



NEVADA COUNTY SANITATION DISTRICT NO. 1
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Steven L. DeCamp
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Director of Sanitation

January 9, 2009

File: 300.1641 002
"CERTIFIED MAIL"

Jim Pedri, Assistant Executive Officer
California Regional Water Quality Control Board - Central Valley Region
415 Knollcrest Drive, Suite 100
Redding, CA 96002

SUBJECT: Nevada County Sanitation District No. 1 (Discharger) Comments on Tentative Waste Discharge Requirements Renewal and Time Schedule Order for National Pollutant Discharge Elimination System (NPDES) Permit (NPDES No. CA 0077828) for the Lake Wildwood Wastewater Treatment Plant

Dear Mr. Pedri:

Nevada County Sanitation District No. 1, Lake Wildwood, Zone 1, (NCS D1LWW) is providing this letter and enclosures as it comments on the Tentative Waste Discharge Requirements (WDRs) Renewal and Time Schedule Order (TSO) for National Pollutant Discharge Elimination System (NPDES) Permit (NPDES No. CA 0077828) for Lake Wildwood Wastewater Treatment Plant.

If you have any questions, please feel free to contact me at (530) 265-7103.

Sincerely,

MARK MILLER
Nevada County Sanitation District No. 1


Gordon Plantenga
Wastewater Operations Manager

GP:ms

Enclosures - Attachment A - District Comments on Preliminary Draft Permit
Copy of Sample Calculation to Estimate Flow & Dilution

cc: Nevada County Sanitation District No. 1 Board of Directors
Sanitation District Advisory Committee
County Counsel, Attention: Rob Shulman
RWQCB, Sacramento, Attention: Diana Messina
RWQCB, Redding, Attention: Dennis Wilson
Kennedy/Jenks, Attention: Gary Carlton and Ken Shuey
Robertson-Bryan, Inc., Attention: Michael Bryan

Ref: H:\WORD\GORDON\0809corr\LWW Permit Comments J Pedri.010909.doc

Attachment A

COMMENTS
ON
TENTATIVE
TIME SCHEDULE ORDER
AND
WASTE DISCHARGE REQUIREMENTS
FOR
NEVADA COUNTY SANITATION DISTRICT NO. 1
LAKE WILDWOOD WASTEWATER TREATMENT PLANT
NEVADA COUNTY

January 9, 2009

I. TIME SCHEDULE ORDER

No comments.

II. RECESSON OF CEASE AND DESIST ORDER

No comments.

III. WASTE DISCHARGE REQUIREMENTS

All pages. The header should be corrected to show Nevada not Nevada.

p. 3, Table 4. Facility Information. The Facility Contact, Title, and Phone Number shall be changed to Chad McBride, Plant Operator, (530) 432-3767. This same change shall also be made on page F-3 of the Fact Sheet.

p. 5, Table 5 Beneficial Uses Table 5 lists Groundwater Recharge (GWR) and Freshwater Replenishment (FRESH) as existing beneficial uses of Deer Creek, via application of the tributary rule to the beneficial uses of the Yuba River below Englebright Dam. Page II-5.00 of the Basin Plan states, as a note to Table II-1, Surface Water Bodies and Beneficial Uses: *“Surface waters with the beneficial uses of Groundwater Recharge (GWR), Freshwater Replenishment (FRESH), and Preservation of Rare and Endangered Species (RARE) have not been identified in this plan. Surface waters of the Sacramento and San Joaquin River Basins falling within these beneficial use categories will be identified in the future as part of the continuous planning process to be conducted by the State Water Resources Control Board.”* Based on this statement, GWR and FRESH are not designated beneficial uses of the Yuba River and, thus, cannot be designated beneficial uses of Deer Creek. Thus, the District requests that these beneficial uses be deleted from Table 5.

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p. 7, M. Stringency of Requirements for Individual Pollutants. Edits to the following sentence in the first paragraph are required, as no effluent limitations for gamma-BHC are included in the Order: “The WQBELs consist of restrictions on dibromochloromethane, dichlorobromomethane, ~~gamma-BHC~~, and pathogens.”

p. 11, IV. A. 1. Final Effluent Limitations. This paragraph states:

“Wastewater shall be oxidized, coagulated, and filtered, or equivalent treatment provided.”

This constitutes a prescription of treatment process, which violates Water Code section 13360(a). Water Code Section 13360(a) states: “*No waste discharge requirement or other order of a regional board or the state board or decree of a court issued under this division shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner.*”

Therefore, the District requests that the language prescribing treatment be deleted and that only the language requiring compliance with the specified effluent limitation be retained, as follows:

~~“Wastewater shall be oxidized, coagulated, and filtered, or equivalent treatment provided. The Discharger shall maintain compliance with the following effluent limitations when flow in Deer Creek provides less dilution than 20:1 (receiving water flow to effluent flow) at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):”~~

p. 11, Table 6, Effluent Limitations. Table shows “Ammonia, Nitrogen, Total (as N)” with units of µg/L (micrograms per liter). This is incorrect- it should be mg/L (milligrams per liter).

