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Mr. Ken Landau, Assistant Executive Officer
Ms. Diana Messina, Supervising WRCE
Mr. James Marshall, Senior WRCE
Regional Water Quality Control Board
Central Valley Region
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VIA: Electronic Submission
Hardcopy if Requested

RE: Renewal of Waste Discharge Requirements (NPDES No. CA0079111) for City of Sacramento Wastewater Collection and Treatment System, Sacramento County

Dear Messrs. Landau, Marshall and Ms. Messina;

The California Sportfishing Protection Alliance (CSPA) has reviewed the proposed renewal of Waste Discharge Requirements (NPDES No. CA0079111) for the Sacramento Wastewater Collection and Treatment System and respectfully 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 water quality and fisheries. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley, including Sacramento County.

The City of Sacramento owns and operates a combined sewer system (CSS) that conveys domestic and commercial wastewater and storm water runoff from 7,510 acres (approximately 334 miles of sewer pipe) in downtown Sacramento, East Sacramento, and Land Park areas. The Discharger also owns and operates a separate sanitary sewer system that conveys domestic and commercial wastewater from 3,690 acres (approximately 566 miles of sewer pipe) from parts of the City surrounding the CSS to the north, east, and south. A portion of the flow from the separate sanitary sewer system flows into the CSS; the remainder flows by gravity or is pumped to the Regional Interceptors to the Sacramento Regional County Sanitation District's regional wastewater treatment plant (SRWTP). The entire collection system serves approximately 300,000 people.

1. The City of Sacramento has established a Dismal Record of Compliance with the Clean Water Act and US EPA's Combined Sewer Overflow Policy.

On April 19th 1994 US EPA published (Federal Register (Vol. 59. No. 75)) a "Combined Sewer Overflow (CSO) Control Policy." The Policy requires that permittees with combined sewer systems (CSSs) that have CSOs should immediately undertake a process to accurately characterize their CSS and CSO discharges, demonstrate implementation of minimum technology-based controls identified in the Policy, and develop long-term CSO control plans which evaluate alternatives for attaining compliance with the CWA, including compliance with water quality standards and protection of designated uses. Once the long-term CSO control plans are completed, permittees will be responsible to implement the plans' recommendations as soon as practicable. Permittees with CSOs should submit appropriate documentation demonstrating implementation of nine minimum controls including any proposed schedules for completing minor construction activities. CSS permits must contain monitoring for compliance with water quality standards and a reopener clause authorizing the NPDES authority to reopen and modify the permit if it is determined that the CSO controls fail to meet water quality standards or protect designated uses. The nine minimum controls are:

1. Proper operation and regular maintenance programs for the sewer system and the CSUs;

2. Maximum use of the collection system for storage;

3. Review and modification of pretreatment requirements to assure CSO impacts are minimized;

4. Maximization of flow to the POTW for treatment;

5. Prohibition of CSOs during dry weather;

6. Control of solid and floatable materials in CSOs;

7. Pollution prevention:

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts, and

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Beginning on page F-8 of the proposed Permit is a *Compliance Summary*. The Compliance Summary is heavily reliant on a 13 December 2005 Final Draft Clean Water Act Compliance Evaluation Report prepared by US EPA. US EPA's report documented that the Discharger failed to comply with several of the USEPA CSO Control Policy Nine Minimum Controls, as specified in Attachment C to Order No. 5-01-258. USEPA found deficiencies in the City's programs and practices under control measure #1 (proper operations and maintenance), measure #2 (maximize use of the collection system for storage), measure #3 (pretreatment program),

measure #6 (control solid and floatable material), measure #8 (public notification), and measure #9 (measuring the efficacy of CSO controls). Other findings by US EPA include:

- The Discharger had 10 CSO discharge events to the Sacramento River over the last 3 years. In storm year 2002/2003, the City exceeded the total suspended solids effluent limit at CSO Discharge Point No. 006.

- The Discharger's hydraulic model estimates that many parts of the CSS service area remain at risk for outflows and flooding from a 10-year storm. It is likely that outflows and flooding will result from smaller storms, but it not known how small of a storm will cause CSS outflows.

