



California Sportfishing Protection Alliance
"An Advocate for Fisheries, Habitat and Water Quality"
3536 Rainier Avenue, Stockton, CA 95204
T: 209-464-5067, F: 209-464-1028, E: deltakeep@aol.com, W: www.calsport.org

7 January 2009

Mr. Ken Landau, Assistant Executive Officer
Mr. Jim Marshall, Sr. WRCE
Ms. Mary E. Serra, P.E.
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: Byron Sanitary District, Byron Wastewater Treatment Facility, Contra Costa County

Dear Messrs. Landau, Marshall and Ms. Serra,

The California Sportfishing Protection Alliance (CSPA) has reviewed the proposed Waste Discharge Requirements for Byron Sanitary District, Byron Wastewater Treatment Facility (WDR) 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 water quality and fisheries. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley, including Contra Costa County.

As discussed more fully below, CSPA believes the proposed WDRs are improper because the facility must be regulated under an NPDES permit as the discharge has polluted groundwater that is migrating to Fisk Creek and the Delta. Additionally, discharge does not meet the requirements for exemption from CCR Title 27 and the tentative WDRs do not comport with antidegradation policy by failing to include limitations protective of groundwater.

Byron Sanitary District owns and operates a wastewater treatment plant (WWTP) and collects wastewater from the community of Byron with 219 residences, a 540-student elementary school, the Contra Costa County Boy's Ranch, and commercial facilities. The WWTP is described in the proposed WDRs as: "Prior to improvements, the WWTF consisted of an influent pump station, bar screens, an Imhoff tank, four treatment ponds, two emergency ponds, and a ten acre land disposal area. The Discharger plans to improve the collection system, replace the Imhoff tank and pump station with new headworks and pump station, remove sludge from ponds, improve

wastewater flow configuration between ponds, improve the control and monitoring system, and replace three monitoring wells (MW1, MW2, and MW3) that were inappropriately placed, did not have construction logs and without adequate surface seals.” The WWTP consists of six percolation and evaporation (P/E) ponds, and a 10-acre land application area. Wastewater treatment is by stabilization pond treatment. The proposed WDR, Finding No. 11, defines the ponds as being 3 to 5 feet deep. The ponds are not mechanically aerated. Because of the shallow pond depth the ponds are assumed to be aerobic. The ponds are assumed to be non-facultative based on the shallow design. While a properly designed aerobic system could potentially convert ammonia to nitrate these processes are generally not continuous or reliable. The lack of anaerobic conditions will prevent denitrification. Therefore the presence of both ammonia and nitrate, depending on the conversion rate, should not be unexpected in both the ponds and any percolate or discharge from the ponds. Proposed WDR Finding No. 22 shows effluent data for disposal to the land application area after pond treatment with nitrate at less than 0.05 mg/l and ammonia at 40 mg/l, which shows no nitrification at the time of sample collection. The wastewater is not disinfected. The defined WWTP “improvements” will eliminate the Imhoff tank, the only physical treatment process and will therefore result treatment solely in the pond system.

Wastewater disposal is entirely by evaporation and percolation. The proposed WDR, Finding No. 18 states that: “The RWD assumes a conservative infiltration rate of 0.03 feet per day based on published infiltration rates (0.12 to 0.40 ft/d) for Marcuse Clay described by the National Resource Conservation Service Soil Survey to underlie the facility. The percolation for the land application area was further reduced in the water balance to 0.015 ft/d as an additional factor of safety.” According to Finding No. 48:

- The typical depth to groundwater underlying the WWTF is five feet below ground surface.
- Groundwater levels are usually one foot or more below the P/E pond bottoms but groundwater monitoring data indicate that groundwater can be higher than the pond bottoms.
- “Groundwater is found in a sandy aquifer beneath a clay layer that extends from the surface to 20 to 35 feet bgs. Because of the clay layer, the aquifer is confined or semi-confined. Therefore, groundwater levels measured in the monitoring wells are an indication of the potentiometric surface of the groundwater in the deeper sand aquifer, not an indication of the actual position of groundwater in the clay layer.”

The proposed WDR *Previous Enforcement* section presents the following Findings:

- 23. In November 2002, the Regional Water Board adopted CAO No. R5-2002-0733, which states that the “Discharger’s facility needs significant improvements to prevent pond berm failure, prevent seepage into the adjacent wetlands, and improve effluent quality.” The CAO requires the discharger to construct a wastewater treatment facility that complies with WDR Order No. 5-00-0058 by 30 October 2004 and submit supporting progress reports during development.

- 24. In January 2005, the Regional Water Board adopted TSO No. R5-2005-0900 because the Discharger was not complying with the CDO or WDRs Order No. 5-00-058. The TSO states that the WWTF has degraded groundwater with respect to nitrogenous compounds and coliform bacteria. The TSO specifies a contingent timeline for submitting progress reports and constructing a wastewater treatment facility capable of ensuring long-term compliance with WDRs Order No. 5-00-058.

It can be reasonably concluded that the percolation of wastewater, with concentrations of ammonia of approximately 40 mg/l and is not disinfected, flowing at a rate up to 0.4 feet/day through 1 to 5 feet of underlying soil, has degraded groundwater quality. The Time Schedule Order (TSO) conclusion that "...the WWTF has degraded groundwater with respect to nitrogenous compounds and coliform bacteria" is reasonable.