The same comments also apply to Table 7.

p. 12, 2. Final Effluent Limitations. The District requests the following edits for the same reason cited above:

~~When flow in Deer Creek provides a minimum dilution ratio of 20:1 (receiving water flow to effluent flow) full secondary treatment shall be provided and the coagulation system and filters shall be used to the maximum extent possible and effluent shall not exceed the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):~~

p. 12, i. Chronic Whole Effluent Toxicity No justification for implementing a chronic toxicity effluent limitation has been provided in the Fact Sheet (p. F-32). The Fact Sheet

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concludes there is insufficient information at this time to determine if there is reasonable potential to cause chronic toxicity in the receiving water. Therefore, the District requests that the chronic whole effluent toxicity limitations (IV.A.1.i and IV.A.2.i) be removed from the Order. In addition, the second sentence on pp. F-44 and F-45 in section B.2.a. is inconsistent with the Fact Sheet finding of insufficient information to determine chronic toxicity reasonable potential (p. F-32).

p. 15, pH Receiving Water Limitation. The receiving water limitation for pH is phrased as follows:

“...The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units on an annual basis. A one-month averaging period may be applied when calculating the pH change of 0.5 units.”

The phrasing of the pH limitation is confusing, because it references both annual and monthly averaging periods.

On October 25, 2007, the Regional Water Board adopted Basin Plan amendments for pH and 0-5 NTU turbidity objectives. (See Resolution No. R5-2007-0136.) In Resolution No. R5-2007-0136, the Regional Water Board made the following findings:

“6. The current water quality objectives for pH and turbidity, which are not supported by current science regarding the effects of pH and low-level turbidity on beneficial uses, create regulatory compliance problems for some municipal wastewater treatment plants.

7. The current pH objectives both maintain pH within a safe range (6.5 to 8.5) and limit changes from background conditions within that safe range. The 1986 U. S. Environmental Protection Agency (USEPA) Quality Criteria for Water does not limit the amount of change when the pH ranges from 6.5 to 9, which is generally considered a safe range for freshwater aquatic life. There are no known aquatic life impacts when pH varies but is maintained within the safe range.”

Moreover, the current Basin Plan language for implementing the pH objective states: “In determining compliance with the water quality objective for pH, appropriate averaging periods may be applied provided that beneficial uses will be fully protected.”

Based on the Regional Water Board’s adoption of the Basin Plan amendment for pH, which removes the 0.5-unit pH restriction completely, and its findings justifying this amendment, it is appropriate to apply the 0.5-unit change component of the current objective on an annual average basis. (See Resolution No. R5-2007-013 and supporting staff report at http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/ph_turbidity/ph_turbidity_staff_report.pdf.) Doing so, along with the requirement to maintain effluent pH between 6.5 and 8.5 at all times, would provide for conditions that would be fully protective of beneficial uses.

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As such, the District requests that the pH limitation be changed to read as follows: “...The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units on an annual average basis. ~~A one-month averaging period may be applied when calculating the pH change of 0.5 units.~~” This has been provided in other recently adopted Region 5 permits (e.g., City of Placerville, City of Vacaville, City of Roseville). This change also would have to be reflected on p. F-39 (h. pH) of the Fact Sheet.

p. 16, B. Groundwater Limitations. The Fact Sheet (p. F-41) concludes that groundwater limitations are not required. The effluent from the Lake Wildwood WWTP is discharged to a surface water body, Deer Creek. No rationale is made here or in the Fact Sheet as to how the WWTP operations pose a potential threat to groundwater. Furthermore, the WWTP is already held to surface water objectives that are as stringent as or more so than the groundwater quality objectives cited in the Fact Sheet on page F-41. The District requests that the groundwater limitations be removed.

p. 21, C.1.c. Salinity Evaluation and Minimization Plan. This provision is redundant with Special Provision 3.a (p. 24) and is not related to reopening the permit. Thus, the District requests that this provision language is deleted, since it is already included in the latter provision. This comment also applies to page F-44 of the Fact Sheet.

p. 26, 5.a. Pretreatment Requirements. This section of the Order along with the Fact Sheet (p. F-49) prescribes the development and implementation of a pretreatment program. The design flow of the WWTP is less than 5 mgd and there are no Users or Industrial Users as defined by 40 CFR 403.3 in the WWTP service area, which are the criteria for requiring a pretreatment program (see Code of Federal Regulations, Title 40, Section 403.8). Thus, the District requests that these requirements for establishing and implementing a pretreatment program be deleted from the Order.

