



## California Sportfishing Protection Alliance

*"An Advocate for Fisheries, Habitat and Water Quality"*

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20 July 2007

Dr. Karl Longley, Chairman  
Ms. Pamela Creedon, Executive Officer  
Mr. Kenneth Landau, Assistant Executive Officer  
Mr. Jim Pedri, Assistant Executive Officer  
Mr. Greg Cash, Engr. Geol.  
Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670-6144

VIA: Electronic Submission  
Hardcopy if Requested

RE: Waste Discharge Requirements (NPDES No. CA0084069) for Tehama County  
Sanitation District No. 1, Mineral Wastewater Treatment Plant, Tehama County

Dear Messrs. Longley, Landau, Pedri, Cash and Ms. Creedon:

The California Sportfishing Protection Alliance and Watershed Enforcers (CSPA) has reviewed the Central Valley Regional Water Quality Control Board's (Regional Board) tentative NPDES permit (Order or Permit) for Tehama County Sanitation District No. 1, Mineral Wastewater Treatment Plant (Discharger) and submits the following comments.

CSPA requests status as a designated party for this proceeding. CSPA is a 501(c)(3) public benefit conservation and research organization established in 1983 for the purpose of conserving, restoring, and enhancing the state's water quality and fishery resources and their aquatic ecosystems and associated riparian habitats. CSPA has actively promoted the protection of water quality and fisheries throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore California's degraded surface and ground waters and associated fisheries. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley, including Tehama County.

- 1. The Regional Board is proposing to adopt the proposed Permit without knowledge of the quality of the wastewater discharge and the impacts to the beneficial uses of the surface water and groundwater. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements. The proposed Permit is based on an incomplete RWD contrary to Federal Regulations 40 CFR 122.21 (e) and (h) and 124.3 (a)(2),**

**the SIP and the CWC section 13377 and cannot therefore be legally adopted. The proposed Permit also clearly states that there is no knowledge of whether the Discharger provides best practicable treatment and control (BPTC) of the discharge which is required by State Water Resources Control Board Resolution No. 68-16 (Antidegradation Policy).**

As is shown in the following citations the Regional Board does not know: whether the discharge presents a reasonable potential to exceed any pollutants not limited in the previous Order, including California Toxics Rule (CTR) and National Toxics Rule (NTR) water quality standards; whether sewage contains ammonia in toxic levels; whether the discharge has degraded groundwater quality, or; whether the Discharger provides best practicable treatment and control (BPTC) of the discharge. The proposed Permit states that:

- “Based on previous CTR sampling, the Regional Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an instream excursion above applicable water quality standards, and therefore, water quality based effluent limitations are not included in this Order for pollutants that were not regulated by Order No. R5-2002-0115.” Fact Sheet page F-8.
- “Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an instream excursion above applicable water quality standards, and therefore, water quality based effluent limitations for CTR parameters are not included in this Order for pollutants that were not regulated by Order No. R5-2002-0115.” Fact Sheet page F-13.
- “Currently there is not true representative analytical data to calculate ammonia effluent limits. The temperature and pH data is from samples out of the ponds and are not representative of pH and temperature of the discharge. The Regional Board finds that relying on samples that are not representative of the true effluent is not sufficient to determine reasonable potential for ammonia.” Fact Sheet page F-14.
- “This order does not require the Discharger to conduct groundwater monitoring. There is no current evidence to indicate that the operation of the wastewater treatment plant poses a threat to groundwater quality. If any information becomes available indicating adverse groundwater impacts, a groundwater investigation and subsequent monitoring may be required.” Fact Sheet page F-29.
- “This order requires the Discharger to conduct an investigation to determine the existing condition of underlying soils beneath the percolation/evaporation ponds. The investigation will include a technical report documenting the existing in-place permeability and percolation rates of the subsurface beneath the unlined ponds.” Fact Sheet page F-29.

- “At the conclusion of the field investigation, a technical report shall be submitted to the Regional Board to evaluate the permeability results under the ponds, and discuss the WWTP impact on groundwater quality. There is a possibility of wastewater impacting groundwater...” Fact Sheet page F-36.
- “This Order requires the Discharger to propose a work plan and schedule for providing BPTC as required by Resolution 68-16. The technical report describing the work plan and schedule shall contain a preliminary evaluation of each component and propose a time schedule for completing the comprehensive technical evaluation. Following completion of the comprehensive technical evaluation, the Discharger shall submit a technical report describing the evaluation’s results and critiquing each evaluated component with respect to BPTC and minimizing the discharge’s impact on groundwater quality.” Fact Sheet page F-37.

