



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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12 January 2009

Mr. Ken Landau, Assistant Executive Officer

Mr. Jim Marshall, Sr. WRCE

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: Revised Draft: Renewal of Waste Discharge Requirements (NPDES No. CA0079898) for City of Grass Valley Wastewater Treatment Facility, Nevada County

Dear Messrs. Landau and Marshall:

The California Sportfishing Protection Alliance (CSPA) has reviewed the revised Waste Discharge Requirements (NPDES No. CA0081787) for Tuolumne Utilities District Sonora Regional Wastewater Treatment Plant, Jamestown Sanitary District Wastewater Treatment Plant (Permit) and submits the following comments on the proposed changes that were made subsequent to the December 2008 hearing.

The 15 December 2008 Cover Letter for transmittal of revisions to the City's of Grass Valley's NPDES Permit states that:

Enclosed is the tentative Waste Discharge Requirements (NPDES Permit) renewal and Cease and Desist Order for the City of Grass Valley Wastewater Treatment Facility. To be given full consideration, any comments or recommendations you may have regarding the enclosed document must be submitted in writing to the Regional Water Board office by 5:00 p.m. on **14 January 2009**. Written evidence or comments must be limited to the scope of the continued hearing for the proposed revisions identified in "underline/strike-out" text in the tentative NPDES permit specifically addressing the salinity effluent limitation, the additional language in the fact sheet that provides the rationale for removing the effluent limitations for aluminum from the previous permit, and the removal of copper and zinc effluent limitations. Written comments outside the scope of the proposed revisions identified in "underline/strike-out" text and/or submitted after 5:00 p.m. on **14 January 2009** will not be accepted and will not be incorporated into the administrative record if doing so would prejudice any party.

However, Table 6, *Effluent Limitations* of the proposed Permit does not contain strikeout(s) of the aluminum, copper and zinc limitations: the limitations have been deleted. We trust that no other modifications to the proposed permit have been made. Our following comments are based on the assumption that the rest of the "underline/strikeout" text, to which comments are limited, is complete.

1. The Effluent Limitation for specific conductivity (EC) is regulated as an annual average contrary to Federal Regulations 40 CFR 122.45 (d)(2) and common sense.

Federal Regulation 40 CFR 122.45 (d)(2) requires that permit for POTWs establish Effluent Limitations as average weekly and average monthly unless impracticable. The proposed Permit establishes an Effluent Limitation for EC as an annual average contrary to the cited Federal Regulation. Establishing the Effluent Limitation for EC in accordance with the Federal Regulation is not impracticable; to the contrary the Central Valley Regional Board has a long history of having done so. Proof of “impracticability” is properly a steep slope and the Regional Board has not presented any evidence that properly and legally limiting EC is impracticable.

In addition to ignoring the cited regulation, the Regional Board has not presented any information that the proposed annual average limitation is protective of the beneficial uses of the receiving stream. For example:

Research at UCD (*Water and Soil Salinity Studies on California Rice*) shows that rice seedlings are very sensitive to salt concentrations and that early season soil salinity had the strongest correlation with yield. In addition, in a *Biological Significance* document, dated November 1st 2006, James M. Harrington, Staff Water Quality Biologist with the California Department of Fish and Game, citing McKee and Wolf (1971 Water Quality Criteria) wrote that: “Surveys of inland fresh waters indicates that good mixes of fish fauna are found where conductivity values range between 150 and 500 umhos/cm. Even in the most alkaline waters, the upper tolerance limit for aquatic life is approximately 2000 umhos/cm.” The drinking water secondary MCL for EC is based on taste and odor which occur instantaneously. *McKee and Wolf* (1971 Water Quality Criteria) lists the limiting TDS concentrations for numerous industrial uses in mg/l; boiler feed water 50-3000, brewing 500-1000, canning 850, general food processing 850 and paper manufacturing 80-500.

Limiting EC on an annual basis could significantly harm all of the above-cited uses. Not only are the Effluent Limitations for EC practicable to limit on an average weekly and average monthly basis, but they are also such necessary to protect the beneficial uses of the receiving stream.

2. The proposed quarterly sampling requirements for determining the “municipal water supply electrical conductivity” may not be adequate.

