & Exports	WY2000-2003		WY1984-2003	
	Water Volume (M acre-feet/yr)	% All Water	Water Volume (M acre-feet/yr)	% All Water
Tributary Sources (% of All Inputs)				
Sacramento River	15.1	78%	16.1	69%
Yolo Bypass	1	5.2%	2.7	11%
San Joaquin River	1.8	9.3%	3	13%
Mokelumne-Cosumnes River	0.48	2.5%	0.7	3.0%
Calaveras River	0.14	0.72%	0.15	0.64%
Morrison Creek	0.064	0.33%	0.067	0.29%
French Camp Slough	0.063	0.32%	0.066	0.28%
Ulatis Creek	0.030	0.15%	0.031	0.13%
Bear/Mosher Creeks	0.028	0.14%	0.029	0.12%
Marsh Creek (a)	0.006	0.03%	0.006	0.03%
Other Small Drainages to Delta (b)	0.094	0.48%	0.097	0.41%
Sum of Tributary Inputs	18.8	96.9%	22.9	97.4%
Within-Delta Sources (% of All Inputs)				
Wastewater (Municipal & Industrial) (a)	0.25	1.3%	0.25	1.1%
Atmospheric (Direct)	0.093	0.48%	0.097	0.41%
Atmospheric (Indirect)	0.15	0.77%	0.16	0.68%
Urban	0.064	0.33%	0.066	0.28%
Sum of Within-Delta Inputs	0.56	2.9%	0.57	2.4%
Exports (% of All Exports)				
Outflows to San Francisco Bay [X2]	12	63%	17	73%
State Water Project	3.2	17%	2.6	11%
Delta Mendota Canal	2.5	13%	2.4	10%
Agricultural Diversions (a)	0.99	5.2%	0.99	4.2%
Evaporation	0.30	1.6%	0.3	1.3%
Dredging (a)	0.00024	0.001%	0.00024	0.001%
Sum of Inputs	19.4 M acre-feet		23.5 M acre-feet	
Sum of Exports	19.1 M acre-feet		23.3 M acre-feet	
Input - Export	0.3 M acre-feet		0.2 M acre-feet	
Exports / Inputs		98%		99%

(a) Only WY2001-2003 flow data were available for Marsh Creek. Wastewater volume is based on 2005 discharger information. Agricultural diversion volume is based on WY1999. The water volume removed by dredging is a 10-year average. The same water volumes for these inputs and exports were used in both water budget periods.

(b) "Other Small Drainages to Delta" include the following areas shown on Figure 6.1, for which total mercury and TSS concentration data are not available: Dixon, Upper Lindsay/Cache Slough, Manteca-Escalon, Bethany Reservoir, Antioch, and Montezuma Hills areas.



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January 11, 2008

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Board of Directors

Representing:

County of Sacramento

County of Yolo

City of Citrus Heights

City of Elk Grove

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Mary K. Snyder
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Chief Financial Officer

**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 Sacramento Regional County Sanitation District (District) appreciates the opportunity to provide comments to the State Water Resources Control Board (State Water Board) on the Consideration of the Pelagic Organism Decline (POD) in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary. The District is a regional sanitation district that serves over a million customers in the Sacramento metropolitan area and owns and operates the Sacramento Regional Wastewater Treatment Plant (SRWTP). The SRWTP discharges directly into the Sacramento River downstream of Freeport, which is part of the Delta Waterways (northern portion), in the Central Valley Regional Water Quality Control Board area.

The District is very interested in the development of effective solutions to the POD as a stakeholder in the Sacramento River watershed and the Bay-Delta. The District is also very interested in the ongoing research regarding the POD, in particular those studies that are based on a working hypothesis that the discharge of effluent from wastewater treatment facilities is a significant contributor to the decline. The District, as well as other municipal agencies that treat wastewater in the Central Valley, owns and operates sophisticated facilities. The District's discharge is highly regulated under the Clean Water Act and the California Water Code. The District performs regular monitoring of whole effluent toxicity and many individual chemical constituents and has an excellent performance record for compliance with its NPDES permit.

Comments on Notice of Public Workshop

In the Notice of Public Workshop, the State Water Board indicated that it is seeking information and recommendations in specific areas for actions to improve fishery resources in the Bay/Delta. Of the areas listed, those of specific interest to the District include:

- Status of the National Center for Ecological Analysis and Synthesis (NCEAS) report summarizing the latest POD work team efforts;

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- 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 for improving habitat conditions for fishery resources.