1. The proposed WDR does not comply with the Board's Antidegradation Policy by failing to contain limitations that are protective of groundwater quality in accordance with CWC Section 13377.

The proposed WDR 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. In 2009 the sole use of evaporation/percolation ponds for the treatment of domestic wastewater is not best practicable treatment and control (BPTC) of the discharge. Throughout the Central Valley wastewater treatment plants are providing tertiary (secondary plus filtration) treatment with nitrification/denitrification and ultraviolet light disinfection. For discharges to surface waters, a minimum of secondary treatment has been required for decades. Some limited degradation to groundwater can only be allowed if BPTC is being provided; clearly throwing untreated wastewater in a shallow hole is not BPTC. 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 WDR 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. 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."

2. The wastewater discharge does not meet the minimum requirements for exemption from California Code of Regulations Title 27.

CCR Title 27 reads, in part as follows (emphasis added):

“CCR Title 27

§20090. SWRCB - Exemptions. (C15: §2511): The following activities shall be exempt from the SWRCB-promulgated provisions of this subdivision, so long as the activity meets, and continues to meet, all preconditions listed: (a) **Sewage**—Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division. (b) **Wastewater**—Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leachfields if the following conditions are met: (1) the applicable RWQCB has issued WDRs, reclamation requirements, or waived such issuance; (2) the discharge is in compliance with the applicable water quality control plan; and (3) the wastewater does not need to be managed according to Chapter 11, Division 4.5, Title 22 of this code as a hazardous waste.

Region 5’s Basin Plan

WATER QUALITY OBJECTIVES FOR GROUND WATERS

The following objectives apply to all ground waters of the Sacramento and San Joaquin River Basins, as the objectives are relevant to the protection of designated beneficial uses. These objectives do not require improvement over naturally occurring background concentrations. The ground water objectives contained in this plan are not required by the federal Clean Water Act.

Bacteria

In ground waters used for domestic or municipal supply (MUN) the most probable number of coliform organisms over any seven-day period shall be less than 2.2/100 ml.

Chemical Constituents

Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At a minimum, ground waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Tables 64449-A (Secondary Maximum Contaminant Levels- Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. This incorporation-by-reference is prospective, including future changes to the incorporated provisions as the changes take effect. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain lead in excess of 0.015 mg/l. To

protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

Tastes and Odors

Ground waters shall not contain taste- or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

Toxicity

Ground waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life associated with designated beneficial use(s). This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.”

The wastewater discharge from Byron is not in compliance with Waste Discharge Requirements as is evidenced by the proposed and past enforcement actions by the Regional Board. The wastewater discharge from Byron is not in compliance with the Basin Plan: coliform organisms have migrated to groundwater above water quality objectives, ammonia has migrated to groundwater at toxic concentrations, and the discharge threatens to degrade groundwater with nitrate concentrations above the drinking water MCL. Other wastewater constituents have also likely migrated to and degraded groundwater, however priority pollutant sampling has not been required. The wastewater discharge from Byron does not meet the requirements for an exemption from CCR Title 27. The proposed WDR should not be adopted but revised to incorporate Title 27 requirements to be fully protective of groundwater quality.

3. The Byron wastewater discharge constitutes a discharge of waste to surface water and must be regulated in accordance with the applicable Federal NPDES regulations.

The Byron wastewater percolation ponds lie adjacent to Fisk Creek only separated by the pond levee, as shown in proposed WDR Attachment B. As is quoted above the percolation rate is estimated by the Discharger to be up to 0.4 feet/day. Regional Board Time Schedule Order, No. R5-2005-0900, Finding No. 13 states in part that: “The assessment of groundwater and surface water quality impacts presented in the Wastewater Facilities Plan indicated that the WWTF has degraded groundwater and surface water quality with respect to nitrogenous compounds and coliform bacteria.” Proposed WDR Finding No. 49 states that: “Groundwater flow direction for the area trends from the west to the east northeast and drains into the seasonal Fisk Creek, which flows north into Discovery Bay and eventually into the Sacramento San Joaquin Delta.” Groundwater has been shown to be degraded and polluted by the Byron wastewater discharge. The Findings in the Regional Board’s TSO and the proposed WDR show that the Discharger's ponds have a significant nexus to Fisk Creek.

On August 10, 2006, in Northern California River Watch v City of Healdsburg, the US Court of Appeals, Ninth Circuit, issued an opinion, No. 04-15442 D.C., No. CV-01-04686-WHA, that in summary: “...made substantial findings of fact to support the conclusion that the adjacent wetland of Basalt Pond has a significant nexus to the Russian River. The Pond’s effects on the Russian River are not speculative or insubstantial. Rather, the Pond significantly affects the

physical, biological and chemical integrity of the Russian River, and ultimately warrants protection as a 'navigable water' under the CWA. Appellant's discharge of wastewater into Basalt Pond without a permit, therefore, violates the CWA." Based on the information in the proposed WDR, the Discharger's ponds have a significant nexus to Fisk Creek with significant levels of impairing pollutants and constitutes a discharge of waste to surface water and must be regulated in accordance with the applicable Federal NPDES regulations. A Report of Waste Discharge must be required in accordance with CWC 13376.

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 written in a cursive, flowing style.

Bill Jennings, Executive Director
California Sportfishing Protection Alliance