- The Discharger has not adequately documented its progress towards attaining the LTCP goals related to outflows and street flooding. It is not known how many CSS outflows have occurred or if outflows are decreased because the Discharger does not keep records of outflows.

- The Discharger has not identified all of the additional projects needed to meet the interim or final LTCP goals of controlling outflows resulting from 5-year and 10-year storms.

- The Discharger's spill response plan does not include adequate procedures for many important spill response activities.

- In fiscal year 2004/2005, the Discharger recorded 102 sewage spills totaling 7,435 gallons (these figures do not include the outflows on September 19, 2004).

- The Discharger does not have a program to regulate restaurant grease discharges to the sewer system. The Discharger has not evaluated what impact restaurant grease is having on the Discharger's sewer system.

- The Discharger lacks data on the condition of its sewers. Fiscal Year 2004/2005, when the Discharger inspected 31 miles of sewer pipes, was the first year that the Discharger had an established procedure for documenting pipe condition findings.

- The Discharger has rehabilitated or replaced about 3 percent of its collection system over the last 10 to 20 years. At this rate, it will take several hundred years to renew the Discharger's sewer infrastructure compared to a useful life expectancy of about 100 years.

On 25 August 2008 the Regional Water Board issued a Record of Violations (ROV) to the Discharger for periodic violations of effluent limitations for chlorine residual, TSS, and pH for the period January 2001 through January 2008. On 10 November 2008 the Regional Water Board issued an Administrative Civil Liability Complaint (R5-2008-0609) based on the ROV.

Beginning on page F-12 of the proposed Permit, *Planned Changes,* it is documented that: "The most recent City Utilities Capital Improvement Program (CIP) provides the projected expenditures for the CSS Improvement Plan (i.e., the July 1995 Combined Sewer System Improvement Plan) for 2008 through 2013. The CIP acknowledges the total cost for the CSS Improvement Plan is $132 million; the total budget for sewer programs for 2008/2009 was $4.1 million (which includes budgets for the combined system; however, it is uncertain what the total funding is specifically for the combined systems). The CIP also described $63.5 million in additional funding for the CSS Improvement Plan, including $10.5 million in federal grants and $53 million in loans from the State Revolving Fund. Finally, the CIP budget includes additional funding for the Combined System Improvement Plan Update."

2. The Combined Sewer Overflows from the City of Sacramento degrade the Beneficial Uses of the Sacramento River and Exceed Water Quality Standards contrary to US EPA's Combined Sewer Overflow Control Policy.

The proposed Permit, page 6 states that: "According to the CSO Control Policy, a permittee is required to develop and implement a long-term CSO control plan which evaluates alternatives for attaining compliance with the CWA, including compliance with applicable water quality standards and protection of designated uses. It further states that once long-term CSO control plans are completed, permittees are responsible for implementing the plan to ensure compliance with applicable water quality standards."

The proposed permit identifies the designated beneficial uses of the Sacramento river as Municipal and domestic supply (MUN); agricultural supply, including stock watering (AGR); industrial process (PROC) and service supply (IND); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater aquatic habitat (WARM), cold freshwater aquatic habitat (COLD); warm migration, cold migration (MIGR); warm spawning habitat (SPWN), wildlife habitat (WILD); and navigation (NAV).

The proposed Permit contains a summary, Table F-7, of toxic pollutant monitoring for storm water years 2002 through 2008 for dissolved copper, lead, zinc and the pesticides diazinon, chlorpyriphos and diuron.

- The discharge is toxic to aquatic life.
    - Dissolved copper was sampled in the discharge at a maximum of 99 ug/l (at discharge point 002), 22 ug/l (at discharge point 006) and 13 ug/l (at discharge points 004 and 005). The water quality standard for copper to protect aquatic life is 5.0 ug/l, assuming a hardness of 50 mg/l. The discharge clearly exceeds toxic levels.
    - Dissolved lead was sampled in the discharge at a maximum of 5.1 ug/l (at discharge point 006). The water quality standard for lead is 1.8 ug/l assuming a hardness of 50 mg/l. The discharge clearly exceeds toxic levels.

