

2. THE SPECIFIC ACTION OR INACTION OF THE REGIONAL BOARD WHICH THE STATE BOARD IS REQUESTED TO REVIEW AND A COPY OF ANY ORDER OR RESOLUTION OF THE REGIONAL BOARD WHICH IS REFERRED TO IN THE PETITION:

Petitioner seeks review of Order No. R5-2007-0113, Waste Discharge Requirements (NPDES No. CA0079243) for the City of Lodi, White Slough Water Pollution Control Facility. A copy of the adopted Order is attached as Attachment No. 1.

3. THE DATE ON WHICH THE REGIONAL BOARD ACTED OR REFUSED TO ACT OR ON WHICH THE REGIONAL BOARD WAS REQUESTED TO ACT:

14 September 2007

4. A FULL AND COMPLETE STATEMENT OF THE REASONS THE ACTION OR FAILURE TO ACT WAS INAPPROPRIATE OR IMPROPER:

CSPA submitted a detailed comment letter on 17 August 2007. That letter and the following comments set forth in detail the reasons and points and authorities why CSPA believes the Order fails to comport with statutory and regulatory requirements. The specific reasons the adopted Orders are improper are:

- A. **The Report of Waste Discharge was incomplete and the Regional Board was unable to adopt a permit that requires full compliance with the Basin Plan and that fully protects beneficial uses of groundwater and receiving waters as required by Federal Regulation, 40 CFR 122.21(e), (h) and 124.3 (a)(2) which states in part that: “The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits” and California Water Code, Section 13377, which requires that the Regional Board shall issue waste discharge 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.**

The City of Lodi (Discharger) discharges combined treated domestic wastewater, untreated industrial wastewater, sludge supernatant, DAF thickener subnatant and sludge to “groundwater” via land application according to the Permit, opening page 1.

Domestic Wastewater: According to the Permit, page 2, during the months of September through June domestic wastewater is treated to tertiary standards and discharged to surface waters. However, during the summer months, June through September, “wastewater is treated to at least a secondary level, and then pumped to the facility’s 40 acres of unlined storage ponds, and is eventually used to irrigate the Discharger’s agricultural fields.” While the tertiary wastewater quality is described in the reasonable potential analysis, the “at least secondary” domestic wastewater discharged to groundwater via percolation from land application has not been adequately characterized. The priority pollutants analysis of the “tertiary” domestic wastewater is not representative of the “at least secondary” domestic wastewater. The Permit contains Effluent Limitations for the discharge to surface waters for BOD, Total Suspended Solids, Total Coliform, Turbidity, pH, Aluminum, Manganese, Chlorodibromomethane, Dichlorobromomethane, Ammonia, Nitrate, Nitrite and Electrical Conductivity. Table F-5, of the Permit, contains a summary of the reasonable potential analysis

conducted of the surface water tertiary discharge; all of these constituents will be greatly magnified by treating wastewater to an “at least secondary” level and more than 40 of the identified constituents are listed as “inconclusive” in the tertiary wastestream sampling. Groundwater underlying the unlined ponds and irrigation areas is shallow and the soils are fairly permeable silts and sands, as is shown by the record (The Permit cites several groundwater studies conducted by the Discharger which are therefore a part of the record). Pollutants in the wastewater will migrate to groundwater. While groundwater has been shown to be degraded with nitrates and EC, the impacts to groundwater have not been assessed for the “at least secondary” domestic wastewater discharge. The discharge threatens to degrade the domestic, agricultural and industrial beneficial uses of groundwater. The Permit does not “...ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance” since the quality of the discharge is unknown as are the impacts to groundwater quality. In addition to the above, the Permit, page 28, requires a *Land Discharge Organic Loading Study* be conducted to determine the maximum allowable BOD loading rate for the irrigation areas, confirming that sufficient information was not available to the Regional Board to produce a permit that is fully protective of the beneficial uses and assures full compliance.