Unfortunately, the available information for the January 22 workshop pertaining to the above topics is quite limited. In fact, important information, such as work plans and other documents related to work efforts on water exports, invasive species and contaminant effects have not been provided by the State Water Board in advance of the comment deadline or workshop. As a result, the District has the following questions, rather than comments, to offer:

- Can the State Water Board furnish a complete current listing of all of the ongoing research related to the impacts of water exports, invasive species and contaminants on the POD?
- How will work performed by others be evaluated for use by the State Water Board in its regulatory process? How will the regulatory processes for POD issues vary from the Basin Planning/NPDES permitting that is in current use (and has been used for over 30 years in California)?
- How will decisions be made by the State Water Board regarding the prioritization of resources, and what process will be used by the State Water Board to prioritize its evaluation of ongoing research projects/working hypotheses?
- Does the State Water Board have the authority to set priorities or otherwise influence the studies being performed by the Interagency Ecologic Program (IEP) POD team or other State-funded researchers working on the fishery decline in the Delta?

Concerns Regarding Implementation of State Water Board Resolution No. 2007-0079

The District supports the oral comments and written request made by the Central Valley Clean Water Association (CVCWA) that the State Water Board efforts to develop its strategic plan and implement its December 4, 2007 resolution regarding the POD and other Bay-Delta issues be done in an open and transparent public process. Unfortunately, much of the work to date by POD researchers has not been publicly available and it is unclear how and to what extent other agencies are coordinating their efforts with the State and Regional Water Boards. If such work is to be considered in the State Water Board's regulatory process, public input and independent peer review of the work plans and research work is essential.

Comments on Work Plans and Investigational Studies Relating to Ammonia Toxicity Informally Obtained by CVCWA

Although no formal documents have been provided for public review, the District has informally obtained a copy of one of the work plans for research planned this spring that has been proposed by Inge Werner of UC Davis. This work plan (which was initiated by DWR) involves toxicity studies to explore the hypothesis that

the District's discharge is causing toxicity to Delta smelt. It is disturbing to the District that a work plan and investigational study has been proposed that directly relates to its discharge, yet the District was not consulted as an affected stakeholder. The District believes it could be a valuable resource – providing technical information to help improve the study design and protocols. For instance, the District is concerned that the work plan is inadequate in a number of areas, as highlighted below.

- How will pH and temperature be properly accounted for in proposed ammonia toxicity studies? These parameters must be controlled during testing, given the significant effect they can have on ammonia toxicity.
- How will the testing procedure be designed to simulate actual conditions in ambient waters at the location of concern to Delta smelt?
- What are the acceptability criteria for the bioassay test results? The work plan fails to address this and other 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.
- How will the relative sensitivity of the test organisms compared to the wild population be addressed?
- Will the seven-day testing be performed using a single grab sample or composite or from daily effluent and river samples?
- The work plan should include a test using undiluted Sacramento River water to determine if there is a downstream effect at the location of concern.
- The work plan should include more details for the test procedure, conditions and daily monitoring to ensure that the results are repeatable and dependable.

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

The District also wishes to reiterate and support the comments made by CVCWA in its letter dated November 28, 2007 regarding the research performed to date by the Department of Water Resources to examine the potential for ammonium inhibition of the Delta food web and the resulting impact on fisheries. CVCWA has stated that it views that work to be largely incomplete due to the absence of information regarding (a) the presence of the effect in the Bay-Delta, (b) adverse food chain implications, and (c) linkage to population level effects on fish species of concern. More specifically, CVCWA has identified the following major issues that must be addressed before this inhibition effect can be verified.

- 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 which must be considered in assessing the relative importance of the inhibition effect.

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- 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 throughout the 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.

Conclusion

The District understands the urgency to address the POD. However, the District also believes a methodical approach is critical to ensure meaningful, scientifically defensible studies are performed that have been considered in an open and transparent public process. Not only is coordination with other agencies essential, it is also key that independent peer review of work plans and study results be performed prior to the finalization of technical or policy determinations. The District offers to assist the State Water Board in its strategic planning effort related to the POD and in the review of relevant work plans, investigational studies and research. In particular, the District seeks involvement in ongoing studies that are targeting POTW discharges as the source of significant impacts to fishery resources in the Delta.

Sincerely,



Wendell H. Kido,
District Manager

cc: Tam Doduc – California State Water Resources Control Board
Pamela Creedon, Central Valley Regional Water Quality Control Board
Erica Fleishman, National Center for Ecological Analysis and Synthesis
Ted Sommer, Department of Water Resources
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February 29, 2008

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- County of Yolo
- City of Citrus Heights
- City of Elk Grove
- City of Folsom
- City of Rancho Cordova
- City of Sacramento
- City of West Sacramento

Re: Comments on Staff Report titled Central Valley Water Board Actions to Protect Beneficial Uses of the Sacramento-San Joaquin Delta

Ms. Larsen:

The Sacramento Regional County Sanitation District (District) appreciates the opportunity to provide comments on the staff report titled *Central Valley Water Board Actions to Protect Beneficial Uses of the Sacramento-San Joaquin Delta*. The District is a regional sanitation district that serves over a million customers in the Sacramento metropolitan area and owns and operates the Sacramento Regional Wastewater Treatment Plant (SRWTP). The SRWTP discharges directly into the Sacramento River downstream of Freeport, which is part of the Delta Waterways (northern portion), in the Central Valley Regional Water Quality Control Board area.

