

- b. **Groundwater Evaluation Study (Special Provisions VI.C.2.b.).** To determine compliance with Groundwater Limitations V.B., the Discharger is required to evaluate the adequacy of its groundwater monitoring network. This provision requires the Discharger to evaluate its groundwater monitoring network to ensure there are one or more background monitoring wells and a sufficient number of designated monitoring wells downgradient of every treatment, storage, and disposal unit that does or may release waste constituents to groundwater. If the monitoring shows that any constituent concentrations are increased above background water quality, **within 48 months of permit adoption**, the Discharger shall submit a technical report describing the groundwater evaluation report results and critiquing each evaluated facility component with respect to BPTC and minimizing the discharge's impact on groundwater quality.

3. Best Management Practices and Pollution Prevention

- a. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plans required for salinity shall, at minimum, meet the requirements outlined in CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plans include the following:
- i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
 - ii. An analysis of the methods that could be used to prevent the discharge of the pollutants into the Facility, including application of local limits to industrial or commercial dischargers regarding pollution prevention techniques, public education and outreach, or other innovative and alternative approaches to reduce discharges of the pollutant to the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.
 - iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
 - iv. A plan for monitoring the results of the pollution prevention program.
 - v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.
 - vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
 - vii. A description of the Discharger's existing pollution prevention programs.

- viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.
- ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.
- b. Mercury Evaluation Program.** A mercury evaluation program was required by the previous Order and is being retained by the current Order. The Sacramento-San Joaquin Delta is 303(d) listed for mercury, and a TMDL is under development. The discharge must not contribute to increased loadings of mercury in fish tissue to meet anti-degradations requirements of State Board Resolution 68-16 and at 40 CFR 131.12(a)(1). Monitoring requirements for mercury and methylmercury are required for this Discharger as part of the mercury evaluation program.
- c. Salinity Plan.** The Regional Water Board, with cooperation of the State Water Board, has begun the process to develop a new policy for the regulation of salinity in the Central Valley. As previously described in this Fact Sheet, effluent data for EC and TDS indicate that effluent concentrations continue to be at levels of concern that may affect beneficial uses of the Old River. Therefore, this Order requires the Discharger to develop a Salinity Plan to reduce its salinity impacts to the Old River, which at a minimum must include source control measures, contributing financially in the development of the Central Valley Salinity Management Plan, and as reasonably possible, changing to water supplies with lower salinity. In addition, the Discharger is required to develop and implement a pollution prevention plan for salinity in accordance with CWC section 13263.3(d)(3), and to implement pollution prevention measures to reduce the salinity in its discharge to the Old River.
- d. Salinity Reduction Goal.** In an effort to monitor progress in reducing salinity discharges to the Old River, the Discharger shall provide annual reports demonstrating reasonable progress in the reduction of salinity in its discharge to the Old River. An annual average salinity goal of the maximum weighted average electrical conductivity of the Discharger's water supply plus an increment of 500 $\mu\text{mhos/cm}$ for typical consumptive use, has been established as a reasonable goal during the term of this permit. The annual reports shall be submitted in accordance with the Monitoring and Reporting Program (Attachment E, Section X.D.1.).

4. Construction, Operation, and Maintenance Specifications

- a. Treatment Pond Requirements.** The operation and maintenance of the treatment ponds are required to be conducted in a manner that prevents flooding and reduces nuisances. Treatment pond operating requirements are carried over from the previous Order.

- b. Ultraviolet Disinfection (UV) System Operating Specifications.** UV System specifications and monitoring and reporting is required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens e.g. viruses in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV System. Monitoring and reporting of these parameters is necessary to determine compliance with minimum dosage requirements established by the California Department of Public Health, (DPH) and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF's *"Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse"* first published in December 2000 revised as a Second Edition dated May 2003. In addition, a Memorandum dated 1 November 2004 issued by DPH to Regional Board executive officers recommended that provisions be included in permits to water recycling treatment plants employing UV disinfection requiring Dischargers to establish fixed cleaning frequency of quartz sleeves as well as include provisions that specify minimum delivered UV dose that must be maintained (as recommended by the NWRI/AWWARF UV Disinfection Guidelines).

Turbidity is included as an operational specification as an indicator of the effectiveness of the treatment process and to assure compliance effluent coliform limitations. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action.

Minimum UV dosage and turbidity specifications are included as operating criteria in Special Provisions, Section V1.C.5 and Monitoring and Reporting requirements, Attachment E, Section IX.B., to ensure that adequate disinfection of wastewater is achieved.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. Pretreatment Requirements.** Not Applicable.
- b. Sludge/Biosolids Discharge, Disposal, and Storage Requirements.** The use and disposal of biosolids is regulated under federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR Part 503.

Title 27, CCR, Division 2, Subdivision 1, section 20005 established approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. This Order includes requirements to ensure the Discharger disposes of solids in compliance with State and federal regulations.

c. Collection System. On 2 May 2006, the State Water Board adopted State Water Board Order No. 2006-0003, a Statewide General WDR for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003 and any future revisions thereto. Order No. 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR. Regardless of the coverage obtained under Order No. 2006-0003, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger must properly operate and maintain its collection system [40 CFR section 122.41(e)], report any non-compliance [40 CFR section 122.41(l)(6) and (7)], and mitigate any discharge from the collection system in violation of this Order [40 CFR. section 122.41(d)].

