Bill Jennings
California Sportfishing Protection Alliance
3536 Rainier Avenue
Stockton, CA 95204
Tel: 209-464-5067
Fax: 209-464-1028
E-mail: deltakeep@aol.com

Michael R. Lozeau
Law Office of Michael R. Lozeau
1516 Oak Street, Suite 216
Tel: 510-749-9102
Fax: 510-749-9103
E-mail: mrlozeau@lozeaulaw.com

Mike Jackson
Law Office of Mike Jackson
P.O. Box 207
429 W. Main Street
Quincy, CA 95971
Tel: 530-283-1007
Fax: 530-283-0712
E-mail: mjatty@sbcglobal.net

VIA: Electronic Submission
Hardcopy to Follow

For Petitioner California Sportfishing Protection Alliance

BEFORE THE STATE WATER RESOURCES CONTROL BOARD

In the Matter of Waste Discharge Requirements For City of Shasta Lake Water Treatment Plant, Shasta County, California Regional Water Quality Control Board – Central Valley Region Order No. R5-2006-0102; NPDES No. CA0004693	**PETITION FOR REVIEW**

Pursuant to Section 13320 of California Water Code and Section 2050 of Title 23 of the California Code of Regulations (CCR), California Sportfishing Protection Alliance ("CSPA" or "petitioner") petitions the State Water Resources Control Board (State Board) to review and vacate the final decision of the California Regional Water Quality Control Board for the Central Valley Region ("Regional Board") in adopting Waste Discharge Requirements (NPDES No. CA0081485) City of Shasta Lake, City of Shasta Lake Water Treatment Plant, Shasta County, on 22 September 2006. *See* Order No. R5-2006-0102. The issues raised in this petition were raised in timely written comments and direct testimony.

1. NAME AND ADDRESS OF THE PETITIONERS:

California Sportfishing Protection Alliance
3536 Rainier Avenue
Stockton, California 95204
Attention: Bill Jennings, Executive Director

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

Petitioner seeks review of Order No. R5-2006-0102, Waste Discharge Requirements (NPDES No. CA0004693) for City of Shasta Lake, City of Shasta Lake Water Treatment Plant, Shasta County. Copies of the orders adopted by the Regional Board at its 22 September 2006 Board meeting are attached hereto as Attachments A.

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

22 September 2006

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

CSPA submitted a detailed comment letter on 19 September 2006. This letter, our verbal presentation, and the following comments set forth in detail the reasons and points and authorities why CSPA believes the Order fails to comport with statutory and regulatory requirements. CSPA only received copies of the tapes of the public hearing on 19 October 2006 and a copy of the final Order was only posted to the Regional Board's Adopted Orders web page on 20 October. Consequently, CSPA has not had sufficient opportunity to review the tapes and examine the final Order prior to submission of this petition. CSPA urges the State Board to require that the Regional Board ensure that copies of adopted orders and requested hearing tapes are timely provided to designated parties. The specific reasons the adopted Order is improper are:

A. The Permit should require BPTC and eliminate the discharge in accordance with the Antidegradation Policy. The state and Regional Board's Antidegradation Policy requires that Discharger's provide best practicable treatment and control (BPTC) of wastewater discharges.

The discharge of waste can easily and reasonably be eliminated from surface waters, which would represent best practicable treatment and control (BPTC) of the discharge. The City of Shasta Lake owns and operates a potable water treatment plant.

Filter backwash water is currently discharged to surface water. The Order Fact Sheet, page F-5, Section E, states that the Discharger plans to begin recycling 60% to 70% of the filter backwash through the treatment train. There is no provided or logical reason why the Discharger cannot provide BPTC by recycling 100% of the wastewater that is currently discharged to surface waters. Alternately, the discharge is in close proximity to the City's WWTP and what flows are not recycled may be discharged to the City's collection system during off hours periods (i.e. non peak flow time). The Basin plan encourages Regional treatment facilities over multiple initial discharges. In either case, the discharge may be eliminated.