p. 29, 6. a. Other Special Provisions. Based on earlier comments regarding this permit’s prescription of treatment process, the District requests the following language for this paragraph, consistent with the El Dorado Irrigation District’s Deer Creek WWTP permit that was renewed by the Board on December 4, 2008:

“a. When flow in Deer Creek provides a stream flow-to effluent dilution less than 20:1, wastewater shall be treated to achieve effluent limitations contained in section IV.A.1 of this Order that are consistent with the Department of Public Health (DPH; formerly the Department of Health Services) reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3, (Title 22), or equivalent.”

p. 30, VII. Compliance Determination. Consistent with Section 2.4.5, Item #1 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), the permit should include a new item “A.” within Section VII, as follows, and the subsequent items in Section VII should be re-lettered:

“A. Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater

than the effluent limitation and greater than or equal to the reporting level (RL)."

p. 30, VII. Compliance Determination. The District requests the following edits to clarify how compliance with the permitted capacity will be assessed:

"Average Dry Weather Flow Effluent Limitations (IV.A.1.k). The Average Dry Weather Flow (ADWF) represents the ~~daily~~-average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the ADWF effluent limitations will be determined annually based on the average of daily flows occurring over the three consecutive driest ~~weather~~ months (e.g., July, August, and September)."

MONITORING AND REPORTING PROGRAM (MRP)

p. E-2, Table E-2. The footnote for this table does not appear to read appropriately (i.e., words appear to be missing), and thus it needs to be revised.

p. E-3, Table E-3, Effluent Monitoring. Table E-3 specifies continuous monitoring for effluent temperature. This is both unnecessary and inconsistent with other permits recently adopted by the Central Valley Board (e.g., EID's Deer Creek permit, City of Roseville, City of Placerville) which require a grab sample 1/day for temperature. The District requests that the monitoring requirement for effluent temperature be changed to grab – 1/day.

Also, The District requests that the continuous pH effluent monitoring requirement be changed to a grab 1/day, consistent with the EID Deer Creek and City of Placerville permits.

Table E-3 specifies quarterly monitoring for copper and silver. As described on pp. F-20 and F-28 of the Fact Sheet, there is no reasonable potential for the discharge to contribute to an exceedance of the CTR criteria for aquatic life for these metals. The District monitored for copper and silver seven times over a three-year period (May 2003 – October 2006) and the submitted results are adequate from which to make reasonable potential determinations. Thus, the District requests that the quarterly monitoring for copper and silver be removed from the Order. Monitoring for copper and silver would still be addressed via the priority pollutant monitoring requirement.

Table E-3 also specifies monthly monitoring for Total Dissolved Solids (TDS). This is redundant as Electrical Conductivity (EC) gives the same information and it is much easier to run the test. A correlation factor could be determined from historical or future data. In general TDS is approximately 0.62 times the EC. The District requests that this requirement be reduced to quarterly.

Furthermore, Table E-3 specifies annual monitoring for alpha-BHC, aldrin, and gamma-BHC (lindane). A more appropriate periodic monitoring frequency in accordance with

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Section 1.3 of the SIP would be the same monitoring frequency as the priority pollutants (i.e., quarterly during the third year of the permit term). These pesticides are among the 126 priority pollutants and would be covered by the priority pollutant monitoring requirement. Thus, the District requests that the separate monitoring requirement for alpha-BHC, aldrin, and gamma-BHC (lindane) be deleted.

p. E-8, Table E-6, Receiving Water Monitoring. The District requests to continue to use a calculation to estimate the dilution capacity and flow in Deer Creek based on the weekly electrical conductivity measurements taken above (RSW-001) and below (RWS-002) the plant outfall ((EFF-001) and electrical conductivity and flow measurement data for the discharge. A sample of this calculation is attached. This is instead of the proposed continuous flow meter as shown in the tentative permit.

p. E-8, Table E-6. Because the effluent total coliform limitations are substantially lower than the Basin Plan objective for fecal coliform, the discharge can never cause an exceedance the Plan objective fecal coliform objective as long as the plant is in compliance with effluent limitations. Therefore, the District requests that this receiving water monitoring requirement for fecal coliform be removed from Table E-6, as was done in the El Dorado Irrigation District's Deer Creek WWTP (ORDER NO. R5-2008-0173) permit, adopted December 4, 2008, and recently renewed permits for the Cities of Placerville, Roseville, and Vacaville.