6. Other Special Provisions

a. Sections 122.41(l)(3) and 122.61 of the Code of Federal Regulations establish requirements for the transfer of an NPDES permit. Special Provision VI.C.6.a. of this Order requires the Discharger to comply with federal regulations for the transfer of NPDES permits in the event of a change in ownership.

7. Compliance Schedules

The use and location of compliances schedules in the permit depends on the Discharger's ability to comply and the source of the applied water quality criteria.

The Discharger submitted a request, and justification dated 18 September 2008, for a compliance schedule for electrical conductivity. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP. This Order establishes a compliance schedule for the new, final, water quality-based effluent limitations for Electrical Conductivity and requires full compliance within 5 years from permit adoption.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Discovery Bay Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided by posting in public areas (the nearest

courthouse or city hall), the post office nearest the Facility, near the entrance of the Facility, and publishing in the local newspaper.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on the date indicated in the transmittal letter for the proposed Orders.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 4 December 2008
Time: 8:30 am
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/rwqcb5/> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 916-464-4772.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Kenneth Landau at 916-464-4726.



diepenbrock•harrison

A PROFESSIONAL CORPORATION

October 27, 2008

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Via: E-mail: klandau@waterboards.ca.gov
And U.S. Mail

Ms. Pamela C. Creedon, Executive Officer
Mr. Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

**Re: *Renewal of Waste Discharge Requirements (NPDES NO. CA0078590)
for Town of Discovery Bay Discovery Bay Wastewater Treatment
Facility, Contra Costa County***

Dear Ms. Creedon and Mr. Landau:

Through this letter, the San Luis & Delta-Mendota Water Authority ("Authority"), on behalf of its member agencies, and Westlands Water District ("Westlands") provide written comments on the tentative waste discharge requirements (National Pollutant Discharge Elimination System ("NPDES") permit No. CA0078590) applicable to the Town of Discovery Bay's ("Town") Wastewater Treatment Facility ("Town's Wastewater Facility") ("Tentative Discharge Requirements"), and request designated party status in the proceeding to consider those Tentative Discharge Requirements scheduled for December 4 and 5, 2008.

The Authority, formed in 1992 as a joint powers authority, consists of 31 public agencies, each of which contracts with the United States Department of the Interior, Bureau of Reclamation ("Reclamation"), for water from the Central Valley Project ("CVP"). The Authority's members hold contracts with Reclamation for the delivery of approximately 3.3 million acre-feet of CVP water annually. Reclamation conveys CVP water delivered to the Authority's members through the Sacramento-San Joaquin River Delta ("Delta"). Of the amount of water under contract, the Authority's members put to beneficial use, on average, approximately 2 million acre-feet of water on about 1.2 million acres of agricultural lands within the western San Joaquin Valley and parts of

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Pamela C. Creedon, Executive Officer
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Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 2

San Benito and Santa Clara Counties, California; 200,000 acre-feet for municipal and industrial uses, including those within the Silicon Valley; and approximately 300,000 acre-feet for environmental purposes, including for waterfowl and wildlife habitat management in the San Joaquin Valley, California.

Westlands, a member of the Authority, is a California water district formed in 1952. Westlands uses CVP water for irrigation of approximately 500,000 acres on the west side of the San Joaquin Valley in Fresno and Kings Counties, as well as for municipal and industrial purposes within those Counties. Westlands' farmers produce more than 60 high quality commercial food and fiber crops sold for the fresh, dry, canned, and frozen food markets, both domestic and export. More than 50,000 people live and work in the communities that are dependent on Westlands' agricultural economy.

The Authority and Westlands appreciate the challenge the California Central Valley Regional Water Quality Control Board ("Regional Board") faces in balancing the competing interests potentially affected by renewal of the Town's NPDES permit. In an effort to help the Regional Board make a properly balanced and reasoned decision in that regard, the Authority and Westlands submit the following comments.

Interest In Tentative Discharge Requirements

The Town "owns a wastewater collection, treatment, and disposal system, and provides sewerage service to the community of Discovery Bay." (Central Valley Regional Water Quality Control Board, Order No. R5-2003-0067, NPDES No. CA0078590, at ¶ 2.) The system serves a population of approximately 16,000 people. (Tentative Discharge Requirements, Sec. II.B.) Wastewater is processed at the Town's Wastewater Facility and treated wastewater is discharged into the Old River, a part of the Delta and "a water of the United States." (Tentative Discharge Requirements, Sec. II.B.) The discharge occurs near facilities used to deliver water to the Authority's member agencies, including Westlands.

The Authority and Westlands have an acute interest in discharges to the Delta because of the impact they can have on the water supply of the Authority's member agencies, including Westlands. Three examples highlight this point. Initially, the Town's point of discharge is located north of the facilities used to pump water to the Authority's member agencies, including Westlands. Because of hydrodynamics within

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Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 3

the southern Delta, the effluent from the Town moves from the point of discharge to the in-Delta facilities. The Town's effluent thus directly affects the quality of water available to the Authority's member agencies.