- Mary K. Snyder
District Engineer
- Stan R. Dean
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- Wendell H. Kido
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- Marcia Maurer
Chief Financial Officer

The Staff Report requests input from stakeholders for use in the development of a strategic work plan for Bay-Delta actions to be taken by the Central Valley Regional Board. The District has the following comments regarding the content of the Staff Report and the questions posed in that document. Our comments are focused on the language of the Staff Report dealing with the proposed new actions to (1) Assess the Potential Impact of Ammonia on Delta Species and (2) develop a Comprehensive Regional Monitoring Program.

Assess the Potential Impact of Ammonia on Delta Species [page 6-7]

Under "Rationale", the staff report states that "elevated ammonia concentrations in San Francisco Bay and Suisun Marsh...reduce marine phytoplankton production rates..." and that "researchers suspect that ammonia levels in the Delta may be sufficiently elevated to inhibit phytoplankton production in the Delta as well." The staff report further states that "reduced algal production could have profound effects on the abundance and distribution of aquatic organisms in the Delta including those associated with the POD."

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The District believes that this language should be modified. The language implies dramatic effects in San Francisco Bay and Suisun Marsh and fails to put the magnitude of the alleged effect in proper context. The language also places an overemphasis of the likelihood and significance of the effect in the Delta, in the advance of any studies of the Delta that would prove or disprove the hypothesis advanced by a DWR researcher.

The staff report also states that "IEP researchers suggest that Delta smelt and juvenile salmon may be impacted by ammonia levels in the Sacramento River...and in the San Joaquin River in the vicinity of the City of Stockton." The report should be modified to state that these "suggestions" are from preliminary data analyses which have not been validated, and as a result, the conclusions are questionable until further scientifically defensible studies subject to independent review and public scrutiny are conducted.

The District is particularly sensitive regarding the staff report language because of the credibility that has been granted to the researchers in question who have alleged in multiple public forums that a significant ammonia impact is likely occurring in the Delta. These alleged impacts are being presented without adequate scientific investigation and measured analysis.

Under the heading "Action", the staff report states that "...the Water Boards will seek funding to conduct screening studies to determine whether freshwater diatoms and Delta smelt could be impacted by ammonia concentrations in the Sacramento River. In addition, the Water Boards will coordinate with researchers collecting information on the potential direct toxicity of ammonia to salmon and Delta smelt."

In the first case, the District objects to the narrowing of the discussion to whether ammonia could be impacting diatoms in the Delta. The question is not whether ammonia could potentially impact diatoms – the question is whether ambient ammonia concentrations (which have not changed significantly over the past decade or more) could have caused population level effects on Delta smelt and other impacted fish species in the Delta since 2000. Therefore, rather than limiting the screening study to a simplified analysis regarding diatoms, the screening study must take into account food chain linkages and complexities at a system scale if it is to have any value in the assessment of impacts on fisheries.

In the second case, it was the District's understanding that the Regional Water Board would be exercising some review and control over the ammonia toxicity screening study that has been proposed by IEP. The District has obtained an early copy of the work plan for the proposed IEP study, and finds it to be lacking in numerous areas. The District has significant comment on the following areas of the work plan:

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- Documentation on the study methods and results obtained in 2006 and 2007 that have led to the proposed work plan.
- Details regarding the proposed sampling methods, frequency, and number.
- Details regarding the proposed Delta smelt toxicity bioassay methods and method validation.
- Details regarding the methodology to account for actual dilution of SRWTP effluent in the Sacramento River.
- Details regarding environmental relevance of the study design.
- Details regarding the statistical significance of the study results and the adequacy of replication.
- Methodology to interpret study results to isolate ammonia effects.

The District is concerned that these issues be addressed prior to performance of the study to avoid the current situation where issues of completeness and scientific rigor reduce the value of work performed to date. The implication that the Regional Water Board will merely coordinate with the IEP researchers sends a message that the proposed studies will occur outside the direct control of the Regional Board or any interested parties.

The District supports the input provided by CVCWA in response to the following questions in the Staff Report:

What long-term ammonia studies should be conducted?

