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

17 August 2007

Dr. Karl Longley, Chairman
Ms. Pamela Creedon, Executive Officer
Mr. Kenneth Landau, Assistant Executive Officer
Mr. Dave Carlson, Env. Program Manager, NPDES
Mr. James Marshall, Sr. WRCE
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6144

VIA: Electronic Submission
Hardcopy if Requested

RE: Renewal of Waste Discharge Requirements (NPDES No. CA0079243) for City of Lodi White Slough Water Pollution Control Facility, San Joaquin County

Dear Messrs. Longley, Landau, Carlson, Marshall and Ms. Creedon:

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 Lodi White Slough Water Pollution Control Facility (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 San Joaquin County.

The proposed Order allows the Discharger to significantly increase the mass loading of pollutants to a severely degraded estuary without first preparing a defensible antidegradation analysis that explores reasonable alternatives. It condones the direct application of untreated industrial wastes to land that have already polluted groundwater at the site. It ignores many of the most basic regulatory requirements of the federal Clean Water Act and Porter-Cologne. As such it is fundamentally nonprotective of both surface and ground water quality.

Our concerns are that the proposed Order:

1. Fails to protect the Delta; a seriously degraded waterway requiring the highest regulatory protection
2. Is based upon an incomplete and inadequate Report of Waste Discharge
3. Fails to hold the Discharger accountable for failing to submit valid data
4. Improperly allows the discharge of wastewater to a low flow backwater slough as a permanent means of disposal
5. Contains a compliance schedule for aluminum based on "a new interpretation of the Basin Plan"
6. Fails to contain an adequate reasonable potential analysis because it uses incorrect statistical multipliers
7. Fails to include mass-based effluent limits for chlorodibromomethane, dichlorobromomethane, aluminum, and manganese
8. Fails to contain an Effluent Limitation for bis(2-ethylhexyl)phthalate
9. The proposed Permit does not contain an effluent limitation for oil and grease in violation of federal regulations
10. Fails to include limits for Lindane
11. Fails to include to include limits for methylmercury
12. Fails to include to include limits for chlorine
13. Fails to include to contain a protective effluent limit for EC
14. Fails to include to include an effluent limit for TDS
15. Contains an Effluent Limitation for acute toxicity that allows mortality that exceeds the Basin Plan water quality
16. Does not contain effluent limitations for chronic toxicity
17. Fails to include receiving water limitations for trace element water quality objectives
18. Violates state and federal endangered species acts
19. Is based upon incomplete CEQA documentation
20. Fails to include a pond freeboard limitation
21. Fails to contain flow limitation for the industrial discharge and sludge supernate
22. Contains a monitoring program that fails to require flow monitoring of biosolids supernate
23. Ignores pond monitoring requirements sufficient to address nuisance odors
24. Fails to Comply with Title 27
25. Fails to address prescriptive standards for the unlined ponds
26. Fails to determined if industrial waste or sludge is a hazardous waste
27. Fails to Comply with Resolution 68-16 for discharges to land
28. Fails to limit nutrient application to agronomic rates
29. Fails prohibit land application of waste during periods of high groundwater
30. Is inadequate to protect against flooding and nuisance conditions
31. Does not comply with recycled water requirements
32. Fails to contain an adequate antidegradation analysis and violates both state and federal antidegradation requirements
33. Fails to comply with the State's Enforcement Policy

Our specific comments are as follows:

1. The Delta is a seriously degraded waterway requiring the highest protection

Delta waterways are crucial habitat and migration corridors for a number species protected under federal and state endangered species acts. Species include: Central Valley spring-run Chinook salmon (*Oncorhynchus tshawytscha* - federal and state listed as threatened); Central Valley steelhead (*Oncorhynchus mykiss* -federal listed as threatened); Delta smelt (*Hypomesus transpacificus* - federal and state listed as threatened); Sacramento splittail (*Pogonichthys macrolepidotus* - California species of concern); winter-run Chinook salmon (*Oncorhynchus tshawytscha* - federal and state listed as endangered); fall/late-fall-run Chinook salmon is both a federal and California species of concern; Green sturgeon (*Acipenser medirostris*) is federally listed as threatened and is a California species of concern and longfin smelt (*Spirinchus thaleichths*), hardhead (*Mylopharodon conocephalus*) and Sacramento perch (*Archoplites interruptus)* are identified as California species of concern. Further, a number of non-special status species, including striped bass, largemouth bass, smallmouth bass, catfish and panfish are found throughout the Delta.

The Delta's pelagic fisheries are experiencing catastrophic collapse. The California Department of Fish and Game's Delta Summer Townet Survey and Fall Midwater Trawl Survey show indices (measures of relative abundance) for Delta smelt, longfin smelt, threadfin shad, splittail and striped bass to be at historic or near historic lows. Adult white and green sturgeon numbers are dropping precipitously. Estuary phytoplankton production has decreased about one order of magnitude while zooplankton production is down one to two orders of magnitude.

The special team of federal and state scientists investigating the pelagic organism decline in the Delta has identified toxic pollutants as one of the three major suspected causes of the collapse of the pelagic fishery. For example, recent U.C. Davis studies of Delta species such as striped bass found <u>all</u> of the fish tested had gastric inflammations, parasitic infestations, liver lesions, infections or a combination. These findings are consistent with earlier work that found nerve damage and developmental abnormalities among newborn bass. Scientists attribute these problems to a chemical stew of pesticides, herbicides and cancer-causing elements in Delta waterways, which in addition to fish habitat serve as drinking water for two-thirds of Californians. Indeed, samples of Delta water collected by U.C. Davis' Aquatic Toxicology Laboratory, as part of its role in evaluating the pelagic fish decline, was found to be toxic to test species. Monitoring by the San Joaquin County and Delta Water Quality Coalition has found significant toxicity to zooplankton, fish and invertebrates in Delta waterways. Monitoring of Delta waters by U.C. Davis staff, pursuant to the Irrigated Lands Monitoring Program identified toxicity and a number of pesticides and metals exceeding freshwater aquatic life standards. Pesticides and other contaminates routinely found in POTW effluent have also been found in fish tissue, placing subsistence-fishing communities at risk.

The Little Hoover Commission found in its CALFED analysis that "*The Delta is so critical to California's future that no water policy will be successful if the estuary is not restored*."