Federal Regulation, 40 CFR 122.21(e) states in part that: “The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits.” In accordance with 40 CFR 122.21 (e) and (h) and 124.3 (a)(2) the Regional Board shall not adopt the proposed permit without first a complete application. The application cannot possibly be complete without a complete characterization of the wastewater discharge and its impacts of the beneficial uses of surface water and groundwater.

State Report of Waste Discharge form 200 is required as a part of a complete Report of Waste Discharge. Form 200, part VI states that: “To be approved, your application must include a complete characterization of the discharge.” The Federal Report of Waste Discharge forms also require a significant characterization of a wastewater discharge. Again, the application cannot possibly be complete without a complete characterization of the wastewater discharge and its impacts of the beneficial uses of surface water and groundwater.

The California Toxics Rule (CTR)(40 CFR 131, Water Quality Standards) contains water quality standards applicable to this wastewater discharge. The final due date for compliance with CTR water quality standards for all wastewater dischargers in California is May 2010. The State’s *Policy for Implementation of Toxics standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), Section 1.2, requires wastewater dischargers to provide all data and other information requested by the Regional Board before the issuance, reissuance, or modification of a permit to the extent feasible. As stated above, the proposed Permit concludes that: “Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Board finds that there is not sufficient information to determine if the discharge has a reasonable potential to cause or contribute to an instream excursion above applicable water quality standards, and therefore, water quality based effluent limitations for CTR parameters are not included in this Order for pollutants that were not regulated by Order No. R5-2002-0115.” Fact Sheet page F-13. The Discharger has not complied with requirements of the SIP to characterize the

wastewater discharge and in proposing to adopt this Order, the Regional Board cannot assure compliance with CTR and NTR water quality standards.

California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.” Since the wastewater has not been characterized, as detailed above, the proposed Permit cannot possibly ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance as is required by CWC 13377.

Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. Since the Regional Board does not know the quality of the wastewater, the proposed Permit cannot “ensure compliance with applicable water quality requirements” and cannot assure that the discharge is not inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA and the proposed Permit cannot be adopted in accordance with Federal Regulations.

The application for permit renewal is incomplete and in accordance with 40 CFR 122.21(e) the Regional Board cannot issue a permit. Federal Regulations, 40 CFR 124.8, requires that Fact Sheets contain the basis for the permit conditions. The Fact Sheet contains no information which supports that a complete RWD has been submitted and that the wastewater discharge has been adequately characterized for priority and conventional pollutants. The Discharger has failed to submit a complete RWD contrary to the cited laws and regulations. The proposed Permit cannot be adopted since the RWD is incomplete.

As a part of the Antidegradation Policy, Dischargers are required to provide BPTC. The Antidegradation Policy, State Water Resources Control Board Resolution No. 68-16, states that: “Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.” The Antidegradation Policy has been incorporated into the Basin Plan.

Waste Discharge Requirements must require that the treatments systems provide BPTC. Since the proposed Permit requires an analysis of whether the Discharger has provided BPTC, the Regional Board cannot state that the Discharger provides BPTC in accordance with Federal and State Antidegradation regulations and policies. To the contrary, the discharge may have significantly degraded groundwater quality, is toxic in surface waters due to ammonia, possibly exceeds CTR and NTR water quality standards and may exceed water quality standards for numerous additional pollutants.

The proposed Permit simply has no basis or merit in regulating water quality. The Regional Board would be rewarding a recalcitrant Discharger for failing to conduct any characterization of the discharge including an analysis of whether the discharge has degraded groundwater quality, whether there is reasonable potential to exceed water quality standards for all priority and non-priority pollutants and to undertake measures to eliminate ammonia which is naturally present in domestic wastewater. Allowing compliance schedules, or in this case simply adopting a permit without any meaningful effluent limitations, sends a message to all dischargers that an easy way around the state and federal laws and regulations is to ignore all requirements to characterize the wastewater and the Regional Board will simply overlook the matter and grant a meaningless permit. The proposed Permit cannot be adopted in accordance with State Law and Federal Regulations, as cited above.