In addition, the State Water Resources Control Board ("SWRCB") assigned to Reclamation significant responsibility for water quality objectives established in the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary ("Bay Delta Plan"), a copy of which is attached hereto as Exhibit A. As a result, discharges into the Delta that fail to adequately protect beneficial uses of Delta water could require Reclamation to increase releases from CVP reservoirs and/or reduce pumping at in-Delta facilities, to avoid a claim that Reclamation is not meeting its responsibilities. Either of those actions would likely reduce the amount of water available to the Authority's member agencies.

Finally, it is likely pollutants discharged from wastewater treatment facilities, including the Town's Wastewater Facility, adversely affect fish species dependant upon the Delta. Such effects may increase the level of regulatory constraints imposed under the federal Endangered Species Act on Reclamation's CVP operations. The added regulatory constraints on the CVP also could limit the amount of water made available to the Authority's member agencies.

In the notice of the proceeding to consider the Tentative Discharge Requirements scheduled for December 4 and 5, 2008, the Regional Board offered interested persons or entities the opportunity to request designated party status. For the reasons stated above, the Authority and Westlands have much more than a casual interest in the Delta, and in-Delta discharges like those by the Town. Accordingly, the Authority and Westlands require designated party status to ensure that the permitted discharge by the Town does not jeopardize the Authority's and Westlands' interests. Therefore, the Authority and Westlands respectfully request designated party status regarding the Town's NPDES permit renewal and all rights attendant thereto.

Background Of Law Applicable To The NPDES Permit For The Town's Wastewater Facility

The federal Water Pollution Control Act of 1972 (the "Clean Water Act") is designed to restore and maintain the "chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251.) The Clean Water Act makes it unlawful to

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 4

discharge pollutants from a point source into the waters of the United States. (33 U.S.C. § 1311(a).) Section 402 of the Clean Water Act, however, establishes the NPDES under which the United States Environmental Protection Agency or an authorized state may issue permits that grant a permittee the right to discharge. (33 U.S.C. § 1342.)

In California, the Porter-Cologne Water Quality Control Act ("Porter-Cologne Act") is designed to protect the "quality of all the waters of the state . . . for use and enjoyment by the people of the state." (Cal. Water Code § 13000.) To that end, the Porter-Cologne Act requires the regulation of all "activities and factors which may affect the quality of the waters of the state . . . to attain the highest water quality which is reasonable." (*ibid.*)

Furthermore, California is a state authorized to administer NPDES permits and does so through the SWRCB and the Regional Boards. (Cal. Water Code §§ 13370; 13377.) Because the Regional Boards are responsible for monitoring and enforcing the State and federal plans, policies, and regulations that help protect and restore the water quality in California, a NPDES permit issued by a Regional Board must therefore advance the requirements and regulations promulgated under the Clean Water Act and Porter-Cologne Act.

General Comment Regarding The Renewal Of The Town's NPDES Permit

Conditions in the Delta are believed to have declined considerably since the Town's prior permit was issued in 2003. As explained by the CALFED Bay Delta Program:

In the last few years [approximately 2002-2004], the abundance indices calculated by the Interagency Ecological Program (IEP) Fall Midwater Trawl survey (FMWT) and Summer Towntnet Survey (TNS) show marked declines in numerous pelagic fishes in the upper San Francisco Estuary (the Delta and Suisun Bay) (IEP 2005). The abundance indices for 2002-2004 include record lows for delta smelt and age-0 striped bass and near-record lows for longfin smelt and threadfin shad.

(http://www.science.calwater.ca.gov/pod/pod_index.html.)

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 5

Former Director of the California Department of Fish and Game, Ryan Broddrick, conveyed a similar point. He expressed to the U.S. House of Representatives, Committee on Natural Resources, Subcommittee on Water and Power:

Of particular concern to [the Department of Fish and Game] is the recent serious and unexpected decline (approximately 90%) in young Delta smelt produced this season. As alarming as the reduced numbers are, this decline is part of a more generally observed decline in other important fish and aquatic resources in the estuary. Anadromous fish (steelhead and salmon), sport fish (striped bass), other native fishes, and some important fish food organisms (invertebrates) of the Delta are in serious trouble.

(Statement Presented by Ryan Broddrick Director, California Department of Fish and Game To U.S. House of Representatives, Committee on Natural Resources Subcommittee on Water and Power Oversight Hearing on "Extinction is not a Sustainable Water Policy: The Bay Delta Crisis and the Implications for California Water Management", July 2, 2007, Vallejo City Council Chambers, Vallejo, California, a copy of which is attached hereto as Exhibit B.) This characterization caused Director Broddrick to conclude that the Delta is "broken." (*Id.*)

During the time of the perceived changes in the "health" of the Delta, and as noted above, the Town held a NPDES permit for the Town's Wastewater Facility, which the Regional Board issued in 2003. The changed circumstances in the Delta and the emergence of new studies and information on the effects of contaminants discharged in wastewater warrant immediate action by the Regional Board. In particular, the Regional Board must consider whether past permitting strategies and decisions are protective of beneficial uses of the Delta waters going forward.

