



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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22 October 2006

Mr. Robert Schneider, Chairman
Ms. Pamela Creedon, Executive Officer
Mr. Kenneth Landau, Assistant Executive Officer
Mr. James C. Pedri, Assistant Executive Officer
Ms. Mary L. Randall, Senior WRC Engineer
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. CA0078930) for City of Biggs
Wastewater Treatment Plant, Butte County

Dear Messrs. Schneider, Landeau, Pedri, Cash and Mesdames Creedon, Randall:

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 City of Biggs Wastewater Treatment Plant, Butte County (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 Butte County.

- 1. The proposed permit is incomplete, in accordance with Federal Regulations 40 CFR 124.7, 124.8 and 124.56, by failing to include sufficient information to determine the basis for not including Effluent Limitations for priority pollutants. There is insufficient information to determine if the proposed Permit complies with requirements of the SIP and Federal Regulations, 40 CFR 122.44, which mandate that an effluent limitation be established if the discharge presents a reasonable potential to exceed a water quality standard**

or objective. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) and California Water Code, Section 13377, 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.

The proposed permit is incomplete. The proposed Permit fails to include sampling data for priority pollutants including sampling data analyzed for California Toxics Rule (CTR) and National Toxics Rule (NTR) constituents. Because the proposed Permit is incomplete, it is impossible to provide adequate comments regarding whether Effluent Limitations are required in accordance with state and federal regulations and the State's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) for the CTR. The proposed Permit, Finding G, states that 3 samples were collected and analyzed for priority pollutants, but that this information is insufficient to determine if a reasonable potential exists to exceed water quality standards. This Finding further states that the laboratory quality assurance/quality control (QA/QC) measures for the priority pollutant sampling were questionable. The Fact Sheet, page F-12, elaborates that one priority pollutant sample was more than 5 years old and one did not include receiving water analysis; leaving one sample which staff concludes is insufficient to conduct a reasonable potential analysis. There is no discussion or supporting information of the proposed Permit Finding statement that the QA/QC was questionable. The SIP, Section 1.2, lays out specific reasons that provide justification for invalidating a data set: a sample is erroneously reported; the sample is not representative of the discharge; there is questionable QA/QC; or there are varying seasonal conditions; none of which apply here. SIP Section 1.2 states that the Regional Board shall use all available, valid, representative data.

With regard to the 5-year old data, there is no discussion of why 5-year old data would not be representative of the discharge. There is no indication that the principal treatment processes have changed. And, there is no indication that the wastestream character has changed. Without such justification, the data would be representative of the discharge. There is no information provided in the proposed Permit or the Fact Sheet that supports throwing out the 5-year old data set.

With regard to failing to use the data set that failed to analyze the receiving stream, the receiving stream is characterized, Fact Sheet Page F-9 No. 1 last paragraph, as ephemeral. Therefore the receiving water sample would virtually be meaningless for a reasonable potential analysis; there is no assimilative capacity. There is no information provided in the proposed Permit or the Fact Sheet that supports throwing out the "effluent only" data set.

Although there does not appear to be any valid reason for not using the two above cited data sets, the Central Valley Regional Board has an extensive history of using a single data set to conduct a reasonable potential analysis. The SIP, Section 1.2, also allows the Regional Board to require single samples be collected, to determine the need for effluent limitations for small dischargers. There is no information provided in the proposed Permit or the Fact Sheet that supports throwing out the "single sample" data set.

Based on the available information there is no valid reason for failing to conduct an analysis to determine if the wastewater discharge presents a reasonable potential to exceed a CTR or NTR water quality standard or Basin Plan water quality objective.

The priority pollutant sampling results are critical to determine the adequacy of the proposed Permit in protecting the beneficial uses of the receiving stream. Federal Regulation 40 CFR 122.44 requires that an effluent limitation be included in an NPDES permit if the data shows there is a reasonable potential for the discharge to exceed water quality standards. The SIP, Section 1.4, established procedures and requirements for determining the need for effluent limitations to be included in NPDES permits. There is also insufficient information to determine if the permit complies with requirements of the SIP and Federal Regulations, 40 CFR 122.44, which mandate that an effluent limitation be established if the discharge presents a reasonable potential to exceed a water quality standard or objective. Federal regulation, 40 CFR 124.7, regarding a Statement of Basis, requires that the derivation of the conditions of a permit and the reasons for them be included in the statement. However, clearly, by the title, the Regional Board decided that the proposed Permit would include a "Fact Sheet". Therefore the Regional Board and the proposed Permit are bound by the Fact Sheet requirements prescribed by Federal Regulations, 40 CFR 124.8 and 124.56. The Fact Sheet does not, as required by Federal Regulation, contain sufficient information regarding the type of pollutants which are proposed to be discharged, nor a summary of the basis of the permit conditions, nor appropriate supporting references, nor sufficient calculations or information to support the failure to derive effluent limitations.

Beyond the technical and legal discussions, compliance with CTR water quality standards is due by May 2010. It is unfair to the Discharger to ignore water quality issues presented by the available data. The Regional Board proposes to allow another year to collect additional data, and perhaps reopen the permit (if staffing allows) in late 2007 or 2008, leaving insufficient time to plan, design and construct a facility to comply with the CTR final due date.

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." 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. There is no information in the proposed Permit that indicates that the discharge can comply with applicable water quality

requirements or is consistent with the Basin Plan; the proposed Permit should not be adopted as presented.

2. The proposed Permit fails to contain an adequately protective Effluent Limitation for coliform organisms in violation of Federal Regulations and the CWC and fails to adequately protect the beneficial uses of irrigated agriculture and contact recreation and provide best practicable treatment and control (BPTC) of the discharge.