- The minimum detection levels for sampling of lead was 5.0 ug/l which exceeds the toxic standard of 1.8. The discharge could have exceeded toxic levels at the other discharge points but would not be documented due to the elevated detection levels.

- Dissolved zinc was sampled in the discharge at a maximum of 360 ug/l (at discharge point 002) and 200 ug/l (at discharge point 006). The water quality standard for zinc to protect aquatic life is 65.7.0 ug/l, assuming a hardness of 50 mg/l. The discharge clearly exceeds toxic levels.

- The pesticide diuron was detected at 4.1 (at discharge point 002) and 1.8 ug/l (at discharge point 006). The Basin Plan water quality objective is for non-detectable concentrations.

  - The documented discharge of diuron exceeds the proposed Permit Receiving Water Limitation, No. 9 for Pesticides which prohibits total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer

- The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) exempts combined sewer systems from compliance with the California Toxics Rule (CTR). The CTR contains water quality standards, many of which are for toxic pollutants. Copper, lead and zinc are CTR regulated constituents. Although the SIP exempts the discharge from compliance with the CTR, the discharge may not degrade the aquatic life beneficial uses and cause toxicity. Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. The proposed Permit must contain effluent Limitations for copper, lead, zinc and pesticides.

- The discharge of toxic constituents in toxic concentrations exceeds the proposed Permit Receiving Water Limitation, No. 16 for Toxicity which prohibits the discharge of toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

- The CTR contains a long list of toxic pollutants that are common to wastewater discharges. The City of Sacramento has apparently not, and has not been required to, characterized the discharge for other toxic constituents that are common to wastewater discharges. Although exempted by the SIP for compliance with CTR toxic water quality standards, the toxic standards are applicable if the discharge is toxic to

aquatic life. The proposed Permit does not contain sufficient information regarding potential toxic pollutants to adequately regulate the discharge.

- The Regional Board is "uncertain" whether the discharge is toxic and therefore cannot state that the aquatic life beneficial use of the Sacramento River is protected. The proposed Permit states that: "The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at page III-8.00) The Basin Plan also states that, *"…effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate…*" USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc.*" No WET data exists for any of the CSO discharges from the Facility. Therefore, it is uncertain whether reasonable potential exists to exceed the Basin Plan narrative toxicity objective. Also due to the short-term, periodic nature of the discharges, the Regional Water Board is primarily concerned with the potential short-term, acute, toxicity in the CSO discharges. As part of the CSO Water Quality Assessment required in Section VI.C.2.a. of the Order, the Discharger will propose and implement a monitoring plan that will include an appropriate schedule for WET monitoring to assess the potential for the CSO discharges to exceed the narrative toxicity objective." (Emphasis added)

- Ammonia is present in domestic wastewater. The City of Sacramento's wastewater system contains no means of removing ammonia. Ammonia is toxic to aquatic life. Ammonia concentrations will be diluted by the stormwater in the combined system. However, the Regional Board has no knowledge whether ammonia is present in the discharge at toxic concentrations. It is reasonable to assume that ammonia concentrations in the discharge will be present exceeding toxic levels. The proposed Permit fails to protect the aquatic life beneficial use of the receiving water by failing to include an effluent Limitation for ammonia.

- The proposed Permit contains Effluent Limitations for fecal coliform organisms that are not protective of the contact recreational (**REC-1**) beneficial uses of the

Sacramento River. The proposed Permit contains Effluent Limitation for:

> "d. Fecal Coliform Organisms. Effluent total coliform organisms shall not exceed: i. 1,000 MPN/100 mL in any three consecutive samples; and ii. 200 MPN/100 mL, as a storm year (1 October through 30 September) median."

Since the title "fecal coliform organisms" conflicts with the following sentence for "total coliform organisms" it is assumed that the title is correct and the intent is to regulate fecal coliform organisms.

There is no technical basis for the proposed Permit bacteria (coliform organisms) limitation. The Basin Plan contains a water quality standard for Bacteria of: "In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml." The proposed Permit limitation is significantly less stringent that the Basin Plan water quality objective.