The Tentative Discharge Requirements Are Unlawful

The Tentative Discharge Requirements are contrary to law, as they are inconsistent with the Bay Delta Plan and the Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins ("Basin Plan"). Most obvious, the Tentative Discharge Requirements impose an electrical conductivity (EC) limitation of 2,700 $\mu\text{mhos/cm}$ (annual average), (Tentative Discharge Requirements, IV.A.1.g), while the Bay Delta Plan and the Basin Plan impose much more stringent requirements. In

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 6

the general area of the Town's discharge, the Bay Delta Plan and the Basin Plan establish 30-day running average salinity objectives of 1,000 $\mu\text{mhos/cm}$ during the September through March period and 700 $\mu\text{mhos/cm}$ during the April through August period. Thus, the Town's proposed EC limitations exceed the salinity objectives by approximately 170 to 400 percent.

To support EC limitations that are contrary to the Bay Delta Plan and the Basin Plan, the Tentative Discharge Requirements cite to Water Quality Order 2005-005. The Tentative Discharge Requirements suggest that, in Water Quality Order 2005-005, the SWRCB intended for "permit limitations to play a limited role with respect to achieving compliance with the EC water quality objectives." (Tentative Discharge Requirements, Attachment F, IV.C.3.p.iv.) The Tentative Discharge Requirements also suggest that EC limitations consistent with the salinity objectives in the Bay Delta Plan and Basin Plans are infeasible. (*Id.*) The rationales fail for at least two reasons.

An interpretation that effluent limitations have a circumscribed role in achieving salinity water quality objectives is belied by the Bay Delta Plan. In the Bay Delta Plan, which the SWRCB adopted after it issued Water Quality Order 2005-005, the SWRCB made clear that the Regional Board maintains an important role in implementing salinity objectives. The most explicit example is the SWRCB order to the Regional Board, that requires it to "impose discharge controls on in-Delta discharges of salts by agricultural, domestic, and municipal dischargers", as a means of implementing salinity objectives in the San Joaquin River at Brandt Bridge, in Old River near Middle River, and in Old River at Tracy Road Bridge. (Bay Delta Plan at Ch. IV, B.1.) Contrary to that order, but as conceded in the Tentative Discharge Requirements, the proposed EC limitations "may cause or contribute to an exceedance of a water quality objective for salinity." (Tentative Discharge Requirements, Attachment F, IV.C.3.p.iv.)¹

¹ That the Regional Board is expected to implement water quality objectives through the discharge permits it administers has also been conceded by the Central Valley Clean Water Association ("CVCWA"), a prominent advocacy group whose mission is to "effectively represent the interests of wastewater agencies in the Central Valley in regulatory matters." (Central Valley Clean Water Association Strategic Plan, June 19, 2008, available at <http://www.cvcwa.org/bp.htm>, as of October 27, 2008.) In a September 30, 2008, letter to the SWRCB, the CVCWA made the following comment:

"In 2006, the State Water Board amended the Bay-Delta Plan . . . implementation program to require the Central Valley Regional Water Board to 'impose discharge controls on in-Delta discharges of salts by agricultural, domestic, and municipal dischargers.' (2006 Bay-Delta Plan at pp. 10, 28.)" (See Exhibit C, September 30, 2008, letter by CVCWA.)

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 7

Furthermore, an argument that it is infeasible for the Town to implement measure that will allow it to comply with the existing objectives established in the Bay Delta Plan and Basin Plan is not well taken. Those objectives are not new. They date back to at least 1995, when the SWRCB issued its 1995 Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary. Ample time has passed for dischargers like the Town to develop means of complying with the salinity objective set forth in the Bay Delta Plan and Basin Plan.

The Tentative Discharge Requirements do include a circumstance when the Town must comply with the salinity objectives established in the Bay Delta Plan and the Basin Plan. However, the circumstance occurs only when the Town fails to comply with a salinity reduction plan mandated in the Tentative Discharge Requirements. In other words, the Tentative Discharge Requirements impose on the Town obligations that are consistent with the Bay Delta Plan and Basin Plan only as a penalty that may not ever be imposed. While the development and implementation of a plan may be appropriate in certain circumstances, this does not appear to be one of those circumstances. As discussed immediately above, the Town has or should have been aware of the water quality objectives established for salinity for 13 or more years (the Bay Delta Plan superseded a prior plan adopted by the SWRCB in 1995, which included the same objectives for salinity), and the Town has reasonable means to ensure its dischargers meet the objectives established in the Bay Delta Plan and Basin Plan.

The Permit Terms Should Be Based On The Best Available Scientific Data

Given the perceived decline in the Delta, the Regional Board should ensure that the Tentative Discharge Requirements are reflective of the best available and emerging scientific data. The Tentative Discharge Requirements, however, appear not to rely upon such new information.

For example, the effluent limitation for ammonia is based upon United States' Environmental Protection Agencies' "Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life." (Tentative Discharge Requirements, Attachment F, IV.C.3.f.) However, the SWRCB and the Regional Board have identified the emergence of potentially important, new science related to contaminants, including ammonia, in the

Thus, the advocacy group: 1) recognized permits like the one at issue here must be consistent with water quality objectives stated in the Bay Delta Plan and Basin Plan, and 2) acknowledged the Regional Board is expected to "impose discharge controls" – e.g., through NPDES permits – that advance those objectives.