Table F-2 of the Fact Sheet shows the discharge contained a maximum 5,000 MPN/100 ml and a highest monthly average of 182 MPN/100 ml of total coliform organisms. Table F-9 of the Fact Sheet shows the discharge contained a maximum 4,900 MPN/100 ml of fecal coliform organisms. The Basin Plan water quality objective for fecal coliform organisms is 200 MPN/100 ml as a 30-day geometric mean and not more than 10% of the samples exceed 400 MPN/100 ml. The receiving stream is ephemeral; there is no dilution available for coliform organisms.

In a letter to the Regional Board dated 8 April 1999, the California Department of Health Services indicated that DHS would consider wastewater discharged to water bodies with identified beneficial uses of irrigation or contact recreation and where the wastewater receives dilution of less than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed (a) 2.2 MPN/100 ml as a 7-day median, (b) 23 MPN/100 ml more than once in any 30 day period, and (c) never exceeds 240 MPN/100 ml. Finding G of the proposed Order stated that “...*there was no receiving water upstream from the discharge point at the time of the sampling events.*” This indicates that less than 20:1 dilution is available and that the 2.2 MPN/100 ml 7-day median is applicable. Reduction of total coliform organisms to the 2.2 MPN/100 ml level typically requires treatment to a tertiary, or equivalent, level. Based on the number of tertiary wastewater treatment systems that have been required by the Central Valley Regional Board; tertiary treatment is BPTC. Tertiary treatment control systems are readily available and are capable of compliance with the Basin Plan’s water quality objective for fecal coliform organisms.

The proposed Permit Fact Sheet discussion of “pathogens” is limited to coliform organisms and does not discuss the reasonable potential to exceed the Basin Plan water quality objective for coliform. The beneficial uses of the receiving stream include contact recreation uses and irrigation. To protect these beneficial uses, the Regional Board must require that the wastewater must be disinfected and adequately treated to prevent disease. The principal infectious agents (pathogens) that may be present in raw sewage may be classified into three broad groups: bacteria, parasites, and viruses. Tertiary treatment, consisting of chemical coagulation, sedimentation, and filtration, has been found to remove approximately 99.5% of viruses. Filtration is an effective means of reducing viruses and parasites from the waste stream. The wastewater must be treated to tertiary standards (filtered) to protect contact recreational and food crop irrigation uses. The California Department of Health Services (DHS) has developed reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3 (Title 22), for the reuse of

wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, school yards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 m/ as a 7-day median. Title 22 is not directly applicable to surface waters; however, the Regional Board has consistently found in the majority of NPDES permits issued that it is appropriate to apply DHS's reclamation criteria because the receiving stream is used for irrigation of agricultural land and for contact recreation purposes. The stringent disinfection criteria of Title 22 would be appropriate since the undiluted effluent may be used for the irrigation of food crops. Coliform organisms are intended as an indicator of the effectiveness of the entire treatment train and the effectiveness of removing other pathogens. The wastewater must be treated to a level capable of complying with the Basin Plan water quality objective for coliform organisms and to protect the beneficial uses of contact recreation and irrigated agriculture. The application of tertiary treatment processes results in the ability to achieve lower levels for BOD and TSS which would provide water quality capable of complying with dissolved oxygen limitations, as well as effluent turbidity limitations of 2 NTU as a daily average and 5 NTU as a daily maximum. The Central Valley Regional Board has a long established history of including turbidity limitations in NPDES permits for discharges to low-flow and ephemeral streams at 2 NTU as a daily average, 5 NTU as a level not to be exceeded more than 5 percent of the time within a 24-hour period, and 10 NTU as an absolute maximum, which has established BPTC for POTWs. Given the ephemeral nature of the receiving stream, this would also result in improved compliance with the Basin Plan's Chemical Constituents objective for turbidity (secondary MCL of 5 NTU).

The discharge has a reasonable potential to cause, or contribute, to an in-stream excursion of the fecal coliform organisms water quality objective and thereby fails to protect the beneficial uses of irrigated agriculture and contact recreation. 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.

3. The proposed Permit fails to clearly identify the municipal and domestic beneficial uses of the receiving stream.

The proposed Permit, Finding H second paragraph, and the Fact Sheet, page F-8, Domestic and Agricultural Supply, state that municipal and domestic supply are beneficial uses of the receiving stream. The permit however fails to include municipal and domestic supply as beneficial uses in proposed Permit Table 2. The addition of the proper citation of the domestic and municipal uses in Table 2 is critical for consistency and to assure the beneficial uses are adequately protected. Table 2 should be modified to add MUN and DOM.

4. The proposed Permit fails to include an Effluent Limitation for Oil and Grease in violation of Federal Regulation 40 CFR 122.44(d)

The proposed Permit is for a domestic wastewater treatment plant. Domestic wastewater treatment plants, by their nature, receive oil and grease in concentrations from home cooking and restaurants that present a reasonable potential to exceed the Basin Plan water quality objective for oil and grease (Basin Plan III-5.00). Confirmation sampling is not necessary to establish that domestic wastewater treatment systems contain oil and grease in concentrations that present a reasonable potential to exceed the water quality objective. The Central Valley Regional Board has a long established history of including oil and grease limitations in NPDES permits at 15 mg/l as a daily maximum and 10 mg/l as a monthly average, which has established BPTC for POTWs. 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 oil and grease in the proposed permit violates 40 CFR 122.44 and CWC 13377.

Notwithstanding the fact that the Regional Board has an established history of including oil and grease limitations in NPDES permits at 15 mg/l as a daily maximum and 10 mg/l as a monthly average, we believe these limitations are not necessarily protective. The only guidance we were able to find supporting the 15/10 mg/l limit is an old 1974 EPA memo discussing technological-based limits for stormwater runoff from petroleum refineries and marketing terminals. The 15/10 mg/l standard is clearly inadequate in situations where reasonable potential analyses mandate a water quality-based limitation.