Industrial Wastewater: Throughout the Permit (e.g., pages 2, 21, 25) and the Fact Sheet it is stated that industrial wastes are collected via a separate collection system and either stored in unlined ponds or discharged directly to the land disposal fields; that the industrial wastestream has not been characterized; the industrial wastes are not treated; and that an “*Industrial Influent Characterization Study*” is required. Groundwater underlying the unlined ponds and irrigation areas is shallow and the soils are fairly permeable silts and sands, as is shown by the record (The Permit cites 1989, 2000 and 2003 Whitley, Burchett and Assoc and September 2006 WYA groundwater studies conducted by the Discharger which are therefore a part of the record). Pollutants in the wastewater will migrate to groundwater. While groundwater has been shown to be degraded with nitrates and EC, the impacts to groundwater have not been assessed for the industrial wastewater discharge. The discharge threatens to degrade the domestic, agricultural and industrial beneficial uses of groundwater. The Permit does not “...ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance” since the quality of the discharge is unknown as are the impacts to groundwater quality.

Sludge Discharge: The Discharger has assessed sludge quality as part of the Discharger Self Monitoring Reports, a part of the record. Sludge is discharged to land for disposal. The Discharger has not assessed pollutant migration to groundwater from the sludge discharge for the constituents sampled and found to be present in the sludge. The Permit does not “...ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance” since the impacts to groundwater quality from the sludge discharge have not been assessed.

Groundwater Quality: The Permit requires a *Background Groundwater Assessment Study*, page 21, be conducted to: “characterize background groundwater quality to determine compliance with Basin Plan water quality objectives and the Antidegradation Policy.” Clearly, the Regional Board does not know whether the discharge of wastewater violates Basin Plan water quality objectives and the Antidegradation Policy. Therefore the Permit cannot “...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”

Flooding and water quality impacts: Federal regulations 40 CFR 503 prohibits the application of biosolids to land that may be flooded or in such a matter that biosolids may enter surface water or wetlands. The western portion of the land application area, see Attachment C-2 west of Interstate Highway 5, is subject to flooding and at such times is hydraulically connected to White Slough and the adjacent wetlands (borrow pits). The Discharger uses flood irrigation to apply the biosolid slurry and industrial waste. This disposal practice leaves biosolid and industrial waste deposited on the surface of the soil where it may be washed away during periods of flooding. A Regional Board May 2006 Inspection Report indicates that “The western disposal fields are within the 100-year floodplain. The 100- year flood elevation is estimated to be at 8-foot elevation, which is approximately five feet above the western fields. Undisinfected secondary effluent, biosolids, pond residuals, digester decant water, WAS air thickener subnatant, and untreated industrial flows all go to the disposal fields without flood protection. These fields are not protected by levees and WPCF staff indicated that floods have inundated the fields in the past. Therefore the threat to water quality must be considered.” The Permit has not addressed the water quality impacts related to flooding of the disposal fields; it is assumed that this information was not included in the Report of Waste Discharge.

The Permit was written absent significant and critical information. The lack of information is detailed throughout the Permit and the Fact Sheet. Absent this information which is required in a Report of Waste Discharge; the Permit cannot “...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” contrary to Federal Regulations and the California Water Code. The Permit must be remanded back to the Regional Board to be amended based on submittal of a complete Report of Waste Discharge.

B. The Permit contains a compliance schedule for aluminum based on “a new interpretation of the Basin Plan” but fails to provide any defensible explanation or definition of the “new interpretation” of the Basin Plan

The Fact Sheet, page F-22, states “The water quality-based effluent limitations for aluminum are based on a new interpretation of the narrative standard for protection of receiving water beneficial uses. Therefore, a compliance schedule for compliance with the aluminum effluent limitations is established in the Order.” In a memorandum, dated 19 July 2002, to NPDES Staff from Kenneth Landau; Mr. Landau states in part that; “The critical factor in use of this “new interpretation” is that the previous Permit contains something that clearly indicates that a reasoned decision was made by the Board to grant mixing zones or not protect certain beneficial uses. This can include standards which are not measured for a considerable distance downstream, effluent limits obviously too large

to be protective, or statements that “the ditch contains no fish”. Just because an existing permit is silent on an issue (for instance nothing was mentioned about drinking water protection), does not mean a “new interpretation” can be considered to occur.” The simple unsupported claim that there is a “new interpretation” of the Basin Plan is insufficient to claim coverage under State Board Order WQ 2001-06 at pp 53-55. The Regional Board has included compliance schedules for aluminum in enforcement orders for several years. The Regional Board must, at a minimum, define the old interpretation of the Basin Plan with respect to aluminum and how has it changed. The permit must be modified to include the details of the new interpretation or the compliance schedule moved to an enforcement order.

