



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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19 May 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, Senior 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: Waste Discharge Requirements (NPDES No. CA0078581), Time Schedule Order and Thermal Plan Exception for California Department of General Services, Central Plant Operations, Heating and Cooling Facility, Sacramento 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, Time Schedule Order and Thermal Plan Exception (Order or Permit) for California Department of General Services, Central Plant Operations, Heating and Cooling 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 Sacramento County.

- 1. The proposed Permit contains Effluent Limitations for temperature based on a Thermal Plan exemption that is also presented for Regional Board consideration. The proposed thermal plan exception and the proposed Permit conflict with the requirements of the Clean Water Act (CWA 101(a),**

303(d)(4)) Federal Regulations 40 CFR 131.12(a) and the Board's Policy (Resolution 68-16) regarding antidegradation.

The proposed Permit, Fact Sheet page F-5 E Planned Changes, states that: "The Facility plans to cease the river discharge within the term of this Order. An objective of this project is the conversion of Central Plant Operations, Heating and Cooling Facility from the use of once-through cooling water to closed loop mechanical cooling towers with a thermal storage tank. Installation of these cooling towers would result in the elimination of the need to discharge condenser effluent directly to the Sacramento River. Based on information provided by the Discharger, elimination of the discharge to the Sacramento River is planned for 2010, but unforeseen circumstances could potentially delay project completion until 2012." In order to comply with CWA, Federal Regulations and the Board's Antidegradation Policy a best practicable treatment and control (BPTC) technology analysis must be done on an individual constituent basis, including in this instance temperature, as detailed below. The Discharger has proposed a technological solution that would eliminate the discharge thereby eliminating the increased discharge of thermal waste, which would likely be found to be BPTC in accordance with the required Antidegradation analysis. Since the Discharger has proposed a project to eliminate the discharge within the term of the permit, it makes no technical or logical sense to proceed with consideration of a Thermal Plan exception or adoption of the proposed Permit, which is based on the exception. A better regulatory and reasonable approach is to grant a compliance time schedule for temperature that requires elimination of the discharge under the time frame proposed by the Discharger which will be within the term of the proposed Permit and will eliminate the need for the proposed Thermal Plan exception.

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.). Actions that trigger use of the antidegradation policy include issuance, re-issuance, and modification of NPDES and Section 404 permits and waste discharge requirements, waiver of waste discharge requirements, issuance of variances, relocation of discharges, issuance of cleanup and abatement orders, increases in discharges due to industrial production and/or municipal growth and/or other sources, exceptions from otherwise applicable water quality objectives, etc. (State Antidegradation Guidance, pp. 7-10, Region IX Guidance, pp. 2-3.).

Thermal waste is a pollutant; and granting an exemption to the Thermal Plan and adopting the Proposed Permit will result in lowering water quality. An antidegradation analysis has not been undertaken for the exemption to the Thermal Plan and adopting the proposed Permit.

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.

The Findings in the proposed Permit regarding the Thermal Plan exception state that:

“The Discharger submitted a Thermal Effects Study to the Regional Water Board in January 2006. The Study findings as they relate to the effluent limitations are summarized below:

1. The Thermal Effects Study indicates that discharge temperatures up to 91°F (under worst-case conditions) would not cause adverse effects on aquatic life due to size, shape, limited distribution within the river, and buoyant nature of the thermal plume throughout the year.
2. The Facility typically complies with the limitation of the maximum temperature differential of 20°F during the summer months between May and October.
3. The Study indicates that the maximum temperature differential of 39°F would not cause adverse effects on aquatic life due to the size, shape, limited distribution within the river, and buoyant nature of the thermal plume throughout the year.

The maximum effluent temperature of 89°F assures that conditions that will occur until the discharge is terminated in 2012 will not create conditions worse than those evaluated in the Thermal Effects Study. The incremental increase in fully mixed receiving water (under worst-case conditions) is less than or equal to 0.11°F; therefore, no cumulative thermal effect of concern is present in the receiving water.

As a result of these findings, the Regional Water Board proposes to grant the requested exceptions to the thermal plan. The resulting effluent limitations for temperature will require that the maximum temperature of the discharge shall not exceed 89°F, nor exceed the natural receiving water temperature by more than 20°F from May to October and by more than 39°F from November to April.”