B. The Basin Plan prohibits the discharge of wastewater to low flow streams as a permanent means of disposal.

The Fact Sheet at page F-9 states, "The Regional Board also finds that, based upon available information, the unnamed tributary to Churn Creek, absent the discharge, is an ephemeral stream." 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 Order characterizes the receiving stream as low flow, or ephemeral, with no available dilution. The Order does not discuss any efforts to eliminate the discharge to surface water and compliance with the Basin Plan Prohibition. Federal Regulation 40 CFR 122.4 states that no permit shall be issued for any discharge when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA and are inconsistent with a plan or plan amendment. The Permit must be amended to require that the Discharger develop a workplan to eliminate the wastewater discharge to surface water in accordance with the Basin Plan.

C. The Regional Board has included an allowance for a new wastewater discharge to surface waters in violation of Federal Regulations 40 CFR 122.21, 122.41, 124.3 (a)(2), SIP Section 1.2 and the Antidegradation Policy.

The fact that "low threat" discharges constitute "new" discharges is confirmed by Monitoring and Reporting Program VIII (B) which states that: Low threat discharge monitoring locations shall be modified as new low threat discharges from the facility are identified." As can be seen in the previous sentence the discharges have not been identified and therefore not characterized. The wastewater effluent has not been characterized, including CTR constituents, a violation of Federal Regulations 40 CFR 122.21 and SIP Section 1.2. In accordance with 40 CFR 122.21 (e) and (h) and 124.3 (a)(2) the Regional Board shall not adopt the Order without first obtaining a complete application. In this case, the permit application requirements for industrial or commercial facilities are extensive. Since there is no data characterizing the wastewater discharge, and no documentation of the wastewater quality in the Order, it is impossible to determine if the proposed effluent limitations are protective of receiving water quality and the beneficial uses of the receiving stream(s). It appears that the "low threat"

discharges were not addressed in the Report of Waste Discharge; but represent an attempt to provide a gift discharge allowance to a Discharger. The Order does not address CEQA compliance for the new wastewater discharge, and it is doubtful that a CEQA document has been prepared. The Order does not specify the point of discharge as required by 40 CFR 122.45 (a) for "low threat" discharges. It does not identify the receiving stream(s) and does not include receiving water monitoring. Receiving water monitoring is critical to determine if the proposed Permit violates Receiving Water Limitations based on Basin Plan water Quality Objectives. Adequate monitoring is required to determine compliance in accordance with Federal Regulations 40 CFR 122.44 (i). There is no discussion of the new discharge in the Permit Findings or Fact Sheet. This is a violation of Federal Regulations 40 CFR 124.8. The Order at page 19, (6) Other Special Provisions (b)(iii)(3)(c), requires in part that: "When reasonable assurance cannot be provided that a discharge will comply with the prohibitions and limitations of this Order…," the Discharger is simply required to conduct sampling and the non-compliance is apparently allowed, which clearly shows the discharge is not a "low threat" and is not in accordance with 40 CFR 122.41 (a) Duty to Comply, 122.4 (a) and 122.4 (2)(i). Municipal water system discharges have a reasonable potential to exceed water quality standards. Municipal water systems routinely exceed the total trihalomethane drinking water MCL of 80 μg/l. The CTR contains significantly more stringent standards for chlorodibromomethane (0.401μg/l) and dichlorobromomethane (0.56 μg/l), both trihalomethanes. It is reasonable to assume, especially since the municipal water supply is chlorinated, that the "low threat" discharges from the water distribution system would exceed water quality standards for chlorodibromomethane and dichlorobromomethane. The effluent from the water treatment system filter backwash contained copper at concentrations that exceed water quality standards. It is reasonable to assume, therefore that discharges from the water distribution system would also contain copper concentrations above CTR water quality standards. The "low threat" discharges pose a threat to exceed water quality standards and must be properly regulated and characterized, not just lumped into a permit for a completely separate wastewater discharge, stating they are "low threat" without any supporting documentation.

The Order contains Effluent Limitations, Section IV, B, for "Low Threat Discharge Limitations", Special Provisions, Section VI (6)(b) and Monitoring Requirements, VIII (B) related to allowing a new, previously unregulated discharge of wastewater to surface waters. There is no antidegradation analysis with regard to the new "Low Threat" discharge. The antidegradation analysis in the Order is not simply deficient, it is literally nonexistent. The brief discussion of antidegradation requirements, in the Findings and Fact Sheet, consist only of skeletal, unsupported, undocumented conclusory statements totally lacking in factual analysis.