Oil and grease is highly toxic to aquatic life: toxic at concentrations as low as 0.1 mg/L and sublethal toxicities are reported at 10-100 $\mu\text{g/L}$. In fact, it has been shown that petroleum products can harm aquatic life at concentrations as low as 1 $\mu\text{g/l}$. Oil and grease is also persistent, bioaccumulative and highly toxic in sediment. The USEPA's water quality standard for oil and grease is stated as: "a) 0.01 of the lowest continuous flow 96-hour LC50 to several important freshwater and marine species, each having a demonstrated high susceptibility to oils and petrochemicals, b) Levels of oils or petrochemicals in the sediment which cause deleterious effects to the biota should not be allowed and c) surface waters shall be virtually free from floating nonpetroleum oils of vegetable or animal origin, as well as petroleum-derived oils." Goldbook, 1986, Quality Criteria for Water, EPA 440/5-86-001. A table summarizing lethal toxicities of various petroleum products to aquatic life can be found in EPA's 1976 Quality Criteria for Water (Redbook, pp 210-215). The Basin Plan's narrative limit for oil and grease is stated as

“[w]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.” Basin Plan, III-5.00.

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

Untreated domestic wastewater contains ammonia. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. Nitrate and nitrite are known to cause adverse health effects in humans. The Basin Plan’s chemical constituents water quality objective prohibits chemical constituents in concentrations that exceed drinking water Maximum Contaminant Levels (MCLs) published in Title 22 of the California Code of Regulations or that adversely affect beneficial uses. Municipal and domestic water supply is a beneficial use of the Sacramento River. The California Department of Health Services (DHS) has adopted Primary Maximum Contaminant Levels (MCLs) for the protection of human health for nitrite and nitrate that are equal to 1 mg/l and 10 mg/l (measured as nitrogen), respectively. Title 22 CCR, Table 64431-A, also includes a primary MCL of 10,000 mg/l (10 mg/l (N)) for the sum of nitrate and nitrite, measured as nitrogen. The discharge from the this wastewater treatment plant has a reasonable potential to cause or contribute to an in-stream excursion above water quality standards for nitrite, and nitrate. Effluent limits for nitrite and nitrate are properly based on the MCLs. Effluent Limitations for nitrite and nitrate must be included in the proposed Permit to assure the treatment process adequately nitrifies and denitrifies the waste stream to protect the beneficial uses of municipal and domestic supply. 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. Drinking water MCLs are included in the Basin Plan Chemical Constituents water quality objective by reference. Failure to include effluent limitations for nitrate and nitrite in the proposed permit violates 40 CFR 122.44 and CWC 13377.

Failure to include Effluent Limitations for nitrate and nitrite also threatens to violate Discharge Prohibition, III-F, which states that “The discharge of waste that causes violation of any numeric water quality objective contained in the Basin Plan is prohibited.” As stated above, nitrate is included in Title 22 drinking water maximum contaminant level at 10 mg/l (N) an included in the Basin Plan’s Chemical Constituents objective by reference. Failure to denitrify the wastestream and the resulting discharge of nitrates and/or nitrites to the receiving stream presents a reasonable potential to violate Discharge Prohibition III-F.

Failure to include an Effluent Limitation for nitrate and nitrite also threatens to violate the Receiving Water Limitation, No 2, for Biostimulatory Substances. Nitrogen compounds are biostimulatory substances. Biostimulatory substances are included in the Basin Plan Water Quality Objectives. The Regional Board has failed to assess, or even discuss, the impacts of discharging significant quantities of nitrates to an ephemeral stream. Failure to denitrify the wastestream and the resulting discharge of nitrates to the receiving stream presents a reasonable potential to exceed the Basin Plan Water Quality Objective for Biostimulatory Substances.

6. The proposed Permit contains an Effluent Limitation for pH that violates the Basin Plan Water Quality Objective in violation of Federal Regulations and the CWC.

The proposed Permit contains an Effluent Limitation for pH as an instantaneous maximum of 9.0. The Basin Plan Water Quality Objective for pH is that pH shall remain above 6.5 and below 8.5. The pH Effluent Limitation of 9.0 threatens to violate the Basin Plan Water Quality Objective for pH. 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.

7. The proposed Permit fails to contain an Effluent Limitation for dissolved oxygen (DO) in violation of Federal Regulations and the CWC.

The Fact Sheet, page F-20, states that: "The discharge has a reasonable potential to cause, or contribute, to an in-stream excursion of the DO water quality objective. Water quality based effluent limitations for DO have been included in this Order based on the Basin Plan water quality objective for DO." The proposed Permit does not contain an effluent limit for DO. Table F-9 of the Fact Sheet shows the background receiving water DO levels have been recorded as low as 2.8 mg/l. The receiving stream is ephemeral; there is no available dilution for DO. The Basin Plan water quality objective for DO is 7.0 mg/l. Pond wastewater treatment systems are known to contain very low concentrations of DO, at times it is difficult to maintain a 1.0 mg/l DO to prevent odors. The discharge has a reasonable potential to cause, or contribute, to an in-stream excursion of the DO water quality objective. Proposed Permit Fact Sheet Table F-2 shows the maximum daily discharge effluent concentration for BOD was 66 mg/l. BOD is obviously a measure of oxygen demanding substances in the discharge. It is unlikely that continuation of a pond treatment system will be capable of meeting the DO limitation. 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.

8. The proposed Permit contains compliance time schedules for ammonia and electrical conductivity (EC) in violation of federal law

The proposed Permit, page 11 Interim Effluent Limitations, contains a compliance schedule for ammonia and EC based on reopening and modifying the Order. No final compliance date is specified. Staff has confirmed by action that NPDES permits are rarely reopened prior to their five-year expiration date. Prior to July 1, 1977, therefore, a discharger could be allowed some time to comply with an otherwise applicable water quality-based effluent limitation. Beginning on July 1, 1977, however, dischargers were required to comply as of the date of permit issuance with WQBELs, including those necessary to meet standards established subsequent to the compliance deadline.