It is incomprehensible that a temperature of 89°F will not have an impact on cold water aquatic beneficial uses of the receiving stream, since the Department of Fish and Game routinely recommends that 58°F is necessary to protect these uses. Delta waterways are crucial habitat and migration corridors for a number of 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 thaleichthys*), 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 South Delta. The discharges of water storage and electrical generation reservoirs are critically controlled for temperature to facilitate cold water aquatic life beneficial uses. It would appear that the Findings of the study are based on the buoyant nature of the thermal plume, which would mean that the view of the study was limited to the small area of the discharge and not the overall increase in Delta water temperatures. The proposed Thermal Plan exception could offset significant benefits gained by the regulation of numerous thermally regulated discharges tributary to Delta waterways and must be analyzed in the required Antidegradation analysis.

As is stated above, the Discharger has proposed a technological solution that would eliminate the discharge thereby eliminating the increased discharge of thermal waste which would likely be found to be BPTC in accordance with the required Antidegradation analysis. Since the Discharger has proposed a project to eliminate the discharge within the term of the permit, it makes no technical or logical sense to proceed with consideration of a Thermal Plan exception or adoption of the proposed Permit which is based on the exception. A better regulatory and reasonable approach is to grant a

compliance time schedule for temperature that requires elimination of the discharge under the time frame proposed by the Discharger which will be within the term of the proposed Permit and will eliminate the need for the proposed Thermal Plan exception. The proposed Thermal Plan exception and Permit cannot be adopted without first conducting an Antidegradation analysis and fulfilling the requirement for BPTC which would likely conclude that elimination of the discharge, as proposed by the Discharger, is the best course of action. The Thermal Plan exception is not necessary if the Board adopts a compliance schedule for elimination of the discharge in accordance with the Dischargers request.

2. The proposed Permit allows a mixing zone for arsenic, dibromochloromethane, dichlorobromomethane and manganese in violation of requirements in the Basin Plan and the SIP.

The proposed Permit would allow a mixing zone for arsenic, dibromochloromethane, dichlorobromomethane and manganese rather than include compliance schedules based on the Discharger's proposal to eliminate the surface water discharge by 2010.

The permit writer bases the proposed mixing zones on an assumption, that the discharge is "completely mixed" as defined by the SIP to avoid extensive mixing zone analyses. The assumption of a completely mixed discharge is invalidated by the fact that the discharge enters the receiving stream via a "shore side diffuser" (proposed Permit Fact Sheet page F-4 II-A) and the "buoyant nature of the thermal plume" (proposed Permit Fact Sheet page F-24). The Basin Plan, page IV-16.00, requires the Regional Board use EPA's *Technical Support Document for Water Quality Based Toxics Control (TSD)*. The TSD, page 70, defines a first stage of mixing, close to the point of discharge, where complete mixing is determined by the momentum and buoyancy of the discharge. Obviously the wastewater discharge here is not completely mixed in the first stage. The second stage is defined by the TSD where the initial momentum and buoyancy of the discharge are diminished and waste is mixed by ambient turbulence. The TSD goes on to state that in large rivers this second stage mixing may extend for miles. There are drinking water intakes, and proposed intakes, downstream of the wastewater discharge which could be impacted prior to the pollutants from the discharge are completely mixed. The TSD, Section 4.4, requires that if complete mix does not occur in a short distance mixing zone monitoring and modeling must be undertaken. The Board's broad unsupported assumption of complete mix is not defensible. The Regional Board has not met the burden of proof that the discharge is well mixed. The extensive SIP, Section 1.4.2.2, requirements for a mixing zone study apply and must be analyzed before a mixing zone is allowed for this discharge. The proposed Effluent Limitations in the proposed Permit are not supported by the scientific investigation required by the SIP and the Basin Plan.

A very clear unaddressed requirement (SIP Section 1.4.2.2) for mixing zones is that the point(s) in the receiving stream where the applicable criteria must be met shall be specified in the proposed Permit.