Receiving waters in the Delta are degraded and included on the California 303(d) list of impaired waterways as incapable of supporting identified beneficial uses because of diazinon, chlorpyrifos, organo-chlorine Group A pesticides, DDT, mercury, electrical conductivity, unknown toxicity and dissolved oxygen deficiencies. Elevated temperatures are increasingly acknowledged to be a limiting factor to critical life stages for a number of species.

Given the depleted fisheries and degraded state of Delta waters, any permit regulating the discharge of pollutants must stringently comply with federal regulations, contain protective limits and not allow increases in concentration or mass loading of pollutants. Unfortunately, as we discuss below, the Order falls woefully short in this regard.

2. The Report of Waste Discharge is incomplete

Federal Regulation, 40 CFR 122.21(e) states in part that: "The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. In accordance with 40 CFR 122.21 (e) and (h) and 124.3 (a)(2) the Regional Board shall not adopt the proposed permit without first a complete application, in this case for industrial, sludge supernate, and groundwater for which the permit application requirements are extensive. The facility has also received truck/hauled waste from offsite facilities. In regards to groundwater, the CEQA document indicates that, at least seasonally, the groundwater underlying the land application area is hydraulically connected to the adjacent ponds (borrow pits) and wetland. The CEQA document concludes that the application of waste to the land application area may have a significant impact of this surface water. The draft permit is shows that the Discharger has failed to characterize the industrial waste, sludge supernate, and groundwater in the Report of Waste Discharge. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity."

State Report of Waste Discharge form 200 is required as a part of a complete Report of Waste Discharge. Form 200, part VI states that: "To be approved, your application must include a complete characterization of the discharge." As shown on Attachment C1 Flow Schematic, wastewater from the pond system may be returned to the headworks and subsequently discharged. The industrial line, sludge supernate and tailwater return flows are also discharged to the ponds and therefore, may be commingled and discharged. Similarly stormwater runoff from the land application area is also collected and stored in the ponds. The permit indicates that the Discharger has not characterized the industrial discharges and allows the Discharger to complete the

characterization after adoption of the permit. The Federal Report of Waste Discharge forms require a significant characterization of a wastewater discharge. Federal Application Form 2A, which is required for completion of a Report of Waste Discharge for municipalities, Section B.6, requires that Dischargers whose flow is greater than 0.1 mgd, must submit sampling data for ammonia, chlorine residual, dissolved oxygen, total kjeldahl nitrogen, nitrate plus nitrite nitrogen, oil an grease, phosphorus and TDS. Federal Application Form 2A, Section D, requires that Discharger's whose flow is greater than 1.0 mgd, conduct priority pollutant sampling. The proposed permit includes an effluent flow rate of 7.0 MGD. Federal Regulation, 40 CFR 122.21(g)(7) requires for existing manufacturing, commercial or mining facilities that a significant list of priority pollutants be sampled to characterize the effluent discharge. The industrial line includes metal finishers a Federal categorical industry. In addition, cooling water from the cogeneration facility is periodically returned to the headworks.

The California Toxics Rule (CTR)(40 CFR 131, Water Quality Standards) contains water quality standards applicable to this wastewater discharge. The final due date for compliance with CTR water quality standards for all wastewater dischargers in California is May 2010. The State's *Policy for Implementation of Toxics standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), Section 1.2, requires wastewater dischargers to provide all data and other information requested by the Regional Board before the issuance, reissuance, or modification of a permit to the extent feasible.

Federal Regulation, 40 CFR 122.21(e) states in part that: "The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits.

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." The application for permit renewal is incomplete and in accordance with 40 CFR 122.21(e) the Regional Board should not issue a permit.

3. The Discharger failed to submit valid data

The Regional Board's May 2006 inspection report shows that the Discharger laboratory failed to use chain of custody procedure, inadequate SOP procedures, and general lack of necessary documentation to demonstrate that the laboratory results are valid.

In particular, the inspection found the following deficiencies:

a. The WPCF does not track or log any samples collected in a sample logbook, as required by Section 8.6, so there is no record of samples collected by the plant and tested on-site. The plant does not use a chain of custody to track samples unless the sample is submitted to an outside laboratory for testing.
b. Staff reviewed the WPCF's Standard Operating Procedures (SOP), and found a lack of detail (e.g., the maximum and minimum duration that items should be stored in a desiccator) that could result in skewed testing results. Some information was missing from the SOPs, such as calibration and temperature monitoring of drying ovens, pipette rinsing during test-organism loading, fathead minnow feeding during testing, and how samples are warmed. Staff is unsure whether some of these procedures are in practice but missing from the SOP, or missing all together.
c. The WPCF's test beaker washing SOP did not meet the minimum required in Section 5.2.2.
d. Documentation at the WPCF is minimal. Samples were not easily tracked or identified, and procedures and corrective actions were not well documented.

Second, the effluent discharge is intermittent and, at times, the WPCF has omitted required monitoring and reporting and follow-up for a short duration discharge within a calendar period. The MRP Order No. 5-00-031 addresses intermittent discharge and requires the Discharger to monitor and record data for all of the constituents in the section Effluent Monitoring Of Wastewater Discharged To Dredger Cut except metal and priority pollutants on the first day of the discharge. Non-compliance with this requirement results in data collection gaps and reporting violations. An example is the effluent discharge to Dredger Cut in June of 2005 for ten days several constituents were not recorded on the first day of the discharge.

4. 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

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 a tidally influenced dead end slough with minimal dilution within the vicinity of the discharge. The proposed permit does not discuss any efforts to eliminate the discharge to surface water and therefore, is not in compliance with the Basin Plan Prohibition. The area surrounding the facility is zoned agriculture and land is available for additional land application that would reduce surface water discharges. In addition, the facility is capable of producing tertiary recycled water that is suitable for public parks and golf courses. The Discharger owns numerous parks and landscaped areas along streets where recycled water may be applied. 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 proposed Order is

silent on alternate disposal methods or studies to reduce surface water discharges. 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. 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.

5. The proposed 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.

6. The Order fails to contain an adequate reasonable potential analysis because it uses incorrect statistical multipliers

The reasonable potential analysis utilized a hardness value of 91 mg/l, see permit Fact Sheet page F-20. The permit fails to identify the measured hardness of the receiving water. The SIP and CTR require the ambient receiving water hardness be used to determine reasonable potential.