C. The Order fails to contain an adequate reasonable potential analysis because it uses incorrect statistical multipliers contrary to Federal Regulations 40 CFR § 122.44(d)(1)(ii).

Federal regulations, 40 CFR § 122.44(d)(1)(ii), state “when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, **the variability of the pollutant or pollutant parameter in the effluent**, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.” Emphasis added.

Attachment D: The reasonable potential analyses for CTR constituents fail to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. For example, a multiplier of 1 was used for CTR constituents instead of the required multiplier factors necessary to properly evaluate reasonable potential. The procedures for computing variability are detailed in Chapter 3, pages 52-55, of USEPA’s *Technical Support Document For Water Quality-based Toxics Control*.

The reasonable potential analyses for CTR constituents are flawed and must be recalculated. The fact that the SIP illegally ignores this fundamental requirement does not exempt the Regional Board from its obligation to consider statistical variability in compliance with federal regulations.

D. The Permit establishes Effluent Limitations for metals based on the hardness of the effluent as opposed to the ambient upstream receiving water hardness as required by Federal Regulations, the California Toxics Rule (CTR, 40 CFR 131.38(c)(4)).

Federal Regulation 40 CFR 131.38(c)(4) states that: “For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/l or less as calcium carbonate, the actual ambient hardness of the surface water shall be used in those equations.” (Emphasis added). The Permit states that the effluent hardness was used to calculate Effluent Limitations for metals.

E. The Permit fails to contain mass-based effluent limits for chlorodibromomethane, dichlorobromomethane, aluminum, and manganese as required by Federal Regulations 40 CFR 122.45(b).

The Permit contains effluent limitations, see Effluent Limitation No. A1a, for Chlorodibromomethane, Dichlorobromomethane, Aluminum, and Manganese which are

expressed in concentration, i.e. ug/L; however, the Order fails to include a mass limitation for the listed pollutants. Federal Regulation, 40 CFR 122.45 (b) requires that in the case of POTWs, permit Effluent Limitations, standards, or prohibitions shall be based on design flow. Concentration is not a basis for design flow. Mass limitations are concentration multiplied by the design flow and therefore meet the regulatory requirement.

The *Water Quality Control Policy for the Enclosed Bays and Estuaries of California, as Adopted by Resolution No. 95-84 on November 16, 1995*, states “Each Regional Board affected by this policy shall set forth for each discharge allowable mass emission rates for each applicable effluent characteristic included in waste discharge requirements.” Chapter IV, General Provisions, p 7.

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. 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.”

For POTWs, priority pollutants, such as metals, have traditionally been reduced by the reduction of solids from the wastestream, incidental to treatment for organic material. Following adoption of the CTR, compliance with priority pollutants is of critical importance and systems will need to begin utilizing loading rates of individual constituents in the WWTP design process. It is highly likely that the principal design parameters for individual priority pollutant removal will be based on mass, making mass based Effluent Limitations critically important to compliance. The inclusion of mass limitations will be of increasing importance to achieving compliance with requirements for individual pollutants.

As systems begin to design to comply with priority pollutants, the design systems for POTWs will be more sensitive to similar restrictions as industrial dischargers currently face where production rates (mass loadings) are critical components of treatment system design and compliance. Currently, Industrial Pretreatment Program local limits are frequently based on mass. Failure to include mass limitations would allow industries to discharge mass loads of individual pollutants during periods of wet weather when a dilute concentration was otherwise observed, upsetting treatment processes, causing effluent limitation processes, sludge disposal issues, or problems in the collection system.

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. The permit must be revised to include mass limitations for the cited pollutants in accordance with Federal Regulations.

F. The Permit fails to contain an Effluent Limitation for bis(2-ethylhexyl)phthalate despite a clear reasonable potential to exceed waste quality standards in violation of Federal Regulations 40 CFR 122.44.