The Basin Plan bacteria objective was based on the coliform water quality index used during a USPHS epidemiological study which was translated into a fecal coliform index in the mid- '60s by using the ratio of fecal coliforms to total coliforms at the location on the Ohio River where the original study had been conducted in 1949. In 1986 US EPA developed (EPA 440/5-86-001**)** *Quality Criteria for Water*. EPA's evaluation of the bacteriological data indicated that using the fecal coliform indicator group at the maximum geometric mean of 200 per 100 ml, recommended in Quality Criteria for water would cause an estimated 8 illnesses per 1,000 swimmers at freshwater beaches. EPA then recommended that: "Based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period), the geometric mean of the indicated bacterial densities should not exceed one or the other of the following:(') E. coli 126 per 100 ml; or enterococci **33** per 100 ml; no sample should exceed a one sided confidence limit (C.L.) calculated using the following as guidance: designated bathing beach **75%** C.L., moderate use for bathing 82% C.L., light use for bathing **90%** C.L. infrequent use for bathing **95%** C.L., based on a site-specific log standard deviation, or if site data are insufficient to establish a log standard deviation, then using **0.4** as the log standard deviation for both indicators." The US EPA criteria were not based on sewage discharges.

The California Department of Public Health (DPH) has developed reclamation criteria, California Code of Regulations, Title 22, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for recreational impoundments, spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2

MPN/100 m*l* as a 7-day median. Title 22 specifically requires that recycled water used as a source of water supply for nonrestricted recreational impoundments be disinfected tertiary recycled water that has been subjected to conventional treatment. A nonrestricted recreational impoundment is defined as "…an impoundment of recycled water, in which no limitations are imposed on body-contact water recreational activities." Title 22 is not directly applicable to surface waters; however, an equivalent level of treatment to that required by DHS's reclamation criteria because would be necessary to protect the non-restricted recreational use of the Sacramento River. The science behind DPH's is to protect contact recreation uses regardless of whether discharging to the Sacramento River or another recreational impoundment. The proposed permit limitation for coliform organisms is not protective of the contact recreational (REC-1) beneficial use of the receiving stream.

- The proposed Permit contains an erroneous statement that the effluent Limitations for coliform organisms are protective of the municipal (MUN) beneficial use of the Sacramento River. Pages F-30 and F-31 discuss pathogens with regard to protecting beneficial uses, stating that: "Because CSO discharges typically occur for relatively short durations and only during extreme storm events, it is unlikely that recreational activities will occur concurrently with the CSO discharges. However, protection of the MUN use will be provided by carrying over the existing effluent limitations and discharge requirements to control the discharge of coliform bacteria. These coliform limits are imposed to protect the beneficial uses of the receiving water. These effluent limitations will apply to the Pioneer Reservoir and CWTP discharge points." The letter cited by the Regional Board from DPH regarding 20-to-1 dilution only applies to contact recreation and irrigation of food crops. Despite the Regional Board's contention, there is no recommendation presented by the DPH regarding what level of pathogens from wastewater treatment plants will protect the municipal (MUN) beneficial use of the Sacramento River. The discharge of primary treated sewage is not equivalent to secondary treated wastewater and any recommendation by DPH regarding protection of recreational and irrigation uses does not apply to drinking water. There is no information in the proposed Permit that the drinking water beneficial use is protected.

  Also with regard to drinking water uses: "The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At a minimum, "…*water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)" in Title 22 of CCR."* The proposed permit does not contain an assessment of drinking water maximum contaminant levels to show that the drinking water beneficial use of the Sacramento River is protected.

- There is no information in the proposed Permit regarding constituents of concern, such as salts or boron, regarding the irrigated agricultural beneficial of the Sacramento River. Absent any data the Regional Board cannot conclude that the agricultural beneficial use is protected.

3. The Sacramento River is 303(d) listed (impaired) for unknown toxicity. As cited above copper, lead, zinc and pesticides were sampled above toxic levels. The proposed Permit cites that WET sampling has not been conducted and the Regional Board "is uncertain" whether reasonable potential exists for the discharge to exceed the Basin Plan water quality objective for toxicity. The discharge at a minimum contributes to the unknown toxicity in the Sacramento River.