In the Clean Water Act Amendments of 1977, Congress provided limited extensions of the July 1, 1977, deadline for achieving WQBELs. In CWA section 301(i), Congress provided that “publicly-owned treatment works” (“POTWs”) that must undertake new construction in order to achieve the effluent limitations, and need Federal funding to complete the construction, may be eligible for a compliance schedule that may be “in no event later than July 1, 1988.” 33 U.S.C. § 1311(i)(1) (emphasis added). Congress provided for the same limited extension for industrial dischargers that discharge into a POTW that received an extension under section 1311(i)(1). *See* 33 U.S.C. § 1311(i)(2). In addition, dischargers that are not eligible for the time extensions provided by section 1311(i) but that do discharge into a POTW, may be eligible for a compliance schedule of no later than July 1, 1983. *See* 33 U.S.C. § 1319(a)(6).

The fact that Congress explicitly authorized certain extensions indicates that it did not intend to allow others, which it did not explicitly authorize. In *Homestake Mining*, the Eighth Circuit held that an enforcement extension authorized by section 1319(a)(2)(B) for technology-based effluent limitations did not also extend the deadline for achievement of WQBELs. 595 F.2d at 427-28. The court pointed to Congress' decision to extend only specified deadlines: “[h]aving specifically referred to water quality-based limitations in the contemporaneously enacted and similar subsection [1319](a)(6), the inference is inescapable that Congress intended to exclude extensions for water quality-based permits under subsection [1319](a)(5) by referring therein only to Section [1311](b)(1)(A). *Id.* at 428 (citation omitted). By the same reasoning, where Congress extended the deadline for achieving effluent limitations for specific categories of discharges and otherwise left the July 1, 1977, deadline intact, there is no statutory basis for otherwise extending the deadline.

The Clean Water Act defines the term effluent limitation as: “any restriction established . . . on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.” 33 U.S.C. § 1362(11).

The term schedule of compliance is defined, in turn, as “a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.” 33 U.S.C. § 1362(17). The purpose of a compliance schedule is to facilitate compliance with an effluent limitation by the applicable deadline by inserting interim goals along the way: “[a] definition of effluent limitations has been included so that control requirements are not met by narrative statements of obligation, but rather are specific requirements of specificity as to the quantities, rates, and concentration of physical, chemical, biological and other constituents discharged from point sources. It is also made clear that the term effluent limitation includes schedules and time tables of compliance. The Committee has added a definition of schedules and time-tables of compliance so that it is clear that enforcement of effluent limitations is not withheld until the final date required for achievement.” S. Rep. No. 92-414, at 77, *reprinted in* 1972 U.S.C.C.A.N. 3668 (Oct. 28, 1971) (emphasis added). Thus, Congress authorized compliance schedules, not to extend its deadlines for achievement of effluent limitations, but to facilitate achievement by the prescribed deadlines.

In *United States Steel Corp.*, the industry plaintiff argued that 33 U.S.C. § 1311(b)(1)(C) allows the July 1, 1977, deadline to be met simply by beginning action on a schedule of compliance that eventually would result in achieving the technology- and water quality-based limitations. 556 F.2d at 855. The Court of Appeals disagreed: “[w]e reject this contorted reading of the statute. We recognize that the definition of ‘effluent limitation’ includes ‘schedules of compliance,’ section [1362(11)], which are themselves defined as ‘schedules . . . of actions or operations leading to compliance’ with limitations imposed under the Act. Section [1362(17)]. It is clear to us, however, that section [1311(b)(1)] requires point sources to achieve the effluent limitations based on BPT or state law, not merely to be in the process of achieving them, by July 1, 1977.” *Id.* Thus, compliance schedule may not be used as a means of evading, rather than meeting, the deadline for achieving WQBELs.

Finally, a compliance schedule that extends beyond the statutory deadline would amount to a less stringent effluent limit than required by the CWA. States are explicitly prohibited from establishing or enforcing effluent limitations less stringent than are required by the CWA. *See* 33 U.S.C. § 1370; Water Code §§ 13372, 13377. The clear language of the statute, bolstered by the legislative history and case law, establishes unambiguously that compliance schedules extending beyond the July 1, 1977, deadline may not be issued in discharge permits. The Permit, however, purports to do just that. By authorizing the issuance of permits that delay achievement of effluent limitations for over thirty years beyond Congress’ deadline, the Permit makes a mockery of the CWA section 301(b)(1)(C) deadline and exceeds the scope of the Regional Board’s authority under the Clean Water Act and the Porter-Cologne Act. 33 U.S.C. § 1311(b)(1)(C). The compliance time schedules for ammonia and EC should be properly removed to an enforcement order.

9. The proposed permit fails to include mass limitations for ammonia, chlorine, and total dissolved solids in violation of Federal Regulation 40 CFR 122.45(f)

The proposed Permit, pages 10-11 Ammonia, total, Total Residual Chlorine, and Total Dissolved Solids fails to include mass limitations.

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.”

Federal Regulations, 40 CFR 122.45 (B)(1), states the following: “In the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow.”

In addition to the above citations, on June 26th 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. Mass limitations for chlorine must be added to the proposed permit.

The proposed permit fails to include protective limitations for ammonia in violation of Federal Regulation 40 CFR 122.44(d) and the CWC

Toxic levels of ammonia are pH and temperature dependant. According to the Fact Sheet, page F-19, the proposed ammonia Effluent Limitation is based on a 30-day average pH and temperature. The Fact Sheet fails to state the date range for the 30-day average receiving water pH of 7.85. The resulting ammonia limitation is 2.72 mg/l as a monthly average and 7.44 mg/l as a one-hour average. Using the worst case observed site-specific effluent pH and temperature of 8.5 and 81° F, respectively, the ammonia limitations would be 0.5 mg/l as a monthly average and 2.14 mg/l as a one-hour average. The proposed ammonia effluent limitation would not protect against toxic discharges which cause exceedance of the Basin Plan water quality objective for toxicity and is not representative of the actual site-specific conditions at the WWTP. The ammonia Effluent Limitation must be changed to reflect the actual worst-case site-specific conditions at the WWTP. 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.