FACT SHEET

p. F-6, C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data. The data period summarized (i.e., January 2004–August 2007), represents the dataset initially available for permit renewal. However, since this dataset does not accurately represent improvements in performance since plant upgrades in August 2007, the District requests the following notation be added:

“Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data, prior to plant upgrades, from the term of the previous Order are as follows:”

p. F-7, D. Compliance Summary. The first sentence indicates the District had difficulty complying with effluent limitations for TSS, pH, and temperature among other constituents. Table F-2 does not indicate compliance problems for TSS. The District requests that the reference to TSS compliance issues be removed. In addition, Table F-2 does not summarize pH or temperature data. The District suggest that either pH and temperature data summaries be added to Table F-2 or make the following changes to the first sentence: “The Discharger’s monthly monitoring data, partially summarized in Table F-2 above, showed that the discharger had difficulty complying with effluent limitations for turbidity, total coliform, pH, ~~TSS~~, nitrate, and temperature.”

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The second sentence states that the District has completed 99% of the plant upgrades. This should be corrected to reflect that all the plant upgrades have been completed.

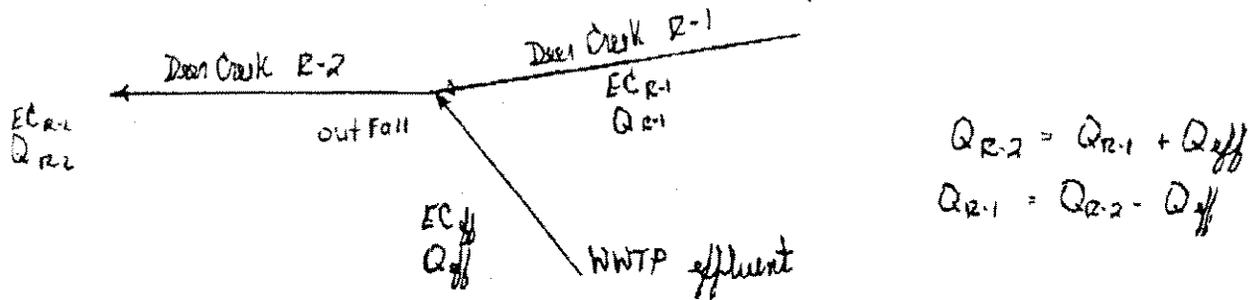
p. F-20, h. Copper. In the last paragraph of this section, the term “NTR criterion” should be replaced with “CTR criterion.”

p. F-29, first sentence. The sentence requires the following edit: “(107 $\mu\text{mg/L}$ as CaCO_3).

p. F-32, b. Chronic Toxicity. The following edit is required to reflect the fact that semi-annual monitoring is being required (see p. E-5): “Attachment E of this Order requires ~~quarterly~~ semi-annual chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.”

SAMPLE CALCULATION TO ESTIMATE FLOW & DILUTION

Approach to estimating dilution capacity in receiving waters



$$Q_{R-2} = Q_{R-1} + Q_{eff}$$

$$Q_{R-1} = Q_{R-2} - Q_{eff}$$

Example

Based on a flow-weighted average, determine Q_{R-1} & Q_{R-2} , given the following data

$$Q_{eff} = 0.5 \text{ mgd}, \quad EC_{eff} = 400 \text{ Amhos/cm}$$

$$EC_{R-1} = 350 \text{ Amhos/cm}$$

$$EC_{R-2} = 360 \text{ Amhos/cm}$$

$$(Q_{R-2})(EC_{R-2}) = (Q_{R-1})(EC_{R-1}) + (Q_{eff})(EC_{eff})$$

60.9

60.9

Q_{R-1} in terms of Q_{R-2} :

$$(Q_{R-2})(EC_{R-2}) = (Q_{R-2} - Q_{eff})(EC_{R-1}) + (Q_{eff})(EC_{eff})$$

$$(Q_{R-2})(360 \text{ Amhos/cm}) = (Q_{R-2} - 0.5 \text{ mgd})(350 \text{ Amhos/cm}) + (0.5 \text{ mgd})(400 \text{ Amhos/cm})$$

$$[Amhos/cm] \quad [Amhos/cm] \quad [mgd][Amhos/cm] \quad [mgd][Amhos/cm]$$

$$(360)(Q_{R-2}) = 350 Q_{R-2} - 175 + 200$$

$$[Amhos/cm] \quad [Amhos/cm] \quad [mgd][Amhos/cm]$$

$$360 Q_{R-2} = 350 Q_{R-2} + 25$$

$[Amhos/cm]$

$$(360 - 350) Q_{R-2} = 25 [mgd][Amhos/cm]$$

$$(10 \text{ Amhos/cm}) Q_{R-2} = 25 [mgd][Amhos/cm]$$

$$Q_{R-2} = \frac{25}{10} \frac{\text{mgd} \text{ Amhos/cm}}{\text{Amhos/cm}} = 2.5 \text{ mgd} \quad \therefore \quad Q_{R-1} = 2.0 \text{ mgd}$$