4. The proposed Permit contains an inadequate antidegradation analysis that does not comply with the requirements of Section 101(a) of the Clean Water Act, Federal Regulations 40 CFR § 131.12, the State Board's Antidegradation Policy (Resolution 68-16) and California Water Code (CWC) Sections 13146 and 13247.

The construction of each and any new structure within the service area brings additional domestic wastewater flow. Each expansion of impermeable surfaces brings more stormwater flow. Therefore it can be concluded that the flows are continuously expanding. The proposed Permit has no flow limitation. Contrary to this, the proposed Permit Fact Sheet states that: "4. Satisfaction of Antidegradation Policy, This Order does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary." The Regional Board has no record of flow rate or mass of discharges from the City of Sacramento combined sewer system. The Regional Board assessment that flows are not increasing is not based on substance and contrary to the fact that Sacramento is a growing community. The proposed Permit contains no antidegradation analysis.

CWC Sections 13146 and 13247 require that the Board in carrying out activities which affect water quality shall comply with state policy for water quality control unless otherwise directed by statute, in which case they shall indicate to the State Board in writing their authority for not complying with such policy. The State Board has adopted the Antidegradation Policy (Resolution 68-16), which the Regional Board has incorporated into its Basin Plan. The Regional Board is required by the CWC to comply with the Antidegradation Policy.

Section 101(a) of the Clean Water Act (CWA), 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 CWA 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 (40 CFR § 131.12(a)) 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.

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 Chief Counsel William Attwater, SWRCB to Regional Board Executive Officers, "federal Antidegradation Policy," pp. 2, 18 (Oct. 7, 1987) ("State Antidegradation Guidance")). As a state policy, with inclusion in the Water Quality Control Plan (Basin Plan), 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. 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. 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.

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

The antidegradation review process is especially important in the context of waters protected by Tier 2. See EPA, Office of Water Quality Regulations and Standards, *Water Quality Standards Handbook*, 2nd ed. Chapter 4 (2nd ed. Aug. 1994). Whenever a person proposes an activity that may degrade a water protected by Tier 2, the antidegradation regulation requires a state to: (1) determine whether the degradation is "necessary to accommodate important economic or social development in the area in which the waters are located"; (2) consider less-degrading alternatives; (3) ensure that the best available pollution control measures are used to limit degradation; and (4) guarantee that, if water quality is lowered, existing uses will be fully protected. 40 CFR § 131.12(a)(2); EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook, 2nd ed. 4-1, 4-7 (2nd ed. Aug. 1994). These activity-specific determinations necessarily require that each activity be considered individually.

For example, the APU 90-004 states:

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

> Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts"

> There is nothing resembling an economic or socioeconomic analysis in the Permit. There are viable alternatives that have never been analyzed. The evaluation contains no comparative costs. As a rule-of-thumb, USEPA recommends that the cost of compliance should not be considered excessive until it consumes more than 2% of disposable household income in the region. This threshold is meant to suggest more of a floor than a ceiling when evaluating economic impact. In the Water Quality Standards Handbook, USEPA interprets the phrase "necessary to accommodate important economic or social development" with the phrase "substantial and widespread economic and social impact."

The antidegradation analysis must discuss the relative economic burden as an aggregate impact across the entire region using macroeconomics. Considering the intrinsic value of the Delta to the entire state and the potential effects upon those who rely and use Delta waters, it must also evaluate the economic and social impacts to water supply, recreation, fisheries, etc. from the Discharger's degradation of water quality in the Delta. Nor has the case been made that there is no alternative for necessary housing other than placing it where its wastewater must discharge directly into sensitive but seriously degraded waters. It is unfortunate that the agency charged with implementing the Clean Water Act has apparently decided it is more important to protect the polluter than the environment.