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.
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; for example 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. There is simply no discussion of the new "low threat" discharge in the antidegradation discussion in the Order. 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 discharge "low threat" waters to the sanitary sewer. 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." There is nothing in the Permit resembling an analysis that ensures that existing beneficial uses are protected. Nor does the Permit analyze the incremental and cumulative impact of increased loading of non-impairing pollutants on beneficial uses. In fact, there is no information or discussion on the composition and health of the identified beneficial uses. Any reasonably adequate antidegradation analysis must discuss the affected beneficial uses (i.e., numbers and health of the aquatic ecosystem; extent, composition and viability of agricultural production; people depending upon these waters for water supply; extent of recreational activity; etc.) and the probable effect the discharge will have on these uses.

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).

D. The Order contains a flawed Reasonable Potential Analysis for priority pollutants contrary to Federal Regulations 40 CFR 122.4 and 122.44 and CWC 13377.

The Regional Board apparently required the City of Shasta Lake conduct two sampling rounds for priority pollutants to characterize the discharge. The Permit Fact Sheet states in the Findings (Nos. C.3. f, g, h and i for copper, zinc, dichlorobromomethane and bis(2-ethylhexyl)phthalate respectively that there is insufficient data to determine whether a reasonable potential exists for the discharge to exceed water quality standards and an effluent limitation is therefore not being required. The Regional Board then proposes in the Monitoring and Reporting Program that priority pollutants only be monitored annually. If one uses standard statistical methods, such as

the student-T test, a minimum of 13 data points is considered the minimum number of data points to conduct an accurate analysis. This would mean that the CTR final compliance date of May 2010 would be passed by six-years before the Regional Board would conduct the required reasonable potential analysis. The Regional Board, by requiring what it states is an unacceptable number of priority pollutant sampling rounds, is deliberately avoiding the regulation of priority pollutants. The purpose of filters on the water treatment system is to remove constituents that are not allowable in the domestic water supply. The filter backwash water contains all of these constituents in concentrated form. Aquatic life criteria are typically much lower than drinking water standards. Aquatic life is a designated beneficial use of the receiving stream. It is reasonable that the concentrated filter backwash water will contain significant priority pollutants exceeding water quality standards.

40 CFR 122.44(d)(1)(i) states, "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." Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. The Order must be remanded back to the Regional Board to include Effluent Limitations for the above constituents.

E. The Order contains a flawed Reasonable Potential Analysis for bacteria contrary to Federal Regulations 40 CFR 122.4 and 122.44 and CWC 13377.

The discharge was not sampled for bacteria, which would be concentrated in the filter backwash water at levels exceeding the Receiving Water Limitations and based on the Basin Plan water quality objective for bacteria.

The MOU between the Regional Board and U.S. Forest Service (Resolution 5-01-211) indicates that houseboats on Shasta Lake have historically discharged shower, sink, dishwasher, and laundry water (gray water) into Shasta Lake. Shasta Lake is the only lake or reservoir in the Central Valley Region where the discharge of gray water from houseboats occurs. The Regional Board has found that gray water is a "high strength,

high pathogen waste." The Regional Board has determined that the discharge of gray water to Shasta Lake from houseboats constitutes a discharge of pollutants from a point source as defined in the Clean Water Act. Resolution 5-01-211 indicates that there are approximately 2000 houseboats on Shasta Lake that may discharge shower, sink, dishwasher, and laundry water directly into Shasta Lake. The Discharger treatment plant uses a filter system to remove waste particles, including pathogen, from approximately 6.0 million gallons of lake water per day. Over time the filters become loaded with waste particles/pathogens and must be cleaned to continue to function properly. Water and air is applied to the filters in order to clean filter media. The backwash water containing the waste particles leaves the filters through a channel at the top of the filters. It is estimated that filtration system will remove over 90 percent of the waste particles from the Lake's water. The filter's backwash (approximately 3 percent of the flow volume contains over 90 percent of the waste) is discharged to the backwash basin. Supernatant from the onsite backwash basin is piped to two offsite settling ponds at the former Summit City water treatment plant where they remain for another eighteen hours prior to discharge to the unnamed tributary to Churn Creek. A manually adjusted valve controls discharge to the two settling ponds. The Permit is silent on the concentrations of total coliform organisms in the effluent and the impacts pathogens will have on the beneficial uses. However, sample data for the supernate collected from at the Sacramento Fairbairn Water Treatment Plant backwash lagoons contained a total coliform organism concentration of 540 MPN/100ml and a fecal coliform organism concentration of 95 MPN/100ml. Moreover, the Order contains average monthly and maximum daily effluent limitations for TSS of 30 and 50 mg/L, respectively. The Regional Water Board has determined that TSS are more likely to be resuspended than settleable solids in the wastewater settling ponds before discharge, and therefore, TSS concentrations are more likely to vary in the discharge than concentrations of settleable solids. Waste particles, which are expressed as TSS in the Permit, contain pathogens. The principal infectious agents (pathogens) that may be present in the discharge can be classified into three broad groups: bacteria, parasites, and viruses. The relationship between pathogens with waste particles is well documented in the literature. The discharge has the reasonable potential to exceed the water quality standard for pathogens.