The proposed permit includes Effluent Limitations for “Ammonia, total”. The proposed Monitoring and Reporting Program requires monitoring of “Ammonia”. U.S. EPA’s Recommended Ambient Water Quality Criteria for ammonia are presented in terms of total ammonia, as nitrogen (as N). The proposed order must be revised to present effluent limitations and monitoring and reporting requirements in the same terms as the U.S. EPA criteria [i.e., Ammonia, Total (as N)].

The proposed permit fails to include Effluent Limitations for settleable solids in violation of Federal Regulations and the CWC.

For inland surface waters, the Basin Plan states that “[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or

adversely affects beneficial uses.” The receiving stream is ephemeral; there is no available dilution for settleable solids. Wastewater discharges typically include a settleable materials component. Disruption of treatment processes can result in increased concentrations of settleable solids. The Central Valley Regional Board has a long established history of including settleable solids limitations in NPDES permits at 0.2 ml/l as a daily maximum and 0.1 ml/l as a monthly average, which has established BPTC for POTWs. 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...*” 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 effluent limitations for settleable solids in the proposed permit violates 40 CFR 122.44 and CWC 13377.

In addition, according to Table F-2, the existing NPDES permit (Order No. 5-00-25) includes effluent limitations for settleable solids of 0.1 ml/l as a monthly average and 0.2 ml/l as a daily maximum. Failure to include these, or more stringent, limitations in the proposed permit constitutes backsliding. Pursuant to Sections 402(o)(2) and 303(d)(4) of the Clean Water Act and 40 CFR 122.44(l), backsliding in NPDES permits is prohibited. The proposed permit must be revised to incorporate the settleable solids effluent limitations included in Order NO. 5-00-25, or more stringent limitations for the same constituent.

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.

For an ephemeral or low flow stream, 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).

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)

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 Tentative 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. Accordingly, the proposed Permit must be revised to prohibit chronic toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i).

The proposed Permit fails to include specifications for odor control.

The proposed permit fails to include the standard requirements that (a) objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas and (b) the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/l.

The proposed Permit does not comply with the Board's Antidegradation Policy and does not require the Discharger provide BPTC

The antidegradation analysis in the proposed Permit is not simply deficient, it is literally nonexistent. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist only of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis. The following comments detail areas of the proposed Permit fails to comply with the Antidegradation Policy or to provide BPTC as required by the Policy:

The Discharger has discharged fecal and total coliform organisms in violation of the Basin Plan water quality objective for Bacteria degrading the beneficial uses of contact recreation and irrigated agriculture. There is no assimilative capacity for bacteria in the ephemeral receiving stream. A significant number of POTWs in the Central Valley provide, or are in the process of providing tertiary treatment. Tertiary treatment is BPTC. The Discharger is not required to provide BPTC.

The Discharger discharges wastewater to unlined ponds for treatment. Groundwater quality has never been analyzed to determine if the discharge has degraded groundwater quality. The Regional Board can not state that BPTC has been provided when it is unknown whether the discharge to unlined ponds has degraded groundwater quality. Lined ponds or a conventional WWTP would eliminate the threat to groundwater quality and provide BPTC.

The Discharger does not denitrify the wastestream resulting in significant quantities of nitrates being discharged to surface waters, threatening to exceed the drinking water standard (Basin Plan Chemical Constituents objective) for nitrate and the Basin Plan water quality objective for biostimulatory substances. Failure to denitrify is not BPTC and is contrary to the Antidegradation Policy.

The Discharger does not adequately nitrify the wastestream resulting in significant quantities of ammonia (up to 27 mg/l) being discharged to surface waters at clearly toxic concentrations in violation of the Basin Plan water quality objective for toxicity. Most WWTPs in the Central Valley are required to nitrify and denitrify their wastestream, which is therefore BPTC. Failure to nitrify is not BPTC and is contrary to the Antidegradation Policy.

Regional Board staff intentionally excluded CTR, NTR and priority pollutant sampling results from inclusion in the proposed Permit. There is therefore no information that the wastewater discharge is capable of complying with the California and National Toxics Rules or water quality objectives in the Basin Plan. There is intentionally insufficient information in the proposed Permit to determine if the Discharge meets BPTC requirements of the Antidegradation Policy.

The proposed Permit finds there is reasonable potential to exceed the Basin Plan water quality objective for DO. There is no way for a pond treatment system to meet an effluent limitation of 7.0 mg/l for DO. The treatment system does not provide BPTC. Tertiary treatment, or equivalent, would result in significant reductions in oxygen-demanding substances.

The proposed Permit, page 26, requires a study to determine if the Discharger provides BPTC with regard to the discharge of salinity. Clearly the proposed Permit statement that the discharge is in compliance with the antidegradation policy is premature, since Regional Board staff do not know if BPTC is being provided.

Section 101(a) of the Clean Water Act, the basis for the antidegradation policy, states that the objective of the Act is to “restore and maintain the chemical, biological and physical integrity of the nation’s waters.” Section 303(d)(4) of the Act carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR § 131.12 before taking action to lower water quality. These regulations describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy as well as implementing procedures. (40 CFR § 131.12(a).)