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 8

Strategic Workplan for Activities in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay Delta Strategic Workplan"), a copy of which is attached hereto as Exhibit D. For example, in that Workplan, the SWRCB and the Regional Board wrote:

Studies suggest that delta smelt may be particularly sensitive to ammonia and that ammonia may limit primary productivity in the Delta. Definitive, controlled laboratory experiments must be conducted to determine the importance of these potential impacts.

(*Id.* at 53.) Also, the Regional Board's concern with ammonia in the Delta has been the subject of two recent, summary papers, copies of which are attached hereto as Exhibit E.²

The Authority and Westlands appreciate that the newness of emerging scientific information may make it appear uncertain. But newness does not necessarily render such information unreliable. If adopted, the Tentative Discharge Requirements will be in existence for five years, a considerable length of time. Therefore, even if the Regional Board is apprehensive of emerging scientific information, it should not summarily discount its value.

Need For More Rigorous Monitoring

If newly emerging science is deemed insufficient at this time to make regulatory decisions, it should at least be used to support a more rigorous and comprehensive monitoring program. The SWRCB and the Regional Board recognized in the Bay Delta Strategic Workplan the importance of increased monitoring for contaminants. The Bay Delta Strategic Workplan provides:

The pelagic organism decline in the Delta and subsequent increased focus on contaminants as a potential cause highlight the need for regularly compiling, assessing, and reporting data that is currently being collected and the need to better coordinate monitoring efforts.

² The two papers were found on the Central Valley Regional Board's website at: waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/ammonia_issues/ammonia_issues_11jun08.pdf; and waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/ammonia_issues/delta_smelt_update_30jul08.pdf

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 9

(Bay Delta Strategic Workplan, p. 59.) The renewal of the Town's NPDES permit provides an opportunity to effectuate better monitoring of contaminants.

Specifically, the SWRCB and the Regional Board have recognized that there "are a suite of contaminants and source categories that pose a concern for some Delta beneficial uses and there is also concern for an emerging list of new contaminant categories (pharmaceuticals and endocrine disrupters)." (Bay Delta Strategic Workplan, p. 25.) Recent investigations claim to have discovered detectable levels of pharmaceuticals in drinking water supplies across the country. ("Prescription Drugs Found in Drinking Water Across U.S." Associated Press, March 10, 2008; "AP Enterprise: Drugs Affect More Drinking Water," Associated Press, September 11, 2008; "AP Enterprise: Report Prompts More Testing," Associated Press, September 11, 2008.) The investigations assert medication not absorbed by its taker "passes through the [body] and is flushed down the toilet," and that even though the wastewater is treated "most treatments do not remove all drug residue." Thus, according to the investigations, prescription drugs can enter water supplies through municipal wastewater discharges. Therefore, even if the Regional Board believes it is presently unclear whether NPDES permits, like the one the Town seeks, should include discharge requirements that specifically address pharmaceuticals, emerging science supports a rigorous and comprehensive monitoring plan that requires the Town to conduct comprehensive testing for a broad range of contaminants in its waste discharges, including pharmaceuticals.

Separate and apart from additional monitoring and reporting compelled by emerging science, the Town should be obligated to notify downstream water authorities if untreated (or partially treated) wastewater is released from the Town's wastewater system. The Authority and Westlands are among the parties that might come into contact with such releases and should be made aware of them if they occur.

Finally, a great majority of the effluent and receiving water monitoring required under the Tentative Discharge Requirements calls for monitoring on a weekly or monthly basis. (Tentative Discharge Requirements, Attachment E, Tables E-3 and E-5.) The monitoring schedule is too infrequent in light of the requirements in the Bay Delta Plan and Basin Plan and in light of a declining Delta. The Town should be required to monitor its discharges and the receiving waters, at a minimum, consistent with the manner in which water quality objectives are measured. Moreover, to facilitate

DIEPENBROCK HARRISON

Pamela C. Creedon, Executive Officer
Kenneth D. Landau, Assistant Executive Officer
Regional Water Quality Control Board, Central Valley Region
October 27, 2008
Page 10

access to this important information, the Town should also be required to post, at least weekly, the results of its monitoring on a publicly available Internet web site.


Conclusion

For the reasons set forth above, the Authority and Westlands respectively request that the Regional Board decline to adopt the Tentative Discharge Requirements as drafted. The Authority and Westlands remain concerned that the Tentative Discharge Requirements are not protective of beneficial uses. They do not appear consistent with the Bay Delta Plan and the Basin Plan, and they do not appear to reflect important, emerging science and information on the effects of contaminants in wastewater. Furthermore, the NPDES permit ultimately issued by the Regional Board must include increased monitoring by the Town.

Thank you very much for your consideration of these comments.

Very truly yours,

DIEPENBROCK HARRISON
A Professional Corporation



Jon D. Rubin
Attorneys for San Luis & Delta-Mendota Water
Authority and Westlands Water District

cc: Daniel Nelson, San Luis & Delta-Mendota Water Authority
Thomas Birmingham, Westlands Water District



United States Senate

WASHINGTON, DC 20510-0504

<http://feinstein.senate.gov>

December 16, 2008

Tam M. Doduc
Chair, State Water Resources Control Board
1001 I Street

Sacramento, CA 95814

Karl Longley
Chair, Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Dear Ms. Doduc and Mr. Longley:

Following the U.S. Fish and Wildlife Service's release yesterday of a biological opinion for the Delta smelt, water supplies for more than 24 million Californians and millions of acres of farmland are under historic restrictions for the foreseeable future, threatening an already fragile economic situation.