The Discharger obtained fourteen samples from February 2005 through August 2006. Only one sample, collected on 7 September 2005, indicated a bis(2-ethyl-hexyl)phthalate concentration of 11 ug/L. Bis(2-ethylhexyl)phthalate exceeds water quality standards above the CTR Water Quality Standard of 1.8 $\mu\text{g/l}$ and is therefore mandated to be limited in the Permit in accordance with 40 CFR 122.44. The Permit indicates that the Discharger was concerned about the detection limit of the test used. However, the concentration of 11ug/L exceeds the laboratory reporting and method detection level of 1.7 ug/l by a factor of over five. There is no indication that laboratory quality assurance/quality control (QA/QC) procedures were invalid. The data was arbitrarily discarded and ignored.

Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. 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 the preponderance of evidence clearly indicates the potential to cause or contribute to an exceedance of State water quality standards (even though the data may be sparse or absent) a limit MUST be included in the permit."

Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. 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 Discharger subsequent collection of additional samples that were non-detect after the fact does not make the September 2005 sample result invalid. The Permit Fact Sheet states that the sampling data for bis(2-ethylhexyl)phthalate collected in September 2005 is not representative. However, the sample point is being discarded without any supporting documentation from the laboratory QA/QC documents. The draft permit shows a total disregard for scientific methods, specifically sampling and laboratory QA/QC methodologies, in throwing out data points that would lead to a reasonable potential for a pollutant to exceed water quality standards. The draft permit failure to include a valid sample amounts to letting the Discharger "cherry pick" the desired results. 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 to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Failure to include an effluent limitation for bis(2-ethylhexyl)phthalate in the permit violates 40 CFR 122.44 and CWC 13377.

G. The Permit does not contain an effluent limitation for oil and grease in violation of federal regulations 40 CFR 122.44 and California Water Code, Section 13377

Recently, U.S. EPA Director, Ms. Alexis Strauss, informed the Regional Board that NPDES permits for domestic wastewater facilities must contain an effluent limitation for oil and grease. The Order fails to include the necessary oil and grease limitation.

The 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 permit violates 40 CFR 122.44 and CWC 13377.

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 $\mu\text{g/L}$. The reported concentration of oil and grease in the effluent for the draft Order exceeds these values. 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. The Permit must be revised to include an oil and grease limitation.

H. The 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 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 Permit contains a discharge limitation that allows 30% mortality (70% survival) of fish species in any given toxicity test, see Effluent Limitation

No. A1c. It is well documented and known that Delta fish populations have crashed and the Delta smelt faces and other endangered species face extinction.

The Delta including Dredger Cut is 303d listed for unknown toxicity and a TMDL has not been completed. Therefore the Permit increase in effluent discharge rate at an authorized 30% mortality rate will only further exacerbate the impairment.

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

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

I. The Permit does not contain an effluent limitation for chronic toxicity and therefore does not comply with federal regulations, at 40 CFR 122.44 (d)(1)(i) and the SIP

The file record shows that for the months of December 2005, January and February 2006 the three species chronic toxicity monitoring data have indicated reproduction toxicity in *Ceriodaphnia dubia* at TUC = 16, 4, and 4 respectively. Additionally, the February 2006 toxicity results for *Ceriodaphnia dubia* showed a survival TUC = 2. The previous Order, Provision H 10 requires the Discharger to initiate the 20 September 2000 TRE workplan within 15 days if there is consistent exceedance of the chronic toxicity monitoring trigger levels. The Discharger did not identify these exceedances in its normal monitoring report, nor did it identify that the WPCF was initiating accelerated monitoring or a TRE when consistent chronic toxicity monitoring exceedances occurred. The monitoring data indicates that discharge has chronic toxicity and effluent limitation is required. The Fact Sheet, page F-47, state "Based on whole effluent chronic toxicity testing performed by the Discharger from February 2005, through October 2006, the discharge has reasonable potential to cause or contribute to an to an in-stream excursion above of the Basin Plan's narrative toxicity objective."

The Permit states that "Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions" and therefore, the Permit does not contain a numeric chronic toxicity effluent limitation.

The Permit Finding regarding the State Implementation Policy states that: "On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13,

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

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

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

J. The Permit allows for land disposal of sludge, untreated industrial wastes and domestic wastewater that fails to comply with CCR Title 27.