The District recommends that ammonia studies be conducted and interpreted as part of a comprehensive set of studies to be performed to evaluate the causes of the POD. Those studies should include the various factors that could be influencing the POD, including contaminants, invasive species, water diversions (screened and unscreened), food web disruption, habitat degradation, predation and disease/pathogens. With this approach the relative contribution of individual factors affecting the POD can be determined.

With regard to ammonia toxicity, the District strongly recommends that long-term studies should be developed, performed and interpreted in the context of USEPA ambient water quality criteria and USEPA guidelines for the development of site-specific ammonia concentrations applicable to the Delta for protection of aquatic life.

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With regard to the impact of ammonia on the Delta food web and subsequent population-level effects on Delta fisheries, long-term studies of ammonia should be integrated with large scale studies of the food web and its dynamic effect on fisheries populations. In addition, ammonia fate and transport from all sources must be evaluated to clearly understand the role of ammonia and the relative contribution of the sources. As stated previously, the studies should not be limited to the impacts of ammonia on diatoms, as is currently described in the Staff Report.

What should the discharger's role be in the studies?

The District supports the recommendation by CVCWA that discharger representatives should be included on an Ammonia Studies Steering Committee, together with representatives from the Water Boards, Fish and Game, NOAA Fisheries and other appropriate stakeholders. The role of the Steering Committee would be to develop and direct the performance of Delta-specific ammonia criteria and impact studies and to assist in obtaining funding for the studies.

Should the Water Board convene a summit to present studies and gather information related to the impact of ammonia on Delta species?

The District agrees with CVCWA that the ammonia impact studies performed to date are an inadequate basis for convening a "summit" on the topic of ammonia impacts in the Delta. The District supports the CVCWA suggestion to convene an independent technical review panel to review a work plan for ammonia studies developed under the direction of the Steering Committee.

Comprehensive Regional Monitoring Program [page 3-5]

The Staff Report indicates that Water Boards staff will develop a comprehensive long-term, coordinated Delta-wide monitoring program. The District recommends that this program be developed through a stakeholder approach (which includes Water Boards staff) to secure buy-in and participation by the other affected parties. In addition to the San Francisco Bay RMP model, the District recommends that the approach to monitoring program development taken by the Sacramento River Watershed Program also be employed. The District also requests that the staff report language be modified to acknowledge the need to coordinate with the SRWP in linking a Delta monitoring program to the Sacramento River watershed.

What are the advantages and disadvantages of implementing a regional monitoring and assessment program?

The District is supportive of and sees clear advantages to the development of a regional monitoring and assessment program for the Delta.

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What should be the geographic and temporal scope of a regional monitoring program?

The District agrees with CVCWA that the primary focus of the program should be long-term and on the Delta. The program should also address and support monitoring in the tributaries to the Delta, (e.g. in the Sacramento River and San Joaquin River watersheds).

What should be the management framework, including data compilation, assessment and reporting for a regional monitoring program?

The District supports the position of CVCWA that management of the regional monitoring program (e.g. Board of Directors) must include significant representation from Central Valley stakeholders (clean water agencies, storm water agencies, agriculture, drinking water agencies, and others) together with State and Federal agency representatives. A non-profit entity, similar to the San Francisco Estuary Institute (SFEI), would be one feasible option to address the need for data compilation, assessment and reporting. In its present organizational structure, and given its strong San Francisco-Bay focus, the District agrees that SFEI would not be well suited to manage and implement the regional monitoring program in the Delta.

What should be the goals and objectives of the program? Which beneficial uses should be assessed? What are the most important parameters to monitor? What kinds of products should the program produce and at what frequency?

The District agrees with CVCWA that, at a minimum, the goals and objectives of the program should include the following: characterization of ambient water and sediment quality conditions, identification of areas of impairment, assessment and projection of quality trends, effective dissemination of information, and coordination with other programs to promote efficiency and quality assurance.

What other efforts should be coordinated with a regional monitoring program? How can various mandates be achieved through a regional Monitoring program?

The regional monitoring program should be coordinated with other ongoing monitoring in the Central Valley, including the Sacramento River Watershed Program, and other established, routine monitoring programs.

What resources should support the program? How can current Water Board monitoring be optimized? Are there other programs or efforts that could be leveraged to support regional monitoring?

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The District supports CVCWA's position that the regional monitoring program will require the integration of federal, state, local and external resources. The District recommends that NPDES-required ambient monitoring be minimized or eliminated to help create funding availability for the regional program. The District also supports the position that beneficiaries of the Delta resources (e.g. water supply entities) be required to provide significant funding for the regional program in exchange for representation on an advisory committee for the program.

We appreciate the opportunity to provide this feedback on this important topic.

Sincerely,



Wendell H. Kido
District Manager

cc: Mary Snyder – District Engineer, SRCSD
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