There is nothing in the Permit resembling an alternatives analysis evaluating less damaging and degrading alternatives. Unfortunately, the Permit fails to evaluate and discuss why there is no alternative other than discharging to surface waters. Other communities have successfully disposed of wastes without discharging additional pollutants to degraded rivers. A proper alternatives analysis would cost out various alternatives and compare each of the alternatives' impacts on beneficial uses.

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

There is nothing in the Permit resembling an analysis that ensures that existing beneficial uses are protected. While the Permit identifies the constituents that are included on the 303(d) list as impairing receiving waters, it fails to discuss how and to what degree the identified beneficial uses will be additionally impacted by the discharge. Nor does the Permit analyze the incremental and cumulative impact of increased loading of non-impairing pollutants on beneficial uses. In fact, there is almost no information or discussion on the composition and health of the identified beneficial uses. Any reasonably adequate antidegradation analysis must discuss the affected

beneficial uses (i.e., numbers and health of the aquatic ecosystem; extent, composition and viability of agricultural production; people depending upon these waters for water supply; extent of recreational activity; etc.) and the probable effect the discharge will have on these uses.

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

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

Any project that allows a single new community to artificially minimize waste management costs by externalizing the disposal of wastes to already degraded waterways that are part of the common property right of all 36 million Californians has not met the test of "maximum benefit of the people of the State" and cannot be consistent with state and federal antidegradation policies. The continued pollutant mass loading will inescapably and detrimentally affect aquatic life, contribute to violations of water quality standards and increase the risks and costs to the millions of people who depend upon the Delta for their drinking/irrigation/recreation water. Any increase housing and/or economic expansion facilitated by the proposed Permit will be at the expense of other communities that will incur the consequences of larger load reductions when TMDL load allocations are instituted.

The antidegradation analysis in the proposed Permit is not simply deficient, it is literally nonexistent. NPDES permits must include any more stringent effluent limitation necessary to implement the Regional Board Basin Plan (Water Code 13377). The proposed Permit fails to properly implement the Basin Plan's Antidegradation Policy.

5. The proposed Permit requires:

"**B. Notification Requirements**

1. For any CSS outflow that results in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours

after becoming aware of the discharge, notify CALEMA, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the Regional Water Board.

2. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a CSS outflow that results in a discharge to a drainage channel or a surface water, the Discharger shall submit to the appropriate Regional Water Quality Control Board a certification that CALEMA and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge."

The eighth of US EPA's nine minimum controls is that: "8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts." The proposed Permit requirements do not inform the public. The City should be required to post the Sacramento River at all public access points and inform local TV and radio station for all discharges to surface waters from their system.

6. The proposed Permit does not comply with water quality standards and objectives contained in the Basin Plan.

Bacteria
In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml. The proposed Permit limitation for fecal coliform organisms is significantly less stringent than the Basin Plan water quality objective for bacteria.

Biostimulatory Substances
Water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses. The discharge contains significant concentrations of ammonia. Ammonia and its conversion to other forms of nitrogen may reasonably contribute to unacceptable aquatic growths. Phosphorus levels are also known to be elevated in domestic wastewater and are not assessed in the proposed Permit.

Chemical Constituents
Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At a minimum, water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations, which are incorporated by reference into this plan: Tables 64431-A (Inorganic Chemicals) and 64431-B (Fluoride) of Section 64431, Table 64444-A (Organic Chemicals) of Section 64444, and Tables 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449. The City of Sacramento's wastewater discharge may reasonably contain constituents contained in Title 22 at concentrations exceeding MCLs. The proposed Permit contains no analysis of compliance with drinking water MCLs.

Color
Water shall be free of discoloration that causes nuisance or adversely affects beneficial uses. Sewage and the associated industrial constituents may discolor the Sacramento River. Title 22 contains an MCL for color. The proposed Permit contains no assessment of whether the CSO discharges exceed the MCL for color.