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.

7. Permit fails to contain mass-based effluent limits for chlorodibromomethane, dichlorobromomethane, aluminum, and manganese

The proposed 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.

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."

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."

Traditional wastewater treatment plant design utilizes average dry weather flow rates for organic, individual constituent, loading rates and peak wet weather flow rates for hydraulic design of pipes, weir overflow rates, and pumps.

Increased wet weather flow rates are typically caused by inflow and infiltration (I/I) into the sewer collection system that dilutes constituent loading rates and does not add to the mass of wastewater constituents.

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.

TMDLs represent a mass loading that may occur over a given time period to attain and maintain water quality standards. Mass loadings from WWTPs are critical to determining individual discharger allocations once a TMDL has been completed.

Once toxicity numeric limitations (TUs) have been established, it is necessary to convert toxicity units that can be directly related to mass. The Federal Regulations, at 40 CFR 122.45 (b), require that POTW effluent limitations, standards, or prohibitions be based on design flow. The mass limitations contained in the proposed permit have however been modified to be based on wet weather flow rates. Virtually every engineering textbook includes *Ten States Standards* as standard engineering design and a recognized civil engineering basis for wastewater treatment plant (WWTP) design parameters. Pursuant to these standards;

a. Average Dry Weather Flow (ADWF) represents the daily average flow when groundwater is at or near normal and runoff is not occurring.
b. Maximum Wet Weather Flow (MWWF) represents the total maximum flow received during any 24-hour period when the groundwater is high and runoff is occurring.
c. Peak Hourly Wet Weather Flow (PHWWF) represents the total maximum flow received during one-hour when groundwater is high, runoff is occurring, and domestic and commercial flows are at their peak.

The PHWWF must be used to evaluate the effect of hydraulic peaks on the design of pumps, piping, clarifiers, and any other flow sensitive aspects. We could not find an example of the design for chemical constituent limitations being based on wet weather flow rates. Unfortunately, the technical basis for the mass limitations is not discussed in

the permit. Consequently, the mass limitations contained in the permit are not based on acceptable WWTP design parameters and therefore fail to comply with the cited federal regulations.

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.

8. The proposed 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 μg/l. The draft permit indicates that the Discharger was concerned about the detect 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 and therefore, is a valid data point. The Discharger subsequent collection of additional samples that were non-detect after the fact does not make the September 2005 sample result invalid. The proposed 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 quality assurance/quality control (QA/QC) documents. The draft permit shows a total disregards 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 proposed permit violates 40 CFR 122.44 and CWC 13377.

9. The proposed 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 tentative Order fails to include the necessary oil and grease limitation.

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.

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 μg/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 μg/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 tentative Order must be revised to include an oil and grease limitation.

10. The Order fails to include limits for Lindane

The CWA 303d listing for the Sacramento-San Joaquin Delta waterways, including Dredger Cut, includes: diazinon, and chlorpyrifos (Organophosphate pesticides); aldrin, dieldrin, endrin, heptachlor, heptachlor epoxide, chlordane (total), lindane, hexachlorocyclohexane (total), endosulfan (total), and toxaphene (Group A organochlorine pesticides); DDT; mercury; and unknown toxicity. The proposed Permit removes the effluent limitation for Lindane and authorizes an expansion of the facility including an increase in the effluent flow rate. Therefore, the proposed Permit improperly authorizes an increase in the mass loading for Lindane to an impaired waterbody for which a TMDL has not been completed.

11. The Order fails to include limits for methylmercury

The Tentative Permit includes an interim effluent mass limitation, or cap, for total mercury. Inexplicably, it ignores methylmercury; the bioaccumulative and biodamaging form of mercury. Regional Board TMDL staff has consistently maintained that the pending Delta Mercury TMDL will require substantial reductions in the mass loading of methylmercury from wastewater treatment plants. The Tentative Permit must include an interim cap on methylmercury loading.

The Tentative Permit states that, if the Regional Board determines that a mercury offset program is feasible, the Order may be reopened to reevaluate the interim mercury mass loading limitation(s) and the need for mercury offset program. An explicit permit re-opener to include final load reductions established in the Delta Mercury TMDL must be incorporated in the Order.

12. The Order fails to include limits for chlorine

The Fact Sheet, page, states, "The previous permit contained effluent limitations for chlorine. However, the Discharger has since upgraded the Facility, and now uses UV Disinfection instead of disinfection by chlorination. Therefore, this Order does not contain chlorine effluent limitations." Regional Board letter, dated May 3, 2006, states, in part, that "Waste Discharge Requirements (WDRs) Order No. 5-00-031, NPDES No. CA0079243, limits chorine in the effluent discharged to Dredger Cut and requires the Discharger to monitor continuously for chlorine residual. In the process of writing the NPDES permit renewal, we have become aware that the Discharger discontinued monitoring for chorine residual on 21 January 2005, after discontinuing chlorine usage in the treatment process. However the Water Pollution Control Facility still uses bleach as a facility-cleaning agent and accepts up to 250,000 gallons per day of chlorinated and biocide-treated wastewater from the Northern California Power Agency." The discharge may contain chlorine residual." The discharge has the reasonable potential to contain chlorine residual.

Effluent limitation that are technology based-limitations include Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), BOD and TSS removal efficiency, settleable matter, oil and grease, and chlorine residual. Technology based limits must be included in the permit.

Congress' prohibition on the relaxation of permit limits where a discharger has demonstrated its ability to meet existing limits is consistent with the Clean Water Act's stated goal of eventually achieving zero discharge of pollutants. (Van Putten & Jackson, *supra* note 26, at 894.) The proposed Permit must be revised to include an effluent limitation for chlorine.

The Discharger has dechlorination equipment including continuous chlorine residual monitoring. Inexplicably, the monitoring program rewards this violator for failing to comply with the previous Order by removing requirements to continuous monitoring. Chlorine is extremely toxic to aquatic life and even intermittent discharges are known to cause acute toxicity. The WWTP receives wastewater including industrial discharges all day. The WWTP is unmanned during evening hours and therefore, personnel are not present to monitor for chlorine during evening hours. The proposed permit must be revised to include continuous monitoring.