California’s antidegradation policy is composed of both the federal antidegradation policy and the State Board’s Resolution 68-16. (State Water Resources Control Board, Water Quality Order 86-17, p. 20 (1986) (“Order 86-17”); Memorandum from William Attwater, SWRCB to Regional Board Executive Officers, “federal Antidegradation Policy,” pp. 2, 18 (Oct. 7, 1987) (“State Antidegradation Guidance”).) As part of the state policy for water quality control, the antidegradation policy is binding on all of the Regional Boards. (Water Quality Order 86-17, pp. 17-18.) 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 USEPA Region IX, “Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12” (3 June 1987) (“Region IX Guidance”), as well as 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, and Region IX Guidance, p. 1.) Application of the policy does not depend on whether the action will actually impair beneficial uses. (State Antidegradation Guidance, p. 6. Actions that trigger use of the antidegradation policy include issuance, re-issuance, and modification of NPDES and Section 404 permits and waste discharge requirements, waiver of waste discharge requirements, issuance of variances, relocation of discharges, issuance of cleanup and abatement orders, increases in discharges due to industrial production and/or municipal growth and/or other sources, exceptions from otherwise applicable water quality objectives, etc. (State Antidegradation Guidance, pp. 7-10, Region IX Guidance, pp. 2-3.) Both the state and federal policies apply to point and nonpoint source pollution. (State Antidegradation Guidance p. 6, Region IX Guidance, p. 4.)

The federal antidegradation regulations delineate three tiers of protection for waterbodies. Tier 1, described in 40 CFR § 131.12(a)(1), is the floor for protection of all waters of the United States. (48 Fed. Reg. 51400, 51403 (8 Nov. 1983); Region IX Guidance, pp. 1-2; APU 90-004, pp. 11-12.) It states that “[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.” Uses are “existing” if they were actually attained in the water body on or after November 28, 1975, or if the water quality is suitable to allow the use to occur, regardless of whether the use was actually designated. (40 CFR § 131.3(e).) Tier 1 protections apply even to those waters already impacted by pollution and identified as impaired. In other words, already impaired waters cannot be further impaired.

Tier 2 waters are provided additional protections against unnecessary degradation in places where the levels of water quality are better than necessary to support existing uses. Tier 2 protections strictly prohibit degradation unless the state finds that a degrading activity is: 1) necessary to accommodate important economic or social development in the area, 2) water quality is adequate to protect and maintain existing beneficial uses, and 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved. (40 CFR § 131.12(a)(2).) Cost savings to a discharger alone, absent a demonstration by the project proponent as to how these savings are “necessary to accommodate important economic or social development in the area,” are not adequate justification for allowing reductions in water quality. (Water Quality Order 86-17, p. 22; State Antidegradation Guidance, p. 13.) If the waterbody passes this test and the degradation is allowed, degradation must not impair existing uses of the waterbody. (48 Fed. Reg. at 51403). Virtually all waterbodies in California may be Tier 2 waters since the state, like most states, applies the antidegradation policy on a parameter-by-parameter basis, rather than on a waterbody basis. (APU 90-004, p. 4). Consequently, a request to discharge a particular chemical to a river, whose level of that chemical was better than the state standards, would trigger a Tier 2 antidegradation review even if the river was already impaired by other chemicals.

Tier 3 of the federal antidegradation policy states “[w]here high quality waters constitute an outstanding national resource, such as waters of national and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water shall be maintained and protected. (40 CFR § 131.12(a)(3).) These Outstanding National Resource Waters (ONRW) are designated either because of their high quality or because they are important for another reason. (48 Fed. Reg. At 51403; State Antidegradation Guidance, p. 15). No degradation of water quality is allowed in these waters other than short-term, temporary changes. (Id.) Accordingly, no new or increased discharges are allowed in either ONRW or tributaries to ONRW that would result in lower water quality in the ONRW. (EPA Handbook, p. 4-10; State Antidegradation Guidance, p. 15.) Existing antidegradation policy already dictates that if a waterbody “should be” an ONRW, or “if it can be argued that the waterbody in question deserves the same treatment {as a formally designated ONRW},” then it must be treated as such, regardless of formal designation. (State Antidegradation Guidance, pp. 15-16; APU 90-004, p. 4.) Thus the Regional Board is required in each antidegradation analysis to consider whether the waterbody at issue should be treated as an ONRW. It should be reiterated that waters cannot be excluded from consideration as an ONRW simply because they are already “impaired” by some constituents. By definition, waters may be “outstanding” not only because of pristine quality, but also because of recreational significance, ecological significance or other reasons. (40 CFR §131.12(a)(3).) Waters need not be “high quality” for every parameter to be an ONRW. (APU 90-004, p. 4) For example, Lake Tahoe is on the 303(d) list due to sediments/siltation and nutrients, and Mono Lake is listed for salinity/TDC/chlorides but both are listed as ONRW.

The State Board’s APU 90-004 specifies guidance to the Regional Boards for implementing the state and federal antidegradation policies and guidance. The guidance establishes a two-tiered process for addressing these policies and sets forth two levels of

analysis: a simple analysis and a complete analysis. A simple analysis may be employed where a Regional Board determines that: 1) a reduction in water quality will be spatially localized or limited with respect to the waterbody, e.g. confined to the mixing zone; 2) a reduction in water quality is temporally limited; 3) a proposed action will produce minor effects which will not result in a significant reduction of water quality; and 4) a proposed activity has been approved in a General Plan and has been adequately subjected to the environmental and economic analysis required in an EIR. A complete antidegradation analysis is required if discharges would result in: 1) a substantial increase in mass emissions of a constituent; or 2) significant mortality, growth impairment, or reproductive impairment of resident species. Regional Boards are advised to apply stricter scrutiny to non-threshold constituents, i.e., carcinogens and other constituents that are deemed to present a risk of source magnitude at all non-zero concentrations. If a Regional Board cannot find that the above determinations can be reached, a complete analysis is required.