For the past five, ten, perhaps fifteen years the Regional Board has allowed the City of Lodi to lead the discussion regarding groundwater quality and degradation. The discussion, as it is in this Order, has been that there are numerous sources of EC and nitrate pollution surrounding the treatment and disposal areas and natural background levels have not been sufficiently documented to determine the individual impacts from the City’s wastewater disposal practices. The Permit cites 1989, 2000 and 2003 Whitley, Burchett and Assoc and September 2006 WYA groundwater studies conducted by the Discharger, which are therefore a part of the record. These reports document fairly permeable sand and silt soil and shallow groundwater underlying the unlined ponds and land disposal areas. The groundwater discussion has not evolved far beyond the discussion of EC and nitrate and has not been focused on whether the City’s discharge has caused or contributed to pollution or degradation for these and for the numerous other pollutants that are contained in the domestic, sludge and industrial wastestreams. The Permit allows another several years for the City to attempt to define background water

quality for nitrate and EC. Other than a standard Permit Finding that domestic wastewater discharges are exempt; the Regional Board has not addressed the untreated industrial waste and sludge discharges with regard to the regulatory requirements of CCR Title 27. The Regional Board has also not assessed the applicability of the exemptions for domestic wastewater for this discharge. The discussion should rightly be focused on underlying permeable soils, shallow groundwater, no agronomic rates for pollutants other than nutrients and limited organic matter, exceedance of water quality objectives, degradation of groundwater, best practicable treatment and the regulatory requirements of Title 27. The regulatory requirements of Title 27 have been ignored in the Permit with the exception of a single canned Finding citing an exemption for the discharge of domestic wastewater.

Sludge Disposal: The permit, page 2, indicates “Biosolids are treated by anaerobic digestion and stored in the Facility’s lined sludge stabilization pond. During the summer months, this biosolid slurry is mixed with the storage ponds wastewater and the industrial untreated-wastewater stream, and applied through Discharge Point 003 (see table on cover page) by flood irrigation to The Agricultural Fields.” The solids content of the sludge is between approximately 2 and 4 percent, not meeting the requirements to be considered “dewatered”. According to a State Board report, sludge was sampled in March 2007 to contain, in part, copper at 315 mg/kg, zinc at 769 mg/kg, phosphorus at 30,770 mg/kg, potassium at 11,540 mg/kg, ammonia at 34,620 mg/kg, TKN at 92,310 mg/kg, organic nitrogen at 57,690 mg/kg and fecal coliform organisms at 1,692,310 MPN/g. The sludge quality is well above applicable water quality objectives of 2.2 MPN/100 ml for bacteria, the primary MCL for drinking water chemical constituents for nitrate and above toxicity standards for metals.

Section 20090 of CCR Division 2, Title 27 (Title 27) exempts discharges of domestic sewage that are regulated by WDRs, which are consistent with applicable water quality objectives, provided that residual sludges or solid waste be discharged only in accordance with the provisions of Title 27. The discharge of sludge or solids from domestic WWTPs must comply with the requirements of Title 27. Title 27, Table 2.1, requires undewatered sludge be fully contained in a surface impoundment with double liners; however natural features capable of containing the waste may satisfy the primary containment requirements. This same section requires that dewatered sludge be discharged at a landfill protective of the beneficial uses of groundwater.

The soils underlying the storage and disposal areas are sand and silt which will allow water and pollutants to migrate to groundwater (percolation). The groundwater elevation below ground surface is shallow. The beneficial uses of groundwater are domestic, agricultural and industrial. The pollutants, metals, nutrients and pathogens, sampled in the “undewatered” sludge have been detected in concentrations that could migrate to groundwater at concentrations that cause degradation and/or pollution. The natural features underlying the sludge storage and disposal areas are not capable of containing the waste and are not protective of the beneficial uses of groundwater.

Dewatering sludge with transport off-site for proper disposal is routinely and commonly used at WWTPs and could be considered best practicable treatment and control (BPTC) of the discharge. The current method of sludge disposal must comply with the requirements of CCR Title 27. The permit must be remanded back to the Regional Board to require that the Discharger comply with Title 27 for sludge disposal.

Industrial Waste Disposal: Industrial wastes are discharged to a separate collection system from domestic wastewater. The Permit, page 2, identifies that: “The industrial wastewater does not receive treatment; instead, during the summer months, the

untreated industrial wastewater, which is derived of approximately 92% food processing waste from Pacific Coast Producers cannery, 7% from metal finishers, and 1% winery waste, is applied directly to the Agricultural Fields. During the remainder of the year, when industrial flows are significantly less and primarily comprised of the metals finishers' and other industries' wastewater, the industrial wastewater is also stored in the Facility's 40 acre unlined ponds."