I strongly believe that a comprehensive regulatory approach is the only option to both restore the Delta ecosystem and achieve a reliable supply of water.

Restricting water supplies alone will do nothing to eliminate other stresses to this vital estuary.

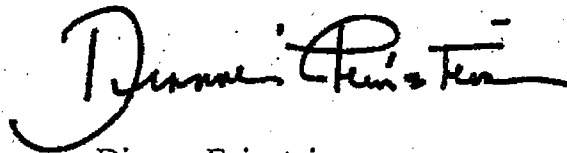
I urge you to take prompt and effective action to address a major part of this complex problem that is within your jurisdiction -- the impact of wastewater discharge in the Delta ecosystem, in particular ammonia discharges from Sacramento Regional County Sanitation District. I ask that you investigate this problem and take action to correct it.

Considerable new research is pointing to the role that ammonia, an ingredient in some wastewater discharges, may be playing in the ecosystem by inhibiting the production of phytoplankton at the base of the food web. As a letter from members of the Delta Vision Blue Ribbon Task Force recently pointed out, 10 of the 11 wastewater facilities in the Delta region have implemented new treatment methods to eliminate the discharge of ammonia or are in the process of doing so. The wastewater facility that is not in the process of modernizing its treatment methods is the largest, the facility for the Sacramento area. It is operating under a permit that expired in 2005 while the Central Valley Regional Water Quality Control Board has been processing a new permit application.

I understand that such permit renewals are complex matters in the face of differing views and science which is inevitably imperfect. But the ecosystem is in nothing short of a crisis. The main water supply that fuels the state's economy is in jeopardy. Delaying necessary action is simply not an option. The State Water Resources Control Board and its Central Valley Regional Board have an obligation to protect the Delta and to uphold its policies that seek to limit resource degradation by under-treated wastewater discharge and other threats.

I look forward to working with you in this effort.

Sincerely,



Dianne Feinstein
United States Senator

DF:jw



CVCWA

Central Valley Clean Water Association

Representing Over Sixty Wastewater Agencies

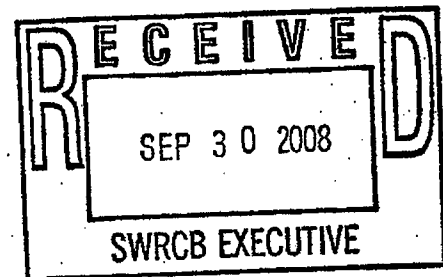
STEVE HOGG – CHAIR, FRESNO
JEFF WILLETT – SECRETARY, STOCKTON

ED CROUSE – VICE CHAIR, RANCHO MURIETA CSD
HUMBERTO MOLINA – TREASURER, MERCED

September 30, 2008

Via electronic mail and U.S. Postal Mail

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-2000
commentletters@waterboards.ca.gov



SUBJECT: Triennial Review of the 2006 Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary

Dear Ms. Townsend:

The Central Valley Clean Water Association (CVCWA) appreciates the opportunity to provide comments to the State Water Resources Control Board (State Water Board) regarding its periodic review of the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (2006 Bay-Delta Plan). CVCWA represents the interests of more than 60 wastewater agencies in the Central Valley in regulatory matters related to water quality and the environment. Included in the membership are a number of wastewater agencies that may be directly or indirectly affected by future regulatory and policy actions in the Delta.

First, CVCWA is concerned with the application of certain water quality objectives that are part of the 2006 Bay-Delta Plan. In particular, CVCWA is concerned with the application of salinity objectives to municipal wastewater discharges without proper consideration and implementation of Water Code sections 13000 and 13241.

Water Code section 13000 requires the State Water Board to regulate activities "to attain the highest water quality which is reasonable, considering all demands made and to be made ..." (Wat. Code, § 13000.) This legal standard is of general applicability and applies to all of the State Water Board's water quality regulatory activities, including the development and adoption of water quality control plans (i.e., basin plans). When adopting water quality objectives, Water Code section 13241, as applied to the State Water Board by Water Code section 13170, requires the State Water Board to consider a number of statutory factors. The factors for consideration include: beneficial uses, water quality conditions that could be

reasonably achieved, economic considerations, the need to develop housing, and the need to develop and use recycled water. (Wat. Code, § 13241.)

When the salinity objectives were adopted as part of the Bay-Delta Plan, the State Water Board focused on export pumping operations by the Department of Water Resources and the Bureau of Reclamation as the primary means for compliance with the objectives. (See In the Matter of the Petition of City of Manteca, Order WQ 2005-0005, at pp. 6-11.) The State Water Board did not evaluate or consider municipal wastewater discharge limitations as part of the State's implementation program for complying with the objectives. (*Id.*) Thus, the State Water Board failed to consider the implications of compliance on municipal wastewater agencies, including potential costs.