Much of the domestic water supply in the foothills is supplied by irrigation District deliveries. The irrigation Districts change sources on a supply and demand basis. The source and quality of potable water can change quickly and often. The City of Grass Valley’s past consultants have documented significant potable water diversions as being the cause of “unnaturally” low hardness in the receiving stream. Sampling for EC generally is fast, easy and inexpensive. A plan developed by the City to capture representative potable supply EC levels or monthly sampling would result in more representative results than quarterly. Monthly sampling would also result in a number of samples that has statistical relevance as opposed to 4 isolated events.

3. The proposed Permit fails to contain an Effluent Limitation for aluminum in accordance with Federal Regulations 40 CFR 122.44, US EPA’s interpretation of the regulation, and California Water Code, Section 13377.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.” The Basin Plan contains a narrative water quality objective for toxicity that states in part that “[a]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life” (narrative toxicity objective). 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. U.S. EPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum to prevent toxicity to freshwater aquatic life. The recommended ambient criteria four-day average (chronic) and one-hour average (acute) criteria for aluminum are 87 mg/l and 750 mg/l, respectively.

Aluminum in the effluent has been measured as high as 516 µg/l. Freshwater Aquatic habitat and municipal (MUN) are beneficial uses of the receiving stream.

US EPA’s 87 ug/l chronic criterion was developed using low pH and hardness testing. California Central Valley waters, the Sacramento River, at the Valley floor, have been sampled to have hardnesses as low as 39 mg/l CaCO₃ by the USGS in February 1996 for the *National Water Quality Assessment Program*. Contributory streams, especially foothill streams, have also been sampled and shown to contain even lower hardness levels. US EPA recognized in their ambient criteria development document, (Ambient Water Quality Criteria for Aluminum, EPA 440/5-86-008) that the pH was in the range 6.5 to 6.6 and that the hardness was below 20 mg/l. Typical values for pH and hardness in the Central Valley alone warrant use of the chronic ambient criteria for aluminum. Despite the hardness and pH values used in the development of the criteria; U.S. EPA’s conclusions in their Ambient Criteria for the Protection of Freshwater Aquatic Life recommends that application of the ambient criteria as necessary to be protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria.

The Regional Board and their proposed Permit cites US EPA’s *Ambient Criteria for the Protection of Freshwater Aquatic Life for Aluminum* (criteria) as not being representative or necessary because the chronic criteria were based on a low hardness and low pH. The Regional Board cites one isolated section of the criteria development document but ignores the final recommendation to use the recommended criteria absent a site-specific objective for aluminum. The Regional Board then defaults to the US EPA recommended acute criteria of 750 ug/l. The Regional Board’s citation of the criteria development document is incomplete its review, for example the *criteria* development document (EPA 440/5-86-008) also cites that:

- 169 ug/l of aluminum caused a 24% reduction in the growth of young brook trout.

- 174 ug/l of aluminum killed 58% of the exposed striped bass.
- Bioaccumulation factors ranged from 50 to 231 for young brook trout exposed for 15 days.
- Aluminum at 169 ug/l caused a 24% reduction in the weight of young brook trout.

US EPA recommends that understanding the *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* is necessary in order to understand the text, tables and calculations of a criteria document. The Regional Board's assessment of the use of low hardness and low pH clearly shows they did not heed EPA's advise in understanding the criteria, the development procedures or the final recommendations. Ignoring the final recommendation of the criteria misses the protective intermediate measures to protect against mortality and reductions to growth and reproduction. The Regional Board's single use of the acute criteria for aluminum is not protective of the beneficial uses of the receiving stream.

The drinking water maximum contaminant level (MCL), which is included as a Basin Plan Water Quality Chemical Constituents Objective, for aluminum is 1,000 as a primary MCL and 200 µg/l as a secondary MCL.

The effluent data has exceeded the MCL and the chronic criteria for aluminum.

Based on information included in analytical laboratory reports submitted by the Discharger, aluminum in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a level necessary to protect aquatic life, and, therefore to violate the Basin Plan's narrative toxicity objective and the drinking water MCL.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." US EPA has interpreted 40 CFR 122.44(d) in *Central Tenets of the National Pollutant Discharge Elimination System (NPDES) Permitting Program* (Factsheets and Outreach Materials, 08/16/2002) that although States will likely have unique implementation policies there are certain tenets that may not be waived by State procedures. These tenets include that "where valid, reliable, and representative effluent data or instream background data are available they MUST be used in applicable reasonable potential and limits derivation calculations. Data may not be arbitrarily discarded or ignored." 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. A water quality standard for Failure to include an effluent limitation for aluminum in the proposed permit violates 40 CFR 122.44 and CWC 13377.