13. Proposed Order fails to contain an effluent limit for EC

The proposed permit relies entirely on data generated by the Discharger and therefore, does not have accurate, representative or valid data on which to base the water quality decisions are based. The RWD is clearly inadequate and incomplete. Furthermore, the Regional Board has elected to reward noncompliance with the previous permit by reducing monitoring and removing prohibitions and effluent limits.

Federal Regulations, 40 CFR 122.44 (d)(i), requires that; "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." The Water Quality Control Plan (Basin Plan) for the Central Valley Region, Water Quality Objectives, page III-3.00, contains a Chemical Constituents Objective that includes Title 22 Drinking Water Maximum Contaminant Levels (MCLs) by reference. The Title 22 MCLs for EC are 900 μmhos/cm (recommended level), 1,600 μmhos/cm (upper level) and 2,200 μmhos/cm (short term maximum).

The Basin Plan states, on Page III-3.00 Chemical Constituents, that "Waters shall not contain constituents in concentrations that adversely affect beneficial uses." The Basin Plan's "Policy for Application of Water Quality Objectives" provides that in implementing narrative water quality objectives, the Regional Board will consider numerical criteria and guidelines developed by other agencies and organizations. This application of the Basin Plan is consistent with Federal Regulations, 40CFR 122.44(d).

For EC, *Ayers R.S. and D.W. Westcott, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985),* levels above 700 µmhos/cm will reduce crop yield for sensitive plants. The University of California, Davis Campus, Agricultural Extension Service,

published a paper, dated 7 January 1974, stating that there will not be problems to crops associated with salt if the EC remains below 750 µmhos/cm.

The wastewater discharge average EC level is 668 μmhos/cm and the maximum observed EC was 770 μmhos/cm. Clearly the discharge exceeds the agricultural goal and therefore the narrative water quality objectives for EC presenting a reasonable potential to exceed the water quality objective. The proposed permit contains an interim effluent limitation for EC of 780 μmhos/cm, as a monthly average. The proposed EC limitation clearly exceeds the agricultural water quality goal for EC. The proposed Order fails to establish an effluent limitation for EC that are protective of the Chemical Constituents water quality objective. The City's wastewater discharge increases concentrations of EC to unacceptable concentrations adversely affecting the agricultural beneficial use. The wastewater discharge not only presents a reasonable potential, but actually causes, violation of the Chemical Constituent Water Quality Objective in the Basin Plan. The available literature regarding safe levels of EC for irrigated agriculture mandate that an Effluent Limitation for EC is necessary to protect the beneficial use of the receiving stream in accordance with the Basin Plan and Federal Regulations. Failure to establish effluent limitations for EC that are protective of the Chemical Constituents water quality objective blatantly violates the law.

Federal Regulation, 40 CFR 122.44, which mandates an effluent limitation be established if a discharge exceeds a water quality objective. MCLs are incorporated into the Basin Plan by reference. State Board Water Quality Order 2005-005 states, in part that:"*…the State Board takes official notice [pursuant to Title 23 of California Code of Regulations, Section 648.2] of the fact that operation of a large-scale reverse osmosis treatment plant would result in production of highly saline brine for which an acceptable method of disposal would have to be developed. Consequently, any decision that would require use of reverse osmosis to treat the City's municipal wastewater effluent on a large scale should involve thorough consideration of the expected environmental effects.*" The State Board does not have the authority to ignore Federal Regulation. Bay Area treatment plants have been utilized for RO brine disposal previously.

Several agricultural water supply pumps exist along Dredger Cut and are in close proximity to the discharge. The proposed permit indicates that Dredger Cut is a dead end slough and at times has no assimilative capacity. The tentative Order identifies the beneficial uses to include agricultural supply. The proposed effluent limitation for EC of 500 μmhos/cm above municipal supply results in effluent that will impair the beneficial uses of Dredger Cut. The proposed Order must be revised so that the effluent EC remains below 750 µmhos/cm.

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 EC less 750 in the proposed permit violates 40 CFR 122.44 and CWC 13377.

The proposed Order clam that the proposed effluent limit for BPTC measures employed by the Discharger and simply fails to comply with Resolution No. 68-16 as follows:

a. The draft Order indicates that the receiving water will degraded; however the degradation is not confined within a specified boundary. In fact, the proposed Order does not authorize a mixing zone;
b. The Discharger has not minimizes the degradation by fully implementing, regularly maintaining, and optimally operating Best Practicable Treatment and Control (BPTC) measures. The proposed Order fails identify the actual BPTC measures implemented by the Discharger or how the WWTP design meets BPTC. It is noted that the RWD did not contain a BPTC evaluation as require by Resolution 68-16 so there is no factual information on which to base permit writer reached this conclusion.
c. The degradation is not limited to waste constituents typically encountered in municipal wastewater. The Order fails to consider that waste constituents associated with industrial waste or that waste received from outside the service area, which is trucked to the WWTP;

The degradation will result in water quality less than that prescribed in the Basin Plan, and a complete antidegradation analysis was not completed.

14. The Proposed Order fails to include an effluent limit for TDS

The recommended agricultural water quality goal for TDS, that would apply the narrative chemical constituent objective, is 450 mg/L on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). Water Quality for Agriculture evaluates the impacts of salinity levels on crop tolerance and yield reduction and establishes water quality goals that are protective of the agricultural uses. The average TDS effluent concentration was 361 mg/L and ranged to 540 mg/L for 23 samples collected by the Discharger from 16 February 2005, through 16 August 2006. The discharge has the reasonable potential to exceed the water quality objective for TDS. As discussed, the discharge is situated in a dead end slough and is near several agricultural supply pumps. 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 of 450 mg/L for TDS in the proposed permit violates 40 CFR 122.44 and CWC 13377.

15. 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, 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 proposed 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 draft Order. 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 proposed Permit must be revised to prohibit acute toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i).

Regional Board's May 2006 letter states in part that "Monitoring and Reporting Program (MRP) Order No. 5-00-031 requires that a bioassay using a 24 hr. composite sample of the effluent be conducted weekly in accordance with USEPA test method 600-4-90-027F. The test method requires that invalid tests require follow up testing. An invalid bioassay was reported on 18 September 2005, and no retest was conducted. The cause was excessive deaths in the control. Since the MRP was adopted in January 2000, a total of

twenty-seven bioassay tests have been reported invalid all due to the same cause and no retest was attempted as required by the test method." Furthermore, Regional Board's May 2006 inspection report shows that the Discharger has not followed the appropriate procedures and controls for conducting acute toxicity tests. Given the Discharger history of non-compliance with the previous Order's monitoring program, the frequency of monitoring for acute toxicity must be increase in accordance with the State Water Board's Enforcement Policy.