**2. The proposed Permit does not contain an Effluent Limitation for ammonia in violation of Federal Regulations 40 CFR 122.44 and California Water Code, Section 13377**

The proposed Permit is for a domestic wastewater treatment plant. Domestic wastewater treatment plants, by their nature, receive ammonia in concentrations ranging from 30 mg/l to 60 mg/l and present a reasonable potential to exceed the Basin Plan narrative toxicity water quality objective. Ammonia is toxic to aquatic life in fairly low concentrations. The Central Valley Regional Board has a long established history of including ammonia limitations in NPDES permits based on U.S. EPA's ambient criteria for the protection of freshwater aquatic life, which has established BPTC for POTWs. Failure to operate a wastewater treatment plant in a nitrification mode allows ammonia concentrations to pass through the system. The nitrification process can be a fairly unstable treatment process; even POTWs that employ nitrification should be limited for ammonia to ensure the system is properly operated. The California Water Code (CWC), Section 13377 states in part that: "...the state board or the regional boards shall...issue waste discharge requirements...which apply and ensure compliance with ...water quality control plans, or for the protection of beneficial uses..." Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an

indicator parameter. Failure to include an effluent limitation for ammonia in the proposed permit violates 40 CFR 122.44 and CWC 13377.

**3. The proposed Permit contains an Effluent Limitation for acute toxicity that allows mortality that exceeds the Basin Plan water quality objective and does not comply with Federal regulations, at 40 CFR 122.44 (d)(1)(i).**

Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This section of the Basin Plan further states, in part that, compliance with this objective will be determined by analysis of indicator organisms.

The Tentative Permit requires that the Discharger conduct acute toxicity tests and states that compliance with the toxicity objective will be determined by analysis of indicator organisms. However, the Tentative Permit contains a discharge limitation that allows 30% mortality (70% survival) of fish species in any given toxicity test.

The Regional Board has looked hard and long to find some citation as to the source of the limitation that would allow or recommend 10% and 30% mortality, such a find however does not eliminate the more restrictive applicable Basin Plan objective that simply prohibits the discharge from causing mortality in the receiving stream.

For an ephemeral or low flow stream, such as the case here, allowing 30% mortality in acute toxicity tests allows that same level of mortality in the receiving stream, in violation of federal regulations and contributes to exceedance of the Basin Plan's narrative water quality objective for toxicity. Accordingly, the proposed Permit must be revised to prohibit acute toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i).

**4. The proposed Permit does not contain Effluent Limitations for chronic toxicity and therefore does not comply with Federal regulations, at 40 CFR 122.44 (d)(1)(i) and the SIP.**

The proposed Permit states that: "On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by

the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.” The SIP, Section 4, Toxicity Control Provisions, Water Quality-Based Toxicity Control, states that: “A chronic toxicity effluent limitation is required in permits for all dischargers that will cause, have a reasonable potential to cause, or contribute to chronic toxicity in receiving waters.”

Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including state narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The Proposed Permit states that: “...to ensure compliance with the Basin Plan’s narrative toxicity objective, the discharger is required to conduct whole effluent toxicity testing...”. However, sampling does not equate with or ensure compliance. The Tentative Permit requires the Discharger to conduct an investigation of the possible sources of toxicity if a threshold is exceeded. This language is not a limitation and essentially eviscerates the Regional Board’s authority, and the authority granted to third parties under the Clean Water Act, to find the Discharger in violation for discharging chronically toxic constituents. An effluent limitation for chronic toxicity must be included in the Order. In addition, the Chronic Toxicity Testing Dilution Series should bracket the actual dilution at the time of discharge, not use default values that are not relevant to the discharge.

Proposed Permit is quite simply wrong; by failing to include effluent limitations prohibiting chronic toxicity the proposed Permit does not “...implement the SIP”. The Regional Board has commented time and again that no chronic toxicity effluent limitations are being included in NPDES permit until the State Board adopts a numeric limitation. The Regional Board explanation does not excuse the proposed Permit’s failure to comply with Federal Regulations, the SIP, the Basin Plan and the CWC. The Regional Board’s Basin Plan, as cited above, already states that: “...waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses...” Accordingly, the proposed Permit must be revised to prohibit chronic toxicity (mortality and adverse sublethal impacts to aquatic life, (sublethal toxic impacts are clearly defined in EPA’s toxicity guidance manuals)) in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i) and the Basin Plan and the SIP.