4. The proposed Permit Effluent Limitation for aluminum has been removed and is therefore less stringent than the existing permit contrary to the Antibacksliding requirements of the Clean Water Act and Federal Regulations, 40 CFR 122.44 (l)(1).

Under the Clean Water Act (CWA), point source dischargers are required to obtain federal discharge (NPDES) permits and to comply with water quality based effluent limits (WQBELs) in NPDES permits sufficient to make progress toward the achievement of water quality standards or goals. The antibacksliding and antidegradation rules clearly spell out the interest of Congress in achieving the CWA's goal of continued progress toward eliminating all pollutant discharges. Congress clearly chose an overriding environmental interest in clean water through discharge reduction, imposition of technological controls, and adoption of a rule against relaxation of limitations once they are established.

Upon permit reissuance, modification, or renewal, a discharger may seek a relaxation of permit limitations. However, according to the CWA, relaxation of a WQBEL is permissible only if the requirements of the antibacksliding rule are met. The antibacksliding regulations prohibit EPA from reissuing NPDES permits containing interim effluent limitations, standards or conditions less stringent than the final limits contained in the previous permit, with limited exceptions. These regulations also prohibit, with some exceptions, the reissuance of permits originally based on best professional judgment (BPJ) to incorporate the effluent guidelines promulgated under CWA §304(b), which would result in limits less stringent than those in the previous BPJ-based permit. Congress statutorily ratified the general prohibition against backsliding by enacting §402(o) and 303(d)(4) under the 1987 Amendments to the CWA. The amendments preserve present pollution control levels achieved by dischargers by prohibiting the adoption of less stringent effluent limitations than those already contained in their discharge permits, except in certain narrowly defined circumstances.

When attempting to backslide from WQBELs under either the antidegradation rule or an exception to the antibacksliding rule, relaxed permit limits must not result in a violation of applicable water quality standards. The general prohibition against backsliding found in §402(o)(1) of the Act contains several exceptions. Specifically, under §402(o)(2), a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant *if*: (A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation; (B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or (ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section; (C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy [(e.g., Acts of God)]; (D) the permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or (E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit, and has properly operated and maintained the facilities, but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control

actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

Even if a discharger can meet either the requirements of the antidegradation rule under §303(d)(4) or one of the statutory exceptions listed in §402(o)(2), there are still limitations as to how far a permit may be allowed to backslide. Section 402(o)(3) acts as a floor to restrict the extent to which BPJ and water quality-based permit limitations may be relaxed under the antibacksliding rule. Under this subsection, even if EPA allows a permit to backslide from its previous permit requirements, EPA may never allow the reissued permit to contain effluent limitations which are less stringent than the current effluent limitation guidelines for that pollutant, or which would cause the receiving waters to violate the applicable state water quality standard adopted under the authority of §303.49.

Federal regulations 40 CFR 122.44 (l)(1) have been adopted to implement the antibacksliding requirements of the CWA:

(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under Sec. 122.62.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(i) Exceptions--A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if:

(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;

(B)(1) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or (2) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b);

(C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;

(D) The permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or

(E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which

case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

(ii) Limitations. In no event may a permit with respect to which paragraph (1)(2) of this section applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, issued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 303 applicable to such waters.

5. The information regarding water effects ratios (WER) and removal of Effluent Limitations for copper and zinc is insufficient in accordance with Federal regulation 40 CFR 124.6 (e), 124.8 (b)(4) and 125.56.

NPDES permit Fact Sheets are required to contain the basis for the permit conditions and an explanation of the reasons why such conditions are applicable. The removal of Effluent Limitations for copper and zinc from a permit should warrant such explanation. The proposed Permit modifications delete all *reasonable potential* calculations for copper and zinc, rather than replace them with calculations based on the WER. There are no details of the development of the WER or what specific EPA methods were used. There are no reasonable potential calculations based on the WER. The proposed permit contains insufficient information regarding development of the WER and removal of the effluent limitations for copper and zinc for the public to make any determinations regarding the adequacy of the proposed Permit. The Fact Sheet must be amended and recirculated for public comment containing sufficient information to form the basis for the proposed Permit.

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

Sincerely,



Bill Jennings, Executive Director
California Sportfishing Protection Alliance