A study of whether a “complete mix” situation occurs downstream of the discharge is necessary before granting a mixing zone and determining whether a significant volume of additional work is necessary to address SIP requirements before granting mixing zones for this discharge. In light of the fact that the Discharger has proposed to eliminate the surface water discharge, the proposed mixing zones are not necessary. The proposed Effluent Limitations based on mixing zones are not technically or legally defensible based on the available information.

With regard to mixing zones, the proposed Permit states that: “The decision to allow dilution credits depends upon whether a discharge is completely or incompletely mixed. For constituents where water quality criteria are based on human health objectives, critical environmental impacts are expected to occur far downstream from the source such that complete mixing is a valid assumption. Therefore, for purposes of establishing WQBELs in this Order, dilution credits have been granted for constituents with human health-based criteria using Table F-3. However, for constituents with aquatic life toxicity-based criteria, where impacts can occur over a small spatial scale near the effluent discharge point, complete mixing is not a valid assumption such that dilution credit has not been granted for these constituents. This Order includes a provision that allows the permit to be reopened to allow dilution credits if the Discharger completes a mixing zone and dilution study that demonstrates to the satisfaction of the Regional Water Board that a dilution credit is appropriate.”

It can be assumed that the discharge is not well mixed, but that the thermal plume is buoyant. There is no information to allow a conclusion that the waters are well mixed downstream.

The resolution of the proposed mixing zone is inadequate in that it does not include the specific language of the exception instead simply stating that: “**THEREFORE BE IT RESOLVED** that an exception to Specific Water Quality Objectives 5.A.(1)a, 5.A.(1)c, and 5.A.(2) of the *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* is granted for the California Department of General Services Central Plant Operations, Heating and Cooling Facility’s non-contact cooling water discharge into the Sacramento River. This exception is conditional and may be terminated at any time.” The specific exception must be presented in the resolution.

- 3. The proposed Permit is based on an incomplete Report of Waste Discharge (RWD) and in accordance with Federal Regulations 40 CFR 122.21(e) and (h) and 124.3 (a)(2) the State’s Policy for Implementation of Toxics standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) and California Water Code Section 13377 the permit should not be issued until the discharge is fully characterized and a protective permit can be written.**

There is no information in the proposed Permit to indicate that the wastewater discharge has been characterized for California Toxics Rule (CTR), National Toxics Rule (NTR), drinking water MCLs and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives. The Reasonable Potential Analysis Summary does not contain a complete list of CTR, NTR, drinking water MCLs and other pollutants which would indicate that the Regional Board is basing the proposed Permit on adequate information. For the last several years the Regional Board's NPDES permits have contained a spreadsheet detailing the priority pollutant sampling which has, or has not, been monitored. Absent this spreadsheet, one can only conclude that the required priority pollutant sampling, which is necessary to characterize the discharge, has not been conducted. The absence of data is contrary to precedential Water Quality Order WQO 2004-0013 for the City of Yuba City, "The findings or Fact Sheet should cite the specific data on which it relied in its calculations."

The SIP required the Regional Board's to require dischargers to characterize their discharges for priority pollutants. On 10 September 2001, the Regional Board mailed out a California Water Code Section 13267 letter to dischargers requiring a minimum of quarterly sampling for priority pollutants, pesticides, drinking water constituents, and other pollutants. The Regional Board's 13267 letter cited SIP Section 1.2 as directing the Board to issue the letter requiring sampling sufficient to determine reasonable potential for priority pollutants and to calculate Effluent Limitations. The Regional Board's 13267 letter went beyond requiring sampling for CTR and NTR constituents and required a complete assessment for pesticides, drinking water constituents, temperature, hardness and pH and receiving water flow. There is no indication that any this data was ever received or that it was utilized in preparing the proposed permit.

SIP Section 1.3 requires that the Regional Board conduct a reasonable potential analysis for each priority pollutant to determine if a water quality-based Effluent Limitation is required in the permit. Absent the data, the Regional Board cannot possibly comply with SIP requirement of Section 1.3. There is no analysis or discussion in the proposed Permit which indicates the Regional Board complied with the requirements of SIP Section 1.3. Failure to include this information, if received, would be in violation of Federal Regulation 40 CFR 124.8 (A)(2) which requires Fact Sheets contain an assessment of the wastes being discharged.