16. 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) 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 proposed permit, page 20, 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 tentative Order does not contain a numeric chronic toxicity effluent limitation.

Proposed Permit Finding No. J. 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 Proposed 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.

Proposed Permit is quite simply wrong; by failing to include effluent limitations prohibiting chronic toxicity the proposed 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 proposed 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 proposed 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.

Finally, the Monitoring and Reporting must require the Discharger to commence TRE workplan immediately as the Regional Board has already determined that the discharge is toxic. The Discharger has already avoided implementing a TRE Workplan in violation of the previous Order and gained an economic benefit at the expense of the Delta.

17. The proposed Order fails to contain receiving water limitations for trace element water quality objectives

The Basin Plan states "Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. The chemical objectives in Table III-1 apply to the

water bodies specified. The listed applicable water bodies listed in Table III-1 includes the "Sacramento-San Joaquin Delta". The proposed permit, Finding No. C, " states "Discharge Point 001 (see table on cover page) to Dredger Cut, a water of the United States, and part of the Sacramento-San Joaquin Delta." The tentative Order indicates that Dredger Cut is a dead end slough with no assimilative capacity. The proposed Order fails to include receiving water limits for chemical objectives listed in Table III-1 for Arsenic, Barium, Copper, Iron, Manganese, Cyanide, Silver and Zinc. The tentative Permit must be revised to include limitations for the cited Chemical Objectives. In addition, the monitoring program for the receiving water must be modified to include the cited pollutants.

18. The Order violates state and federal endangered species acts

As discussed above, Delta waterways are listed on the 303(d) list as impaired because of unknown toxicity and are home to species protected by state and federal endangered species acts. There is no remaining assimilative capacity for toxicity, toxic pollutants or oxygen demanding constituents. Astonishingly, the Tentative Permit allows acute toxicity, fails to limit chronic toxicity and includes effluent limits that are not protective of listed species. The Tentative Permit is likely to result in the illegal "take" of listed species and will likely result in the destruction or adverse modification of critical habitat in violation of Section 9 of the federal Endangered Species Act (ESA).
The Order has been developed with federal funds and is issued pursuant to U.S. Environmental Protection Agency (EPA) authorization. Consequently, the Regional Board and/or EPA must enter into formal consultation with both the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the ESA. The discharge of toxicity and toxic pollutants by the Discharger is a violation of Section 9 of the ESA and requires an incidental take permit pursuant to Section 10 of the ESA. The Regional Board's issuance of an Order that authorizes and/or "causes" an illegal "take" is also a violation of Section 9 of the ESA. Consequently, both the Discharger and the Regional Board must secure incidental take permits from NMFS and USFWS.

The Tentative Permit will also likely result in an illegal "take" of listed species pursuant to Section 2080 of the California Fish and Game Code; i.e., the California Endangered Species Act (CESA). The Discharger must obtain a permit under Section 2081 or a consistency determination under Section 2080.1 of CESA. Unlike ESA, CESA requires that authorized take be "fully mitigated" and that all required measures be "capable of successful implementation." Since there are no provisions for time schedules under CESA, the Discharger must comply with protective limits as soon as possible and certainly prior to any increase in the rate of discharge. The inadequate toxicity, temperature, ammonia, and dissolved oxygen limits in the Tentative Permit should be revised to be fully protective of listed species. The Discharger and Regional Board must initiate consultation with the California Department of Fish and Game.

19. CEQA documentation is incomplete

The permit states that the action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of Division 13 of the Public Resources Code in accordance with Section 13389 of the CWC. The action to adopt an NPDES permit may be exempt from CEQA; however the proposed permit discusses significant expansion of the wastewater treatment plant, which is not exempt from CEQA.

The tentative Order authorizes via the Executive Officers approval an increase in the flow rates to the facility. An increase in influent flow rate to the facility will also result increase in sludge production and subsequently the volume of sludge, supernate, and DAF subnatant discharged, i.e. designated waste, to the storage pond and land application area. A review of the CEQA documentation on which the Order relies has found that the CEQA documentation does not address an increase designated waste produce, storage or disposal at the site. In fact the CEQA is silent on the handling of designated waste. CPRC Section 21065 defines "Project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

a. An activity directly undertaken by any public agency.
b. An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
c. An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

The increase in the POTW's discharge and subsequent increase in the sludge, supernate, and DAF subnatant production, i.e. designated waste, to the storage pond and disposal is a new "project" for which a permit is required and is being considered by the Regional Board. The Discharger's proposed disposal of sludge, supernate, and DAF subnatant, i.e. designated waste, to storage pond and land application area has potential significant impacts to the environment and as such must comply with CEQA regulations. CPRC Section 21001.1 states, "projects to be carried out by public agencies be subject to the same level of review and consideration under this division as that of private projects required to be approved by public agencies."

Title 14 Section 15050 states, "Where a project is to be carried out or approved by more than one public agency, one public agency shall be responsible for preparing an EIR or Negative Declaration for the project. This agency shall be called the Lead Agency." The Regional Board is the first public agency to undertake an action for the "project" and has jurisdiction over both the WWTP and sludge disposal site, the Regional Board is the designated lead agency for the project. As discussed in this letter, the project will have significant impacts to the environment. Consequently, an EIR must be prepared by the Regional Board and circulated for public review. Please note, this letter is written notification to the lead agency of the new project and to have CSPA included on the Regional Board's Notice of Preparation for the EIR.

20. Draft Order fails to include a pond freeboard limitation

The tentative Order fails to include a freeboard limitation for the wastewater ponds, see Pond Operating Requirements, and is inconsistent with other Orders adopted by the Regional Board. Freeboard means the vertical distance between the lowest point along the top of a surface impoundment dike, berm, levee, or other similar feature and the surface of the liquid contained therein. The Regional Board has policy requires that a two feet of freeboard be maintained for wastewater impoundments in order to prevent over topping and levee failures. The Fact Sheet (page F-72) indicates that "freeboard is necessary to prevent levee failures or overtopping due to wave actions, which could cause undesirable reactions"; however, the proposed Order fails to require any freeboard levels be maintained in the pond.