Dissolved Oxygen
Within the legal boundaries of the Delta, the dissolved oxygen concentration shall not be reduced below: 7.0 mg/l in the Sacramento River (below the I Street Bridge) and in all Delta waters west of the Antioch Bridge; 6.0 mg/l in the San Joaquin River (between Turner Cut and Stockton, 1 September through 30 November); and 5.0 mg/l in all other Delta waters except for those bodies of water which are constructed for special purposes and from which fish have been excluded or where the fishery is not important as a beneficial use. The discharge of raw or primary treated sewage contains oxygen demanding substances such as BOD and ammonia. There is no analysis or assessment of whether the discharge of raw or primary treated wastewater from the City of Sacramento causes a dissolved oxygen sag below 7.0 mg/l.

Floating Material
Water shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses. With regard to the US EPA Findings that the City failed to adequately regulate grease discharges, the proposed Permit states that: "*The Discharger claimed that this finding is incorrect as the City did participate in a regional study that concluded that regulation of restaurants was unnecessary. The Discharger has since implemented an outreach program for the community and restaurants.* The proposed Permit fails to recognize the site-specific characteristics of oil and grease discharges and that the "requirement" to install grease traps in restaurants is commonplace. An "outreach" program does not "regulate" grease discharges.

The City of Sacramento has not undertaken an acceptable oil and grease control program. Monitoring at other local wastewater treatment plants, which likely provide a minimum of secondary treatment, is not validation of the absence of oil and grease in the raw or primary treated wastewater discharges from the City. Floating material, by definition will be at the top of the water column. Sampling for oil and grease should be conducted at the top of the water column.

7. The proposed Permit does not require maximization of flows to the wastewater treatment plant for treatment.

The fourth of US EPA's nine minimum controls requires maximization of flow to the POTW for treatment. As is stated above; a portion of the flow from the separate sanitary sewer system flows into the CSS; the remainder flows by gravity or is pumped to the Regional Interceptors to the Sacramento Regional County Sanitation District's regional wastewater treatment plant (SRWTP). Combined sewer systems are not exempt from the requirements of the Clean water Act. Combined sewer systems are known to discharge inadequately treated sewage to surface waters as "combined system overflows" during wet weather. US EPA's Combined Sewer Overflow Policy has the goal of eliminating sewer system overflows and compliance with the

CWA. Adding flows from the separate sewer system will only contribute to excessive flows in the combined system and result in additional overflows. The proposed Permit does not discuss why the separate sewer system is allowed to be discharged into the combined sewer system.

8. The proposed Permit fails to contain adequate effluent Limitation to protect the beneficial uses of the Sacramento River.

Proposed Permit Finding No. G. states that:

> "Water Quality-Based Effluent Limitations (WQBELs). Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. 40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).
>
> According to the CSO Control Policy, a permittee is required to develop and implement a long-term CSO control plan which evaluates alternatives for attaining compliance with the CWA, including compliance with applicable water quality standards and protection of designated uses. It further states that once long-term CSO control plans are completed, permittees are responsible for implementing the plan to ensure compliance with applicable water quality standards. A detailed discussion of the water quality-based requirements included in this Order is provided in the Fact Sheet (Attachment F).

It is well documented in the proposed Permit that the discharge exceeds water quality standards and toxic levels for copper, lead, zinc and pesticides. The Effluent limitation for coliform organisms is significantly less stringent than the Basin Plan water quality objective and does not protect the contact recreational use of the Sacramento River. There is no technical justification for an Effluent Limitation for suspended solids as high as 100 mg/l which could directly translate to exceedance of turbidity objectives. There is no assessment of the need for Effluent Limits for drinking water constituents with associated MCLs. There is no assessment of biostimulatory substances, particularly ammonia and phosphorus. There is no assessment of toxic substances such as ammonia and aluminum. There is no assessment of toxic materials that can be discharged from the documented under regulated industrial segment of the community such as metals from plating shops. While the State may have exempted combined sewerage discharges from CTR compliance; each of the CTR priority pollutants is based on protecting a beneficial use such as aquatic life (from toxicity) or human health in drinking water. An assessment of all

priority pollutants and drinking water constituents must be undertaken and adequately limited before the permit is adopted.

California Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." The application for permit renewal is incomplete and in accordance with 40 CFR 122.21(e) the Regional Board should not issue a permit.

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

Sincerely,

Bill Jennings, Executive Director
California Sportfishing Protection Alliance