Even a minimal antidegradation analysis would require an examination of: 1) existing applicable water quality standards; 2) ambient conditions in receiving waters compared to standards; 3) incremental changes in constituent loading, both concentration and mass; 4) treatability; 5) best practicable treatment and control (BPTC); 6) comparison of the proposed increased loadings relative to other sources; 7) an assessment of the significance of changes in ambient water quality and 8) whether the waterbody was a ONRW. A minimal antidegradation analysis must also analyze whether: 1) such degradation is consistent with the maximum benefit to the people of the state; 2) the activity is necessary to accommodate important economic or social development in the area; 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved; and 4) resulting water quality is adequate to protect and maintain existing beneficial uses. A BPTC technology analysis must be done on an individual constituent basis; while tertiary treatment may provide BPTC for pathogens, dissolved metals may simply pass through.

Any antidegradation analysis must comport with implementation requirements in State Board Water Quality Order 86-17, State Antidegradation Guidance, APU 90-004 and Region IX Guidance. The conclusory, unsupported, undocumented statements in the Permit are no substitute for a defensible antidegradation analysis.

The antidegradation review process is especially important in the context of waters protected by Tier 2. See EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook, 2nd ed. Chapter 4 (2nd ed. Aug. 1994). Whenever a person proposes an activity that may degrade a water protected by Tier 2, the antidegradation regulation requires a state to: (1) determine whether the degradation is “necessary to accommodate important economic or social development in the area in which the waters are located”; (2) consider less-degrading alternatives; (3) ensure that the best available pollution control measures are used to limit degradation; and (4) guarantee that, if water quality is lowered, existing uses will be fully protected. 40 CFR § 131.12(a)(2); EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook,

2nd ed. 4-1, 4-7 (2nd ed. Aug. 1994). These activity-specific determinations necessarily require that each activity be considered individually.

For example, the APU 90-004 states:

“Factors that should be considered when determining whether the discharge is necessary to accommodate social or economic development and is consistent with maximum public benefit include: a) past, present, and probably beneficial uses of the water, b) economic and social costs, tangible and intangible, of the proposed discharge compared to benefits. The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment. The ability to pay depends on the facility’s source of funds. In addition to demonstrating a financial impact on the publicly – or privately – owned facility, the analysis must show a significant adverse impact on the community. The long-term and short-term socioeconomic impacts of maintaining existing water quality must be considered. Examples of social and economic parameters that could be affected are employment, housing, community services, income, tax revenues and land value. To accurately assess the impact of the proposed project, the projected baseline socioeconomic profile of the affected community without the project should be compared to the projected profile with the project...EPA’s Water Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts”

There is nothing resembling an economic or socioeconomic analysis in the Permit. There are viable alternatives that have never been analyzed. The Discharger could continue with land disposal or install micro-filtration treatment equipment. The evaluation contains no comparative costs. As a rule-of-thumb, USEPA recommends that the cost of compliance should not be considered excessive until it consumes more than 2% of disposable household income in the region. This threshold is meant to suggest more of a floor than a ceiling when evaluating economic impact. In the Water Quality Standards Handbook, USEPA interprets the phrase “necessary to accommodate important economic or social development” with the phrase “substantial and widespread economic and social impact.” The antidegradation analysis must discuss the relative economic burden as an aggregate impact across the entire region using macroeconomics. It is unfortunate that the agency charged with implementing the Clean Water Act has apparently decided it is more important to protect the polluter than the environment.

There is nothing in the proposed Permit resembling an alternatives analysis evaluating less damaging and degrading alternatives. Unfortunately, the Permit fails to evaluate and discuss why there is no alternative other than discharging to surface waters. Other communities have successfully disposed of wastes without discharging additional pollutants to degraded rivers. The discharger certainly has the option of purchasing

offsets. A proper alternatives analysis would cost out various alternatives and compare each of the alternatives' impacts on beneficial uses.

There is nothing resembling an analysis buttressing the unsupported claim that BPTC is required. An increasing number of wastewater treatment plants around the country and state are employing reverse-osmosis (RO), or even RO-plus. Clearly, micro-filtration can be considered BPTC for wastewater discharges of impairing pollutants into critically sensitive ecological areas containing listed species that are already suffering serious degradation. If this is not the case, the antidegradation analysis must explicitly detail how and why run-of-the-mill tertiary system that facilitate increased mass loadings of impairing constituents can be considered BPTC.

There is nothing in the proposed Permit resembling an analysis that ensures that existing beneficial uses are protected, to the contrary there are numerous instances where beneficial uses are not protected as cited above. The proposed Permit does not analyze the incremental and cumulative impact of increased loading of non-impairing pollutants on beneficial uses. In fact, there is no information or discussion on the composition and health of the identified beneficial uses. Any reasonably adequate antidegradation analysis must discuss the affected beneficial uses (i.e., numbers and health of the aquatic ecosystem; extent, composition and viability of agricultural production; people depending upon these waters for water supply; extent of recreational activity; etc.) and the probable effect the discharge will have on these uses.

Alternatively, Tier 1 requires that existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. By definition, any increase in the discharge of impairing pollutants to impaired waterways unreasonably degrades beneficial uses and exceeds applicable water quality standards. Prohibition of additional mass loading of impairing pollutants is a necessary stabilization precursor to any successful effort in bringing a waterbody into compliance.

The State Board has clearly articulated its position on increased mass loading of impairing pollutants. In Order WQ 90-05, the Board directed the San Francisco Regional Board on the appropriate method for establishing mass-based limits that comply with state and federal antidegradation policies. That 1990 order stated "[I]n order to comply with the federal antidegradation policy, the mass loading limits should also be revised, based on mean loading, concurrently with the adoption of revised effluent limits. The [mass] limits should be calculated by multiplying the [previous year's] annual mean effluent concentration by the [four previous year's] annual average flow. (Order WQ 90-05, p. 78). USEPA points out, in its 12 November 1999 objection letter to the San Francisco Regional Board concerning Tosco's Avon refinery, that '[a]ny increase in loading of a pollutant to a water body that is impaired because of that pollutant would presumably degrade water quality in violation of the applicable antidegradation policy.'