The tentative Order also does not contain an adequate description of the ponds and lacks the critical information including pond volume(s), flow rates for the industrial discharge and subnatant, percolation rates for unlined ponds and structural features present. For example, are the ponds equipped with a spillway?

In regards to the industrial pond, which receives designated waste, a three-foot freeboard limitation in accordance with Title 27. The permit also fails to demonstrate that the industrial impoundment has capacity for the industrial discharge, DAF subnatant, sludge supernate, tailwater return flows and stormwater generated by a 1,000-year, 24-hour precipitation event as require for Class II impoundments. What is equally alarming is that a review of the Discharger's case file did not identify a water balance for the holding ponds. The tentative Order is silent on whether a water balance has been completed by the Discharger for the Report of Waste Discharger and does not require the Discharger to perform one.

The proposed Order must be revised to include two feet freeboard for the wastewater pond, three feet freeboard for the Class II pond, and include a flow limitation for industrial discharge to the impoundment. In addition, the Discharger must complete a water balance that demonstrates the Class II impoundment has sufficient storage capacity to comply with the three feet freeboard including stormwater from the 1,000-year, 24-hour precipitation event.

21. Proposed Order fails to contain flow limitation for the industrial discharge and sludge supernate

The proposed Order fails to contain a flow limitation for the industrial discharge or sludge supernate to the impoundment and is inconsistent with other Orders adopted by the Regional Board. Virtually every engineering textbook includes *Ten States Standards* as standard engineering design and a recognized civil engineering basis for wastewater treatment plant design parameters including pond systems used to manage the industrial waste. Pursuant to these standards;

Average Dry Weather Flow (ADWF) represents the daily average flow when groundwater is at or near normal and runoff is not occurring.

Maximum Wet Weather Flow (MWWF) represents the total maximum flow received during any 24-hour period when the groundwater is high and runoff is occurring.

Peak Hourly Wet Weather Flow (PHWWF) represents the total maximum flow received during one-hour when groundwater is high, runoff is occurring, and industrial and commercial flows are at their peak.

The PHWWF must be used to evaluate the effect of hydraulic peaks on the design of pumps, piping, pond capacity, and any other flow sensitive aspects.

Unfortunately, the technical basis for not including a flow limitation for the industrial pond system is not discussed in the Permit. We assume that this is a error on the part of the staff engineer. The proposed Order must be revised to include a flow limitation for the industrial and sludge supernate discharge to the impoundment.

22. The monitoring program fails to require flow monitoring biosolids supernate

The monitoring program fails to require flow-monitoring equipment for the biosolids supernate discharge and sludge discharge but relies on the Discharger to guess. Without flow monitoring equipment the amount of waste loading applied to the land application areas cannot be accurately determined, which is critical for the Discharger to maintain agronomic loading rates. Flow monitoring equipment is also necessary for the Discharger to comply with BPTC. The Regional Board cannot argue that guessing the volume of waste applied land is BPTC.

The CEQA document contains mitigation measures necessary to protect water quality. In particular, the CEQA document indicates that application of sludge and wastewater may significantly impair groundwater quality and the adjacent freshwater ponds known as the borrow pits. The CEQA mitigation measure requires that sludge and wastewater application will be limited to agronomic rates. The draft Order indicates that the sludge and supernate lacks flow-monitoring equipment. Without flow monitoring equipment it is impossible to control the discharge and the resulting nutrient loading are not agronomic. The proposed Order fails to include flow-monitoring equipment for the sludge and supernate discharge and therefore does not support the CEQA mitigation measure for this project, which is necessary to protect water quality. The proposed Order must be revised to include flow-monitoring equipment for the supernate sludge discharges.

23. Order should be revised to include to pond monitoring sufficient to address nuisance orders

The facility has a history of nuisance odors. We have frequently detected and reported odor from this facility to the Regional Board. The proposed monitoring frequency of a weekly grab sample for dissolved oxygen and pH monitoring is not adequate to prevent nuisance conditions. Given the history of noncompliance, daily monitoring is appropriate and necessary to prevent septic odor conditions. In addition, the monitoring fails to specify that samples for dissolved oxygen must be collected in morning and therefore, is inconsistent with Regional Board Orders, which require "dissolved oxygen monitoring be conducted before 9:00 a.m."

The proposed Order must be revised to increase the monitoring frequency for dissolved oxygen and pH to daily and also require that the dissolved oxygen monitoring be performed before 9:00 a.m.

24. Proposed Permit Fails to Comply with Title 27

The proposed 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 stabilization pond supernate and subnatant from the DAF is also discharged to the unlined storage ponds. The storage and handling of treatment sludge and biosolid sludge must comply with Title 27 regulations.

The permit's Fact Sheet, page F-56, states "Municipal sewage can be treated and controlled to a degree that will not result in unreasonable degradation of groundwater, and for this reason, treated municipal effluent has been conditionally exempted from Title 27. The remaining sources of wastewater (e.g. untreated industrial effluent, biosolid supernatant, DAF subnatant, stormwater runoff, return tailwater flows, and biosolids) are regulated by the Waste Discharge Requirements in this Order, including but not limited to Land Discharge Specifications IV.B.1. through B.4. Therefore, the following Land Discharge Specifications are necessary to consider the total wastewater discharge to land exempt from Title 27 under Section 20090(a), including the treatment and storage ponds associated with the Facility." However from Title 27 under Section 20090(a) does not provide and exemption for wastewater sludges, i.e. biosolid supernatant, DAF subnatant or untreated industrial waste. Title 27 under Section 20090(a) states "Sewage—Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, <u>provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division</u>." The sludges must be managed in accordance with Title 27.