The industrial waste is collected, untreated, stored and with the exception of dilution from treated domestic wastewater, disposed separate from the domestic wastewater. The industrial waste is not exempt from Title 27 requirements.

The cannery wastewater has been documented to have elevated concentrations of nitrogen and EC above water quality objectives. The discussion regarding the industrial discharge has been principally limited to Pacific Coast Producers and the issues of EC and nitrate. There has been little discussion of plastics extrusion and injection molding industries, metal finishers, rubber product industries and wineries. The total industrial wastestream has not been characterized for pollutants of concern. Throughout the Permit (e.g., pages 2, 21, 25) and the Fact Sheet it is stated that industrial wastes are collected via a separate collection system and either stored in unlined ponds or discharged directly to the land disposal fields; that the industrial wastestream has not been characterized; the industrial wastes are not treated; and that an "*Industrial Influent Characterization Study*" is required. There has been little discussion of the industrial waste discharges with the minimal exception of the cannery wastewater. This is likely due to the fact that most of the industrial waste pollutants will have no potential whatever for agronomic reuse; there are no agronomic rates for salt, heavy metals, plastic constituents or volatile/semi-volatile constituents. Groundwater underlying the unlined ponds and irrigation areas is shallow and the soils are fairly permeable silts and sands, as is shown by the record (The Permit cites 1989, 2000 and 2003 Whitley, Burchett and Assoc and September 2006 WYA groundwater studies conducted by the Discharger which are therefore a part of the record). Pollutants in the wastewater at this site will migrate to groundwater with some minor, unquantified, exceptions for plant uptake of nutrients and organic matter. While groundwater has been shown to be degraded with nitrates and EC, the impacts to groundwater have not been assessed for the industrial wastewater discharge. The discharge has degraded and threatens to continue to degrade the domestic, agricultural and industrial beneficial uses of groundwater.

At a minimum the uncharacterized industrial discharges have been documented to contain concentrations of EC and nitrate that have contributed to degraded groundwater quality and exceedances of water quality objectives', thereby degrading the drinking water, industrial and agricultural supply beneficial uses of groundwater. The underlying soils have been documented to be permeable and the groundwater elevations shallow. The industrial discharges, are not domestic wastewater, are not in compliance with the Basin Plan, and are not therefore exempt from the requirements of Title 27 and must be regulated at least as designated waste as defined in the CWC.

Domestic Wastewater Disposal: Title 27, Section 20090, exempts domestic sewage discharges and associated treatment and storage units from the requirements of the regulations where WDRs have been issued or waived, and which are consistent with applicable water quality objectives. The Permit simply contains a canned reference to the exemption; there is no analysis of the consistency with water quality objectives. The tertiary treated wastestream has been sampled to contain BOD, Total Suspended Solids, Total Coliform, Turbidity, pH, Aluminum, Manganese, Chlorodibromomethane, Dichlorobromomethane, Ammonia, Nitrate, Nitrite and Electrical Conductivity at concentrations that warrant Effluent Limitations be established. However, the Permit

contains a singular Finding that during the summer months, June through September; “wastewater is treated to at least a secondary level, and then pumped to the facility’s 40 acres of unlined storage ponds, and is eventually used to irrigate the Discharger’s agricultural fields.” While the tertiary wastewater quality is described in the reasonable potential analysis, the “at least secondary” domestic wastewater discharged to groundwater via percolation from land application has not been characterized. The priority pollutants analysis of the “tertiary” domestic wastewater is not representative of the “at least secondary” domestic wastewater. If the tertiary wastewater has a reasonable potential to exceed water quality objectives for BOD, Total Suspended Solids, Total Coliform, Turbidity, pH, Aluminum, Manganese, Chlorodibromomethane, Dichlorobromomethane, Ammonia, Nitrate, Nitrite and Electrical Conductivity; the secondary wastewater will be of significantly lower quality; presenting a threat to exceed water quality objectives. The documented threat from the tertiary wastewater is based on a reasonable potential analysis for a discharge to surface water. However, groundwater quality objectives for nitrate, nitrite and EC will be the same for groundwater as surface waters. The groundwater coliform objective at 2.2 MPN/100 ml is more restrictive than for surface water. Again however, the surface water limitations are based on tertiary treatment; whereas the Permit allows lower quality secondary wastewater to be discharged to groundwater. Additional pollutants will present a reasonable potential to exceed water quality objectives in the secondary wastestream.