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 landfill, for which the permit application requirements are extensive. 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." The Federal Report of Waste Discharge forms also 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 and 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. 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. This has apparently not been completed.

As the proposed Permit states: 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, or the information utilized to write the proposed Permit is incomplete, and in accordance with the CWC, Federal Regulations and the SIP the proposed Permit should not be adopted.

4. The proposed Permit fails to include mass based Effluent Limitations in accordance with Federal Regulations and technical advise from EPA.

Section 5.7.1 of U.S. EPA's *Technical Support Document for Water Quality Based Toxics Control* (TSD, EPA/505/2-90-001) states with regard to mass-based Effluent Limits:

“Mass-based effluent limits are required by NPDES regulations at 40 CFR 122.45(f). The regulation requires that all pollutants limited in NPDES permits have limits, standards, or prohibitions expressed in terms of mass with three exceptions, including one for pollutants that cannot be expressed appropriately by mass. Examples of such pollutants are pH, temperature, radiation, and whole effluent toxicity. Mass limitations in terms of pounds per day or kilograms per day can be calculated for all chemical-specific toxics such as chlorine or chromium. Mass-based limits should be calculated using concentration limits at critical flows. For example, a permit limit of 10 mg/l of cadmium discharged at an average rate of 1 million gallons per day also would contain a limit of 38 kilograms/day of cadmium.

Mass based limits are particularly important for control of bioconcentratable pollutants. Concentration based limits will not adequately control discharges of these pollutants if the effluent concentrations are below detection levels. For these pollutants, controlling mass loadings to the receiving water is critical for preventing adverse environmental impacts.

However, mass-based effluent limits alone may not assure attainment of water quality standards in waters with low dilution. In these waters, the quantity of effluent discharged has a strong effect on the instream dilution and therefore upon the RWC. At the extreme case of a stream that is 100 percent effluent, it is the effluent concentration rather than the mass discharge that dictates the instream concentration. Therefore, EPA recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards.”

Federal Regulations, 40 CFR 122.45 (f), states the following with regard to mass limitations:

- “(1) all pollutants limited in permits shall have limitations, standards, or prohibitions expressed in terms of mass except:
 - (i) For pH, temperature, radiation or other pollutants which cannot be expressed by mass;
 - (ii) When applicable standards and limitations are expressed in terms of other units of measurement; or
 - (iii) If in establishing permit limitations on a case-by-case basis under 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.
- (2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations.”

Mixing zone allowances will increase the mass loadings of a pollutant to a waterbody and decrease treatment requirements. Accurate mass loadings are critical to mixing zone determinations.

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.

5. 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.

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

6. 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.

Proposed Permit Finding No. J. State Implementation Policy states that: “On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxic 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.

7. The proposed permit fails to contain an Effluent Limitation for manganese protective of the irrigated Agriculture beneficial use of the receiving stream in violation of Federal Regulations 40 CFR 122.44.

As discussed above the proposed Permit would allow Effluent Limitations for manganese based on granting a mixing zone, or dilution in the receiving stream. The proposed Permit Effluent Limitation for manganese is 2954 ug/l. The proposed mixing zone only analyzed human health conditions. Irrigated agriculture is a beneficial use of the receiving stream. An agricultural water quality goal of 200 ug/l exists for manganese, a factor of more than 10 times lower than the proposed discharge limit. The proposed permit did not assess and is not protective of the irrigated agricultural beneficial use of the receiving stream. The Basin Plan, 8. *Policy for Application of Water Quality Objectives*, states that: "Water quality objectives are defined in the Water Code as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area". Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard.

8. The proposed Permit contains a compliance schedule for aluminum based on "a new interpretation of the Basin Plan" as detailed in the Fact Sheet, page F-32 and Finding No. k. The Regional Board fails to provide any explanation or definition of the "new interpretation" of the Basin Plan.

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.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Jennings". The signature is fluid and cursive, with a large initial "B" and "J".

Bill Jennings, Executive Director
California Sportfishing Protection Alliance