In addition, the file record shows that the listed sludges contains constituents that exceed water quality objectives and that, at least seasonally the groundwater is in direct contact with the bottom of the pond. The waste sludge is a designated waste. Designated waste, as defined in California Water Code section 13173, shall be discharged only at Class I waste management units (for information regarding Class I Units, see Chapter 15, Division 3, Title 23 of this code) or at Class II waste management units which comply with the applicable SWRCB-promulgated provisions of this subdivision and have been approved by the RWQCB for containment of the particular kind of waste to be discharged. Decomposable wastes in this category can be discharged to Class I or II land treatment units. Therefore the discharge of biosolid supernate, DAF subnatant, and biosolid sludge, which is classified as a designated waste, must comply with Title 27 including prescriptive standards for the storage ponds and land treatment areas.

25. The unlined ponds must comply with Title 27 Prescriptive Standards

The proposed permit indicates that the ponds are not lined. Title 27 section 20250 contains prescriptive standards for impoundments and requires that "New and existing Class II landfills or waste piles shall be immediately underlain by natural geologic materials which have a hydraulic conductivity of not more than $1x10^{-6}$ cm/sec (i.e., 1 foot/year) and which are of sufficient thickness to prevent vertical movement of fluid, including waste and leachate, from Units to waters of the state for as long as wastes in such units pose a threat to water quality. Class II units shall not be located where areas of primary (porous) or secondary (rock opening) hydraulic conductivity greater than $1x10^{-6}$ cm/sec (i.e., 1 foot/year) could impair the competence of natural geologic materials to act as a barrier to vertical fluid movement." The ponds must comply with requirements for a Class II impoundment including installation of a leachate collection system.

Furthermore the tentative Order indicates that the groundwater elevation under the facility is at times four feet below ground surface. Title 27 requires that "surface impoundments shall be operated to ensure that wastes will be a minimum of five feet (5 ft.) above the highest anticipated elevation of underlying ground water. For new and existing land treatment units, the base of the treatment zone shall be a minimum of five feet (5 ft.) above the highest anticipated elevation of underlying ground water…"

The proposed Order must require the Discharger to modify the facility in order to comply with Title 27 prescriptive standards or the Discharger must immediately cease the discharge of designated waste.

26. Proposed Order fails to determined if industrial waste or sludge is a hazardous waste

The proposed Order has not demonstrated that the industrial discharge, supernate, DAF subnatant, and biosolid sludge is not a hazardous waste. In accordance with Title 22 Section 66261.1 the discharge classified as a "waste". The permit writer clearly failed to consider that there is no domestic sewage exclusion authorized under Title 22 regulations. The RWD failed to properly characterize the waste in accordance with Title

22 Section 66261.24; nor does the MRP require the Discharger to periodically conduct test the sludge in order to determine if the sludge has become a hazardous waste. Furthermore, the industrial line receives "7% flows from metal finishers," which are Federal categorical dischargers and produce hazardous waste from non-specific sources (40 CFR 261.31). Therefore, the hazardous waste mixture rule and derived from rule applies to these discharges because the industrial discharge is "untreated", is not mixed with domestic sewage, and is not processed through a POTW, but discharged directly to land for disposal. The Discharger has also received truck/hauled waste from off-site industrial facilities, a fact that the tentative Order ignores. The proposed Order fails to consider that Federal and state land ban prohibitions apply to this discharge for the same reason cited above.

Without adequate monitoring data and routine testing to characterize the sludges, there is no factual information on which the Regional Board can rely to determine if the sludges are a hazardous waste. Moreover, the regulation of hazardous waste applied directly to land is not the within jurisdiction of the Regional Water nor is a Class I impoundment.

27. Order fails to comply with Resolution 68-16 for discharges to land

The Order is silent BPTC measures employed by the Discharger and simply fails to comply with Resolution No. 68-16 as follows:

a. The draft Order indicates that the groundwater is degraded; however the degradation is not confined within a specified boundary;
b. The Discharger has not minimizes the degradation by fully implementing, regularly maintaining, and optimally operating Best Practicable Treatment and Control (BPTC) measures. The discharge of untreated industrial waste and designated waste (sludges) to unlined facilities is not BPTC;
c. The degradation is not limited to waste constituents typically encountered in municipal wastewater. The Order fails to consider that waste constituents associated with industrial waste are not such as hexavalent chrome and spent degreasing solvents. In fact, the groundwater monitoring does not require testing for industrial waste constituents; and
d. The degradation will result in water quality less than that prescribed in the Basin Plan. The Regional Board May 2006 Inspection Report and the file record shows that groundwater underlying the Dischargers ponds has been increasing degraded since 2002. Furthermore, the concentration of waste in the industrial line exceeds water quality objectives and the subsequent discharge to unlined ponds that seasonally intersect the groundwater is pollution.

28. Order fails to limit nutrients to agronomic rates

Finding B states in part that, "municipal wastewater is treated to at least 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. The Discharger's agricultural fields cover approximately 790 acres adjacent to the Facility..."

This Finding does not accurately describe the purpose of land application areas. "Land application areas" are actually an integral part of the wastewater treatment facility and are specifically for the treatment of waste. Land application areas must be operated and maintained in a fashion that ensures the highest and most consistent waste treatment possible. While we encourage the Regional Boards' recycling efforts, land application areas must remain first and foremost as treatment units for waste removal. Historically crops raised on the land application have not been selected for maximum waste removal. Selection of crops with a lower waste removal rates but which may be more profitable but cannot comply with Resolution 68-16, as it is not BPTC. The Regional Board May 2006 Inspection Report states "A comprehensive nutrient management plan should be established to justify the any crop uptake for the disposal fields." Therefore, the tentative Order must require that crop selection, crop management and harvest are based on the highest obtainable waste treatment/removal rates as specified in a nutrient management plan. The Fact Sheet, page F-56, "Waste applications must be balanced to provide adequate plant nutrients and water while minimizing nuisance potential and percolation of waste constituents to the water table. The chemical and biological reactions that take place are interrelated and require that constituent loadings and wetting and drying cycles be optimized. As in this case, when the depth of the unsaturated (vadose) zone is less than several feet, the zone in which most of the treatment and attenuation occurs is limited." However, the permit fails to limit the application of waste constituents other than nitrogen to agronomic rates and does not ensure that treatment is optimized in the limited soil column.

The CEQA document for the proposed Order indicates that the application of waste may have a significant impact on groundwater and surface water quality unless agronomic rates are maintained. The file record shows that the Discharger has applied waste and fertilizers to the application area that exceeded agronomic rates. While the draft Order does limit nitrogen to agronomic rates, there is no agronomic rate for organic nitrogen and other nutrients are not included in the Order.