Shasta Lake, the source water for the Discharger's water treatment plant, is known to contain pathogens. Pathogens and waste remove from the source water by the Discharger's filter system are discharged to the backwash basin and settling ponds. Effluent from the settling ponds contains is subsequently discharged to the unnamed tributary to Churn Creek. The Permit states, "The Regional Water Board also finds that based on the available information, the unnamed tributary to Churn Creek, absent the discharge, is an ephemeral stream. The ephemeral nature of the unnamed tributary to Churn Creek means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available."

The Permit indicates the designated beneficial uses of the unnamed tributary and Churn Creek downstream of Discharge Point 001 are as follows: municipal and domestic supply; agricultural supply, industrial service supply; navigation; hydropower generation; water contact recreation, including canoeing and rafting; non-contact water recreation,

including aesthetic enjoyment; warm freshwater habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning, reproduction, and/or early development; cold spawning, reproduction, and /or early development; and wildlife habitat.

The discharge of wastewater containing pathogens from the Discharger's settling ponds to the unnamed tributary will result in the impairment of the beneficial uses for contact recreation, municipal, domestic supply and agricultural supply. The Porter-Cologne Water Quality Control Act (California Water Code Division 7) and the Basin Plan mandate that waste discharges that impair beneficial uses be eliminated to protect the waters of the State. To protect the beneficial uses for contact recreation, municipal, domestic supply and agricultural supply, the Regional Board must ensure that the discharge from the settling ponds is disinfected and adequately treated to prevent disease. The wastewater discharged must be treated to tertiary standards, or equivalent, to protect contact recreational and other beneficial uses.

40 CFR 122.44(d)(1)(i) states, "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." Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA. The Order must be remanded back to the Regional Board to include an Effluent Limitation for bacteria.

F. The Order contains a flawed Reasonable Potential Analysis for copper and dichlorobromomethane contrary to Federal Regulations 40 CFR 122.4 and 122.44 and CWC 13377 and the SIP

The maximum observed effluent concentration for copper was 13 μg/l which exceeds the CTR water quality standard of 4.2 μg/l. The maximum observed effluent concentration for dichlorobromomethane was 3.0 μg/l which exceeds the CTR water quality standard of 0.56 μg/l. In accordance with Federal Regulations, 40 CFR 122.44, the Regional Board is required to establish an effluent limitation if a pollutant is measures in the effluent which presents a reasonable potential to exceed a water quality standard of objective. In accordance with the SIP, Section 1.3, since the maximum effluent

concentration exceeded a water quality standard, an effluent limitation is required. The measured concentrations of copper and dichlorobromomethane clearly exceed the CTR water quality standard and in accordance with Federal Regulations and the SIP, effluent limitations are required. Federal Regulation, 40 CFR 122.4 (a), (d) and (g) require that no permit may be issued when the conditions of the permit do not provide for compliance with the applicable requirements of the CWA, or regulations promulgated under the CWA, when imposition of conditions cannot ensure compliance with applicable water quality requirements and for any discharge inconsistent with a plan or plan amendment approved under Section 208(b) of the CWA.

G. The Order contains a flawed Reasonable Potential Analysis for zinc and bis(2-ethylhexyl)phthalate contrary to Federal Regulations 40 CFR 122.4 and 122.44 and CWC 13377 and the SIP.