NPDES permits must include any more stringent effluent limitation necessary to implement the Regional Board Basin Plan (Water Code 13377). The proposed Permit fails to properly implement the Basin Plan's Antidegradation Policy. The discharge must

be capable of achieving 100% compliance with Effluent and Receiving Water Limitations prior to allowing the discharge to continue. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) and California Water Code, Section 13377, 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.

The proposed Monitoring and Reporting Program must be compliant with Federal Regulation 40 CFR 122.41 (j)(1) which states that: “Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity” and 40 CFR 122.44(i)(1) which requires that monitoring must be sufficient “To assure compliance with permit limitations...”.

- The Monitoring and Reporting Program for Groundwater Monitoring requires “static water depth” be measured as “feet below ground surface”. This should be modified to required the depth be measured to the nearest 100th of a foot. Failing to measure to the nearest 100th of a foot will prevent accurate assessment of the groundwater gradient and direction of flow.
- The Monitoring and Reporting Program for Groundwater Monitoring fails to include monitoring requirements for non-priority pollutants with Basin Plan objectives. The Basin Plan includes the Chemical Constituents objective, which describes additional constituents of concern. The proposed Monitoring and Reporting Program should be revised to include monitoring requirements and characterization of these additional constituents.
- Proposed ammonia sampling in groundwater should be replaced with nitrate. Ammonia converts to nitrate in the anaerobic zone of the pond and as it migrates to groundwater.
- Effluent ammonia sampling prescribed at a monthly rate is insufficient to reflect the rapid changes that can occur to the nitrification process, a minimum of daily sampling should be required to determine whether the WWTP is nitrifying the wastewater or discharging toxic levels of ammonia.
- As detailed above, Effluent Limitations for nitrate and nitrite are required. Monitoring of the effluent for these constituents is also required. The proposed Monitoring and Reporting Program should be revised to include weekly monitoring of the effluent for nitrate (as N) and nitrite (as N).
- As detailed above, Effluent Limitations for turbidity and dissolved oxygen (both concentration and percent saturation) should be included in the proposed permit. In addition, to determine whether the Discharger is the cause of non-compliance with Receiving Water Limitations for turbidity and dissolved oxygen, these constituents must be monitored in the effluent.

- pH is shown to be metered, however the required frequency is weekly. If a meter is present it should be operated continuously since pH shifts can be observed hourly in pond treatment systems. Chemical usage for chlorination and dechlorination can also result in rapid fluctuation of effluent pH.
- EC is only required to be sampled monthly. EC is the subject of a special study in the proposed Permit. EC sampling is very inexpensive and easy. The frequency should be required daily or continuously.
- The priority pollutant sampling is required to be a “Grab” sample which is inappropriate for priority pollutant metals which should be 24-hour composite samples.
- The last sentence in Footnote 8 to Table E-3 (effluent monitoring requirements) states: “Upon approval of the Executive Officer, after two bi-monthly sampling events, some constituents may be eliminated from further analyses if not detected.” This is inappropriate. According to the TSD, the percentile of the concentration range represented by the highest concentration in the available data can be calculated as being equal to $(1 - \text{confidence level})^{1/n}$. For the default confidence level of 99%, the highest concentration out of two data points represents only the 10th percentile of the actual concentration range. The proposed permit should be revised to remove the last sentence in Footnote 8 to Table E-3 of the proposed permit.
- The proposed Monitoring and Reporting Program fails to include effluent monitoring requirements for non-priority pollutants in the discharge. The Basin Plan includes the Chemical Constituents and Pesticides objectives, which describe additional constituents of concern (e.g., iron, manganese, turbidity, thiobencarb). The proposed Monitoring and Reporting Program should be revised to include monitoring requirements and characterization of these additional constituents.
- To determine compliance with proposed Receiving Water Limitation V.A.5.a, the Receiving Water Monitoring requirements in Table E-6 in the proposed permit must be revised to include dissolved oxygen percent saturation in the receiving stream.
- The pond monitoring fails to require DO sampling to determine if the ponds are a source of odors. The pond monitoring also fails to require observation of the levee conditions.

The monitoring as currently proposed is not sufficient to determine whether the WWTP complies with permit requirements and should be amended as proposed above in compliance with CFR 122.44(i)(1).

The Basin Plan, Implementation, Page IV-24-00, prohibits the discharge of wastewater to low flow streams as a permanent means of disposal and requires the

evaluation of land disposal alternatives, Implementation, Page IV-15.00, Policies and Plans (2) Wastewater Reuse Policy

The Basin Plan, Implementation, Page IV-24-00, Regional Water Board prohibitions, states that: “Water bodies for which the Regional Water Board has held that the direct discharge of waste is inappropriate as a permanent disposal method include sloughs and streams with intermittent flow or limited dilution capacity.” The proposed Permit characterizes the receiving stream as low flow, or ephemeral (i.e., intermittent), with no available dilution. The proposed Permit does not discuss any efforts to eliminate the discharge to surface water and compliance with the Basin Plan Prohibition. Federal Regulation 40 CFR 122.4 states that no permit shall be issued for any discharge when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA and are inconsistent with a plan or plan amendment. The permit must be amended to require that the Discharger develop a workplan to eliminate the wastewater discharge to surface water in accordance with the Basin Plan.

This discharge can, in accordance with the cited Basin Plan Prohibition, reasonably be eliminated in accordance with the Basin Plan, Implementation, Page IV-15.00, Policies and Plans (2) Wastewater Reuse Policy, the Discharger was required as a part of the Report of Waste Discharge to submit a land disposal and reuse analysis – which does not appear to have been submitted since it is not discussed in the proposed Permit. The permit must be amended to require that the Discharger develop a workplan to eliminate the wastewater discharge to surface water in accordance with the Basin Plan.

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