Since the tertiary wastewater presents a reasonable potential to exceed water quality objectives for coliform organisms, nitrate, nitrite and EC, that same potential exists for the discharge to groundwater. It is also reasonable to conclude that additional pollutants in the lesser treated secondary wastewater will present additional pollutants that pose a threat to groundwater quality objectives. Therefore, the exemption from Title 27 is not applicable to the discharge of domestic wastewater to land for disposal at this facility.

K. The Order fails to contain an adequate antidegradation analysis and violates both state and federal antidegradation requirements.

The Permit allows a significant increase in flow and therefore in the mass load of constituents discharged. The Permit fails to contain limitations based on design flow, contrary to Federal Regulations, and therefore the increased mass of pollutants discharged is not properly limited and may not be protective of the beneficial uses of the receiving stream; a proper antidegradation analysis would clearly address the impacts of the discharge of an increased mass of pollutants. The Permit requires an assessment of the constituents that are present in the industrial wastewater discharge and cannot assess compliance with the Antidegradation Policy. The Permit allows for the discharge of sludge to land contrary to Title 27 and an assessment of the full impacts to groundwater has not been undertaken and therefore cannot assure compliance with the Antidegradation Policy. The Permit Groundwater Limitations allow for the degradation of groundwater quality without providing BPTC for the disposal of untreated industrial waste, sludge, and secondary, rather than available tertiary, domestic wastewater. The Permit, page 27, requires a BPTC study based on the outcome of additional groundwater studies; indicating the Regional Board does not currently know if BPTC is being provided as required by the Antidegradation Policy. The Permit, page 28, requires a *Land Discharge Organic Loading Study* indicating the Regional Board does not know whether the Permit limitations allow for exceedance of water quality objectives and are adequate to protect groundwater quality contrary to the Antidegradation Policy. The Permit allows for a discharge of secondary domestic wastewater to land for disposal without an assessment of the effluent quality and possible groundwater degradation and therefore cannot assure compliance with the Antidegradation Policy. The Permit requires

a *Background Groundwater Assessment Study* be conducted to: “characterize background groundwater quality to determine compliance with Basin Plan water quality objectives and the Antidegradation Policy”; clearly, the Regional Board does not know whether the discharge of wastewater violates Basin Plan water quality objectives and the Antidegradation Policy. The Permit, page F-65, in justifying Reclamation Monitoring states that the monitoring reports are necessary to assess groundwater degradation to determine BPTC and derive limitations that are consistent with the Basin Plan; clearly this information would have been known from an adequate Antidegradation Policy assessment. Federal regulations 40 CFR 503 prohibits the application of biosolids to land that may be flooded or in such a matter that biosolids may enter surface water or wetlands; the Regional Board does not know the impacts of the flooding on surface waters or groundwater and therefore whether these conditions comply with the Antidegradation Policy. The discharge of untreated industrial waste is not BPTC as required by the Antidegradation Policy. The discharge of sludge to land allowing groundwater degradation is not BPTC as required by the Antidegradation Policy. Turning off the readily available filtration process and allowing secondary rather than tertiary domestic wastewater to be discharged to land allowing degradation of groundwater quality is not BPTC as required by the Antidegradation Policy.

The antidegradation analysis in the Permit is seriously deficient. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist largely of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis.

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. Given the importance of the Delta as a fishery, fish migration corridor and fact that it is the hub of California’s water distribution system, a fair argument can be made that the Delta is, in fact, an 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 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. Considering the intrinsic value of the Delta to the entire state and the potential effects upon those who rely and use Delta waters, it must also evaluate the economic and social impacts to water supply, recreation, fisheries, etc. from the Discharger’s degradation of water quality in the Delta. Nor has the case been made that there is no alternative for necessary housing other than placing it where its wastewater must discharge directly into sensitive but seriously degraded waters. 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 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 Permit resembling an analysis that ensures that existing beneficial uses are protected. While the Permit identifies the constituents that are included on the 303(d) list as impairing receiving waters, it fails to discuss how and to what degree the identified beneficial uses will be additionally impacted by the discharge. Nor does the Permit analyze the incremental and cumulative impact of increased loading of non-impairing pollutants on beneficial uses. In fact, there is almost 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 an impaired 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.’”