In 2006, the State Water Board amended the Bay-Delta Plan to expand application of the salinity water quality objectives from specific compliance locations to locations in "that general area," and amended the implementation program to require the Central Valley Regional Water Board to "impose discharge controls on in-Delta discharges of salts by agricultural, domestic, and municipal dischargers." (2006 Bay-Delta Plan at pp. 10, 28.) However, the administrative record for the 2006 Bay-Delta Plan fails to indicate that the State Water Board considered the statutorily required factors when it expanded the geographic area of application, and more importantly, when it expanded application of objectives on municipal dischargers.

Thus, the 2006 Bay-Delta Plan and the salinity objectives contained therein are not appropriate as applied to municipal dischargers, and must be reviewed and revised accordingly within this triennial review process. (See *Cities of Arcadia, et al. v. State Water Resources Control Board*, Super. Ct. Orange County, 2008, No. 06CC02974, Preemptory Writ of Mandate, Superior Court found it necessary for water quality standards to be reviewed in light of the factors and requirements set forth under Water Code sections 13241 and 13000 where such standards had not previously been considered as applied to stormwater.)

Second, CVCWA understands that other interested parties may recommend that the 2006 Bay-Delta Plan be amended to include water quality objectives for constituents of concern to drinking water. To the extent this may occur, CVCWA encourages the State Water Board to defer to the Drinking Water Policy development process that is underway with the Central Valley Regional Water Board. Through the Central Valley Drinking Water Policy Workgroup, the Central Valley Regional Water Board and other interested stakeholders have worked collaboratively for many years to develop and evaluate information and data on drinking water constituents of high priority. Based on the information developed, the Central Valley Regional Water Board will consider amending its Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, as necessary. It is unnecessary and inappropriate for the State Water Board to preempt this process.

In summary, the State Water Board must evaluate the application of salinity water quality objectives to municipal discharges in accordance and in consideration of Water Code sections 13000 and 13241. Also, to the extent others may recommend amendments to address drinking water quality constituents, such suggestions should not be adopted due to the Central Valley Regional Water Board's mature process directed toward developing a Drinking Water Policy.

Sincerely,

Original signed by Debbie Webster

Debbie Webster, Executive Officer
Central Valley Clean Water Association

c: Pamela Creedon, Central Valley RWQCB

Concerns about Ammonia Concentrations in Delta Waters

A June 2nd article in the Sacramento Bee highlighted some recent findings by Dr. Richard Dugdale, a researcher at San Francisco State University, which suggested that ammonia levels in the Delta and Sacramento River may pose a threat to Delta species by interrupting the food chain. The Regional Water Board and others agree that it is essential to initiate actions to follow-up on these preliminary results. Following is some background information and a brief description of the follow-up activities underway on this particular issue and some related issues.

Algal Production

Primary production rates and standing chlorophyll levels in the Sacramento-San Joaquin Delta Estuary are among the lowest of all the major estuaries in the world and continue to decline. The reason(s) are unclear but decreasing primary production is cited as a possible cause of the decline of important Delta fish species, such as Delta smelt. Recent work by Drs. Dugdale and Wilkerson, San Francisco State University Romberg Tiburon Center, has shown that elevated ammonium concentrations reduce diatom (a type of algae that is important in the Bay and Delta) production rates in water samples collected from San Francisco and Suisun Bays by inhibiting nitrate uptake. It is not known whether the same effect is manifested in the Delta.

Also, it is not known whether the ammonium concentrations in the River inhibit freshwater diatom production and are a cause of low algal primary production in the freshwater portions of the Delta. The Regional Water Board contracted with Dr. Dugdale to conduct experiments with diatoms collected from the lower Sacramento River to determine whether ambient in-stream ammonium concentrations reduce growth rates. Staff will be evaluating existing information to determine the need for studies to determine fate and transport of ammonium down the Sacramento River and across the Delta to determine what factors contribute to ammonium concentrations in Suisun Bay.

Once the results of the follow-up screening studies are complete, further work will be needed to determine the relative importance of ammonium on the Delta food web.

Delta Smelt Survival

In most water years, larval Delta smelt are caught in the spring about 30 miles below the City of Sacramento at the confluence of the Sacramento River and Sacramento Deepwater Ship Channel. Recent data from bioassay tests with ambient Sacramento River water has led to the hypothesis that larval Delta smelt may be sensitive to ammonia.

The Regional Water Board has contracted with researchers at the University of California, Davis to conduct bioassays with larval Delta smelt to determine their

sensitivity to ammonia in the lower Sacramento River and to identify whether other toxicants might be present. These studies were initiated in May 2008. Further study will be needed to determine if any additional actions should be taken to control ammonia discharges to protect Delta smelt.

Stimulation of Nuisance Algal Blooms

Recent research conducted by the Department of Water Resources (DWR) suggests that nuisance algal blooms that have been occurring in the Delta in recent years might be linked to elevated levels of ammonia in Delta waters. The nuisance blooms are characterized by surface scums and the release of toxins into the water. Regional Water Board staff is coordinating with DWR on follow-up studies.

Wastewater Treatment Plant Discharges

A recent review of ammonia concentrations in the Delta has shown that ammonia levels in the Sacramento River at Greene Landing are about an order of magnitude higher than concentrations reducing diatom growth in half in San Francisco Bay. And, as was discussed above, there are concerns about potential toxic impacts to Delta smelt and stimulation of nuisance algal blooms.