The maximum observed effluent concentration for zinc was 39 μg/l which does not exceed the CRT water quality standard of 54 μg/l. Bis(2-ethylhexyl)phthalate exceeds water quality standards in the receiving stream, but has not been detected in the wastewater effluent. The Order Fact Sheet states that the receiving water sampling data for bis(2-ethylhexyl)phthalate is subject to error and is being discarded without any supporting documentation from the laboratory quality assurance/quality control (QA/QC) documents. The Regional Board total disregards 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 when the burden should properly be placed on wastewater Dischargers to conduct proper sampling and analysis.

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. The reasonable potential analyses for zinc, a CTR constituent, fails to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. 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 and if properly followed would have resulted in a reasonable potential for exceeding the CTR water quality standard for zinc. 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.

The Order contains a flawed Reasonable Potential Analysis for electrical conductivity (EC) contrary to Federal Regulations, 40 CFR 122.44 (d)(i), which 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 umhos/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 umhos/cm.

The wastewater discharge EC level is projected to be 1833 μmhos/cm (From Fact Sheet Table F-1). Clearly the discharge exceeds the MCLs for EC presenting a reasonable potential to exceed the water quality objective. The proposed EC limitation clearly exceeds the agricultural water quality goal and the MCL for EC. The proposed Order fails to establish an effluent limitation for EC that are protective of the Chemical Constituents water quality objective. The wastewater discharge increases concentrations of EC to unacceptable concentrations adversely affecting the agricultural beneficial use. 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, mandates an effluent limitation be established if a discharge exceeds a water quality objective, which is clearly the case here with regard to EC.

H. The Order contains an Effluent Limitation for acute toxicity that allows mortality that exceeds the Basin Plan water quality objective and does not comply with federal regulations, at 40 CFR 122.44 (d)(1)(i).

Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The Water

Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This section of the Basin Plan further states, in part that, compliance with this objective will be determined by analysis of indicator organisms. The Tentative Permit requires that the Discharger conduct acute toxicity tests and states that compliance with the toxicity objective will be determined by analysis of indicator organisms. However, the Tentative Permit contains a discharge limitation that allows 30% mortality (70% survival) of fish species in any given toxicity test. For an ephemeral or low flow stream, allowing 30% mortality in acute toxicity tests allows that same level of mortality in the receiving stream, in violation of federal regulations and contributes to exceedance of the Basin Plan's narrative water quality objective for toxicity. Accordingly, the Order should be revised to prohibit acute toxicity.

I. The Permit must contain a limitation for chronic toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i), which 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.

Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including state narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The Tentative Permit states that: "…to ensure compliance with the Basin Plan's narrative toxicity objective, the discharger is required to conduct whole effluent toxicity testing…". However, sampling does not equate with or ensure compliance. The Tentative Permit requires the Discharger to conduct an investigation of the possible sources of toxicity if a threshold is exceeded. This language is not a limitation and essentially eviscerates the Regional Board's authority, and the authority granted to third parties under the Clean Water Act, to find the Discharger in violation for discharging chronically toxic constituents. An effluent limitation for chronic toxicity must included in the Order upon remand back to the Regional Board.

J. The Groundwater Limitation is not protective against degradation of water quality and violates the State and Regional Board's Antidegradation Policy.

The proposed Groundwater Limitation does not prohibit degradation of groundwater quality when compared with background water quality. There is no discussion of best practicable treatment and control (BPTC) of the discharge of waste to groundwater and an allowance for groundwater degradation.

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 Discharger must be required to provide BPTC of the discharge and the Order must be remanded back to the Regional Board to be revised to prohibit the degradation of groundwater quality or contain a complete antidegradation analysis.