Any project that allows a community to artificially minimize waste management costs by externalizing the disposal of wastes to already degraded waterways that are part of the common property right of all 36 million Californians has not met the test of “maximum benefit of the people of the State” and cannot be consistent with state and federal antidegradation policies. The proposed increase in pollutant mass loading will inescapably and detrimentally affect aquatic life, contribute to violations of water quality standards and increase the risks and costs to the millions of people who depend upon the Delta for their drinking/irrigation/recreation water. Any increase housing and/or

economic expansion facilitated by the Permit will be at the expense of other communities that will incur the consequences of larger load reductions when TMDL load allocations are instituted.

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

5. THE MANNER IN WHICH THE PETITIONERS ARE AGGRIEVED.

CSPA is a non-profit, environmental organization that has a direct interest in reducing pollution to the waters of the Central Valley. CSPA's members benefit directly from the waters in the form of recreational hiking, photography, fishing, swimming, hunting, bird watching, boating, consumption of drinking water and scientific investigation. Additionally, these waters are an important resource for recreational and commercial fisheries.

Central Valley waterways also provide significant wildlife values important to the mission and purpose of the Petitioners. This wildlife value includes critical nesting and feeding grounds for resident water birds, essential habitat for endangered species and other plants and animals, nursery areas for fish and shellfish and their aquatic food organisms, and numerous city and county parks and open space areas.

CSPA's members reside in communities whose economic prosperity depends, in part, upon the quality of water. CSPA has actively promoted the protection of fisheries and water quality 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 declining aquatic resources.

CSPA member's health, interests and pocketbooks are directly harmed by the failure of the Regional Board to develop an effective and legally defensible program addressing discharges to waters of the state and nation.

6. THE SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH PETITIONER REQUESTS.

Petitioners seek an Order by the State Board to:

- A. Vacate Order No. R5-2007-0113 (NPDES No. CA0079243) and remand to the Regional Board with instructions prepare and circulate a new tentative order that comports with regulatory requirements.
- B. Alternatively; prepare, circulate and issue a new order that is protective of identified beneficial uses and comports with regulatory requirements.

7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION.

CSPA's arguments and points of authority are adequately detailed in the above comments and our 17 August 2007 comment letter. Should the State Board have additional questions regarding the issues raised in this petition, CSPA will provide additional briefing on any such questions.

The petitioners believe that an evidentiary hearing before the State Board will not be necessary to resolve the issues raised in this petition. However, CSPA welcomes the opportunity to present oral argument and respond to any questions the State Board may have regarding this petition.

8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE APPROPRIATE REGIONAL BOARD AND TO THE DISCHARGERS, IF NOT THE PETITIONER.

A true and correct copy of this petition, without attachment, was sent electronically and by First Class Mail to Ms. Pamela Creedon, Executive Officer, Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, CA 95670-6114.

A true and correct copy of this petition, without attachment, was sent to the Discharger in care of: Mr. Richard C. Prima, Jr., Public Works Director, Public Works Department, City Hall, 221 West Pine Street, P.O. Box 3006, Lodi, California 95241.

9. A STATEMENT THAT THE ISSUES RAISED IN THE PETITION WERE PRESENTED TO THE REGIONAL BOARD BEFORE THE REGIONAL BOARD ACTED, OR AN EXPLANATION OF WHY THE PETITIONER COULD NOT RAISE THOSE OBJECTIONS BEFORE THE REGIONAL BOARD.

CSPA presented the issues addressed in this petition to the Regional Board in a 17 August 2007 detailed comment letter that was accepted into the record.

If you have any questions regarding this petition, please contact Bill Jennings at (209) 464-5067 or Michael Jackson at (530) 283-1007.

Dated: 14 October 2007

Respectfully submitted,



Bill Jennings, Executive Director
California Sportfishing Protection Alliance

Attachment No. 1: Order No. R5-2007-0113