As was mentioned in the article, the Sacramento Regional County Sanitation District (SRCSD) discharge is the largest single source of ammonia in the Delta. Other sources include other smaller wastewater treatment plants and agricultural discharges. The Regional Water Board's current wastewater discharge permit requirements for ammonia are based on US EPA guidance on aquatic toxicity that is designed to protect the most sensitive aquatic species. When writing a permit, Regional Water Board staff evaluates effluent concentrations, concentrations of ammonia already in the river and available dilution. Limitations in permits are, therefore, site specific. SRCSD's permit allows for discharge of relatively high concentrations of ammonia because the river is large and provides considerable dilution. SRCSD has constructed large storage basins to hold wastewater when there is not sufficient dilution in the river. The City of Stockton, on the other hand, has very stringent effluent ammonia limits because little dilution is available. Several years ago the Regional Water Board required Stockton to upgrade their wastewater treatment facility to add treatment processes to remove ammonia.

It is important to recognize that current Delta ammonia concentrations are far lower than concentrations that US EPA guidance indicates would be toxic. The current studies and follow-up studies may provide information that would lead to the need for stricter requirements on all sources of ammonia to the Delta.

Be assured that the Water Quality Control Board is committed to protecting the waters of our state. In this effort we are engaged with the scientific community to study and document impacts to water quality. When new scientific information is developed we incorporate this information into our permits.

Study to Evaluate Potential Effects of Ammonia on Delta Smelt

Status Update – 30 July 2008

A previous web posting¹ summarized background information about issues related to ammonia in the Sacramento-San Joaquin Delta estuary. As indicated in that posting, the Regional Water Board contracted with researchers at the University of California, Davis Aquatic Toxicology Laboratory to initiate studies to evaluate the potential effects of ammonia on delta smelt. The study was designed to answer two questions:

1. Is delta smelt survival negatively impacted by ambient ammonia concentrations in the Sacramento River with increasing concentrations causing increased mortality?
2. Is delta smelt survival negatively impacted by one or more contaminants present in the Sacramento Regional Wastewater Treatment Plant (SRWTP) effluent that are positively correlated with ammonia?

The study plan identified two sets of experiments to be conducted with the first set beginning in June 2008. To date, researchers have conducted two tests: one to determine the 4-day delta smelt ammonia LC50 in laboratory water (i.e., establish the concentration of ammonia that would cause 50% of the test fish to die) and the first set of ambient tests using the SRWTP effluent as a source of ammonia. In the LC50 test the concentration of total ammonia at which no effect could be detected was 5 mg/L, the lowest concentration that produced an effect was 9 mg/L, and the LC50 was calculated at 12 mg/L. These results suggest that delta smelt are about as sensitive to ammonia as some of the more sensitive species (e.g., salmon and trout) and therefore, that the USEPA acute ammonia criteria used by the Regional Board in NPDES permitting would be protective of delta smelt. Average ammonia concentrations in the Sacramento River also are lower than the chronic effect levels for fish species reported in the USEPA dataset.

The ambient set of tests were conducted in Sacramento River water collected upstream of the SRWTP discharge at concentrations of ammonia that encompassed average concentrations in the River once the effluent is fully mixed downstream. To evaluate whether any other toxicants could be present in the SRWTP effluent that effect delta smelt (question #2), the tests were conducted using laboratory ammonium chloride (ranging from 0.25 to 4.0 mg/L) and SRWTP effluent (ranging from 0.25 to 2.0 mg/L) as a source of ammonia. No effect was observed at any of the ammonia concentrations. These results are consistent with the laboratory LC50 study and indicate that the SRWTP effluent is not acutely toxic to Delta smelt at concentrations four times greater than the average currently observed in the Sacramento River, and five times greater than the average effluent concentration now present in the Sacramento River.

¹The referenced document is available for download at:
http://www.waterboards.ca.gov/centralvalley/water_issues/delta_water_quality/ammonia_issues/ammonia_issues_11jun08.pdf

After reviewing the initial results, Regional Water Board staff, in consultation with UC Davis researchers, SRWTP, and the review team², planned modifications to the study design to further evaluate question #2. - The new objective is to quantify the potential interactions between effluent and ammonia toxicity to delta smelt (i.e., does the effluent add to, decrease, or have no effect on toxicity). The second set of tests will include some of the same concentrations of ammonia that were tested previously to verify the results of the first set of tests. In addition, higher concentrations, closer to the level that produced effects in the LC50 study, will be tested to evaluate question #2 and to assess the potential for effluent and ammonia interactions. It should be noted that these concentrations are well above levels that occur in the Sacramento River downstream of the SRWTP discharge. This second set of tests will be conducted in July 2008.

It is important to note that these studies only assess the acute (i.e., short-term, lethal) effects of ammonia on delta smelt immediately downstream of the SRWTP discharge location in the Sacramento River. Questions remain about the potential for chronic (i.e., long-term, sub-lethal) impacts from ammonia as well as the impacts in sensitive delta smelt spawning areas downstream of the SRWTP discharge. Future studies may need to be designed to answer these questions.

² The Interagency Ecological Program Contaminants Work Team served as the technical review panel for these studies.