K. The Order fails to contain mass limits for TSS and chlorine contrary to 40 CFR §122.45, which states that "All pollutants limited in permits shall have limitations…expressed in terms of mass"

Section 5.7.1 of U.S. EPA's Technical Support Document for Water Quality Based Toxics Control (TSD, EPA/505/2-90-001) states with regard to mass-based Effluent Limits: "Mass-based effluent limits are required by NPDES regulations at 40 CFR 122.45(f). The regulation requires that all pollutants limited in NPDES permits have limits, standards, or prohibitions expressed in terms of mass with three exceptions, including one for pollutants that cannot be expressed appropriately by mass. Examples of

such pollutants are pH, temperature, radiation, and whole effluent toxicity. Mass limitations in terms of pounds per day or kilograms per day can be calculated for all chemical-specific toxics such as chlorine or chromium. Mass-based limits should be calculated using concentration limits at critical flows. For example, a permit limit of 10 mg/l of cadmium discharged at an average rate of 1 million gallons per day also would contain a limit of 38 kilograms/day of cadmium. Mass based limits are particularly important for control of bioconcentratable pollutants. Concentration based limits will not adequately control discharges of these pollutants if the effluent concentrations are below detection levels. For these pollutants, controlling mass loadings to the receiving water is critical for preventing adverse environmental impacts. However, mass-based effluent limits alone may not assure attainment of water quality standards in waters with low dilution. In these waters, the quantity of effluent discharged has a strong effect on the instream dilution and therefore upon the RWC. At the extreme case of a stream that is 100 percent effluent, it is the effluent concentration rather than the mass discharge that dictates the instream concentration. Therefore, EPA recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards." Federal Regulations, 40 CFR 122.45 (f), states the following with regard to mass limitations: "(1) All pollutants limited in permits shall have limitations, standards, or prohibitions expressed in terms of mass except: (i) For pH, temperature, radiation or other pollutants which cannot be expressed by mass; (ii) When applicable standards and limitations are expressed in terms of other units of measurement; or (iii) If in establishing permit limitations on a case-by-case basis under 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment. (2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations." Federal Regulations, 40 CFR 122.45 (B)(1), states the following: "In the case of POTWs, permit effluent limitations, standards, or prohibitions shall be calculated based on design flow." 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.

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 contains average monthly and maximum daily effluent limitations for TSS of 30 and 50 mg/L, respectively. However, the Permit does not contain a monthly and daily mass limitation for TSS. The Order is deficient in this regard and must be revised to include an effluent mass loading limits for TSS.

The Order contains one-hour average and four-day average effluent limitations for chlorine residual of 0.02 and 0.01 mg/L, respectively. The Fact Sheet indicates that "Effluent total residual chlorine shall not exceed the following:

0.01 mg/L as a four-day average;
0.0083 lbs/day as a four-day average;
0.02 mg/L as a one-hour average; and
0.017 lbs/day as a one-hour average."

However, the Permit does not contain one-hour average and four-day average mass limitation for chlorine residual. The Permit is deficient in this regard and must be Remanded back to the Regional Board to be revised to include an effluent mass loading limits for chlorine residual.

5. THE MANNER IN WHICH THE PETITIONERS ARE AGGRIEVED.

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

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

CSPA's members reside in communities whose economic prosperity depends, in part, upon the quality of water. CSPA has actively promoted the protection of fisheries and water quality throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore declining aquatic resources.

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

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

Petitioners seek an Order by the State Board to:

A. Vacate Order No. R5-2006-0102 (NPDES No. CA0004693) and remand to the Regional Board with instructions prepare and circulate a new tentative order that comports with regulatory requirements.

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

CSPA's arguments and points of authority are adequately detailed in the above comments, our 19 September 2006 letter that was accepted into the record and oral testimony presented to the Regional Board on 22 September 2006. Should the State Board have additional questions regarding the issues raised in this petition, CSPA will provide additional briefing on any such questions.

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

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

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

A true and correct copy of this petition, without attachment, was sent to the Discharger in care of Mr. Chuck Robinson, Water Treatment Supervisor, City of Shasta Lake, P.O. Box 777, Shasta Lake, CA 96019.

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

CSPA presented the issues addressed in this petition to the Regional Board in live oral testimony at the 22 September 2006 hearing on the Order and in a comments submitted to the Regional Board on 19 September 2006 that were accepted into the record.

If you have any questions regarding this petition, please contact Bill Jennings at (209) 464-5067 or Michael Lozeau at (510) 749-9102.

Dated: 21 October 2006

Respectfully submitted,

Bill Jennings, Executive Director
California Sportfishing Protection Alliance

Attachments:

A. Order No. R5-2006-0102