- 5. The proposed Permit does not comply with the Board’s Antidegradation Policy by failing to contain limitations that are protective of groundwater quality and require groundwater monitoring in accordance with CWC Section 13377.**

The proposed Permit shows that the Discharger utilizes land disposal by discharge to unlined ponds and wastewater flows throughout a large permeable area where it is reasonable to assume that wastewater will percolate to groundwater. California's antidegradation policy is composed the State Board's Resolution 68-16 which is included as a part of the Basin Plan. As part of the state policy for water quality control, the antidegradation policy is binding on all of the Regional Boards. Implementation of the state's antidegradation policy is guided by the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 ("APU 90-004") and Water Quality Order 86-17. The Regional Board must apply the antidegradation policy whenever it takes an action that will lower water quality (State Antidegradation Guidance, pp. 3, 5,18). The proposed action here is renewal of an NPDES permit although the applicable provisions being discussed for land disposal are not federally mandated, an antidegradation analysis is required. The proposed Permit must include a requirement that protects groundwater quality from percolating pollutants. Any antidegradation analysis must comport with implementation requirements in State Board Water Quality Order 86-17 and State Antidegradation Guidance. The discharge of wastewater to unlined ponds at a minimum threatens groundwater quality, mandating monitoring of groundwater quality to determine if degradation has occurred and to what degree. Groundwater monitoring must be required to determine if the wastewater discharge is degrading groundwater quality and commingling and degrading surface water. California Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance."

**6. The proposed Permit fails to contain mass based effluent limitations contrary to Federal Regulations.**

Section 5.7.1 of U.S. EPA's *Technical Support Document for Water Quality Based Toxics Control* (TSD, EPA/505/2-90-001) states with regard to mass-based Effluent Limits:

"Mass-based effluent limits are required by NPDES regulations at 40 CFR 122.45(f). The regulation requires that all pollutants limited in NPDES permits have limits, standards, or prohibitions expressed in terms of mass with three exceptions, including one for pollutants that cannot be expressed appropriately by mass. Examples of such pollutants are pH, temperature, radiation, and whole effluent toxicity. Mass limitations in terms of pounds per day or kilograms per day can be calculated for all chemical-specific toxics such as chlorine or chromium. Mass-based limits should be calculated using concentration limits at critical flows. For

example, a permit limit of 10 mg/l of cadmium discharged at an average rate of 1 million gallons per day also would contain a limit of 38 kilograms/day of cadmium.

Mass based limits are particularly important for control of bioconcentratable pollutants. Concentration based limits will not adequately control discharges of these pollutants if the effluent concentrations are below detection levels. For these pollutants, controlling mass loadings to the receiving water is critical for preventing adverse environmental impacts.

However, mass-based effluent limits alone may not assure attainment of water quality standards in waters with low dilution. In these waters, the quantity of effluent discharged has a strong effect on the instream dilution and therefore upon the RWC. At the extreme case of a stream that is 100 percent effluent, it is the effluent concentration rather than the mass discharge that dictates the instream concentration. Therefore, EPA recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards.”

Federal Regulations, 40 CFR 122.45 (f), states the following with regard to mass limitations:

- “(1) all pollutants limited in permits shall have limitations, standards, or prohibitions expressed in terms of mass except:
  - (i) For pH, temperature, radiation or other pollutants which cannot be expressed by mass;
  - (ii) When applicable standards and limitations are expressed in terms of other units of measurement; or
  - (iii) If in establishing permit limitations on a case-by-case basis under 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.
  
- (2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations.”

In addition to the above citations, on June 26<sup>th</sup> 2006 U.S. EPA, Mr. Douglas Eberhardt, Chief of the CWA Standards and Permits Office, sent a letter to Dave Carlson at the Central Valley Regional Water Quality Control Board strongly recommending that

NPDES permit effluent limitations be expressed in terms of mass as well as concentration.

Thank you for considering these comments. If you have questions or require clarification, please don't hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Jennings". The signature is fluid and cursive, with the first name "Bill" being more prominent than the last name "Jennings".

Bill Jennings, Executive Director  
California Sportfishing Protection Alliance