According to *Wastewater Engineering Treatment and Reuse*, Metcalf & Eddy, 2003, the optimum bacterial degradation of organic wastes, the ratio of carbon to nitrogen to phosphorus (C:N:P Ratio) should be 20:5:1. The percolation of wastewater containing nitrogen but with disproportionately low concentrations of total organic carbon or phosphorus may retard denitrification and, absent sufficient aeration, may also retard nitrification. In anaerobic soil and groundwater conditions, concentrations of nitrogen in the form of ammonia can leach and discharge to groundwater. The Order fails to require that the Discharger maintain the proper ratio of organic waste need for optimum treatment. The Order does not even require the Discharger to monitor for the carbon and phosphorus; nor did RWD disclose what the actual concentration was for these wastes in the effluent, industrial waste or sludge.

In addition, the TDS and EC concentration of the industrial waste exceed water quality objectives and the crops historical cultivated at the site will not reduce the salinity concentrations significantly. The proposed Order must be revised to include limitations for salinity, carbon and phosphorous. The monitoring program must be updated to include these pollutants.

29. The Order must prohibit land application of waste during periods of high groundwater

The draft permit indicates that at times the groundwater elevation underlying the application area is within four feet of the ground surface. The land application area receives designated waste and therefore, is a land treatment unit. In accordance with Title 27, Chapter 3, Subchapter section 20250, for new and existing land treatment units, the base of the treatment zone shall be a minimum of five feet (5 ft.) above the highest anticipated elevation of underlying ground water. The Order fails to require to comply with Title 27 in that the draft Order does not require a five-foot separation be maintained between the groundwater. The tentative Order must be revised to prohibit discharges during periods when the groundwater is less than five-feet below the base of the treatment zone including the capillary fringe.

30. The Order must be revised to protect against flooding and nuisance conditions

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. The 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-feet 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 proposed Order fails to consider water quality impacts related to the western fields.

In regards to flooding at the WWTP, the tentative Order is silent on the construction standard required for the WWTP and therefore, is inconsistent with other Orders adopted by the Regional Board. The draft Order must be revised to require "All treatment and storage facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency."

The decomposition of the waste residue on the soil surface creates nuisance condition such as odors and flies. The facility's discharge has created nuisance conditions for public, which is documented in the record. The adjacent neighbor, myself and Regional Board staff, have documented noxious odors created by the discharge that has gone unabated for over five years. The draft permit is inconsistent with other Regional Board Orders that require "biosolids to be completely incorporated into the soil with 48 hours after the application" in order to prevent nuisance conditions. The draft permit must be revised to require the Discharger to incorporate biosolids and industrial waste into the soil with 48 hours after the application. The tentative Order must include a Finding on nuisance conditions created by the Discharger and mitigation measures in the permit that are designed to prevent them.

31. The Order must be revised to comply with recycled water requirements

The use of the untreated industrial wastewater flow containing digester decant water, air thickened WAS subnatant, and pond residuals does not meet the Title 22 requirements for the application of recycled water. The Discharger cannot mix wastes with recycled water and then claim that the recycled water complies with Title 22 requirements. The draft Order must be revised so that the application of waste complies with Title 22.

The Department Health Services requires that the American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water be implemented in design and construction of recycling equipment. The guidelines require installation of purple pipe, adequate signs, and adequate separation between the recycled water lines and domestic water lines and sewer lines. The Discharger operates a recycled water system. The tentative Order must be revised to include recycle water specifications, which require the Discharger's recycled water system complies with American Water Works Association (AWWA) Guidelines for Distribution of Non-Potable Water and Guidelines for the On-site Retrofit of Facilities Using Disinfected Tertiary Recycled Water.

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

Table F-11 of the Fact Sheet indicates that the proposed Permit allows significant increases in mass loads of aluminum, arsenic, copper, iron, manganese, molybdenum, zinc, bromoform, chloroform, total THMs, MTBE, chloride, sulfate, oxygen demanding substances, TSS, TDS, phosphorus and probably EC. The Fact Sheet is silent on the potential increases in loading for most of the other priority pollutants: including many classified as carcinogens, immune suppressors and .reproductive and developmental toxins.

The antidegradation analysis in the proposed 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. The failure to undertake a rigorous antidegradation analysis for a "major" discharge of pollutants into a severely degraded and legally impaired waterbody whose fisheries are experiencing catastrophic collapse due, in part, to poor water quality is appalling. Regional Board staff are either unaware of state and federal policies regarding antidegradation analyses or they have been directed to ignore them.

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/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 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. 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 in the 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 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 proposed 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 Tentative Order fails to properly implement the Basin Plan's Antidegradation Policy.

33. The proposed Order fails to comply with the State's Enforcement Policy

California Water Code (CWC) Section 13000 states, in part, that Legislature declared "…that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state." CWC Section 13000 shows the Legislature intent that "state must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the state from degradation originating inside or outside the boundaries of the state;" In order fulfill the Legislature intent to protect water quality, the State Water Resources Control Board adopted the Water Quality Enforcement Policy (Enforcement Policy) February 2002.

The Enforcement Policy states, "The primary goal of this Enforcement Policy is to create a framework for identifying and investigating instances of noncompliance, for taking enforcement actions that are appropriate in relation to the nature and severity of

the violation, and for prioritizing enforcement resources to achieve maximum environmental benefits. Toward that end, it is the intent of the SWRCB that the RWQCBs operate within the framework provided by this Policy." However, the proposed permit and time schedule order does not comply with the Enforcement Policy in that it has the following deficiencies:

- Fails to recover economic benefit gained from the violations,
- Fails to take enforcement for groundwater pollution,
- Fails to require that the Discharger obtain a Title 27 WDR for the 200 acre land application area which is receiving designated waste,
- Fail to require the Discharger to cease discharging designated waste to unlined facilities, and
- Fails to enforce against the Discharger for not implementing Pretreatment regulations. The Discharger failed to require installation of pretreatment equipment at metal finishers such as Lodi Chrome.
- Fails to prevent nuisance conditions.

The Regional Board has elected to ignore the Enforcement Policy and has subverted the Legislative intent for water quality protection through pollution prevention into that of pollution permission and rewarding recalcitrant polluters with increased limits.

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