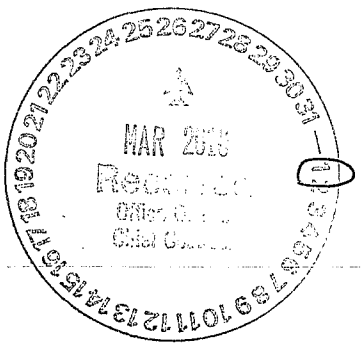
Bill Jennings
California Sportfishing Protection Alliance
3536 Rainier Avenue
Stockton, CA 95204
Tel: 209-464-5067
Fax: 209-464-1028
E-mail: deltakeep@aol.com



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

Andrew Packard
Law Office of Andrew Packard
319 Pleasant Street
Petaluma, CA 94952
Tel: 707-763-7227
Fax: 707-763-9227
E-mail: andrew@packardlawoffices.com

For Petitioner California Sportfishing Protection Alliance

BEFORE THE STATE WATER RESOURCES CONTROL BOARD

In the Matter of Waste Discharge Requirements For United Auburn Indian Community and Hydroscience Operations, Inc. Thunder Valley Casino Wastewater Treatment Plant; California Regional Water Quality Control Board – Central Valley Region Order No. R5-2010-0005; NPDES No. CA0084697	**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. CA0084697) for United Auburn Indian Community and Hydroscience Operations, Inc. Thunder Valley Casino Wastewater Treatment Plant, on 28 January 2010. *See* Order No. R5-2010-0005. The issues raised in this petition were raised in timely written comments.

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. R5-2010-0005, Waste Discharge Requirements (NPDES No. CA0084697) for the United Auburn Indian Community and Hydroscience Operations, Inc. Thunder Valley Casino Wastewater Treatment Plant. A copy of the adopted Order is attached as Attachment No. 1.

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

28 January 2010

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 10 December 2009. That letter and the following comments set forth in detail the reasons and points and authorities why CSPA believes the Order fails to comport with statutory and regulatory requirements. The specific reasons the adopted Orders are improper are:

The Thunder Valley Casino plans to expand their operations in a $1 billion project to build a 23-story hotel, a nine-story parking garage, performing arts center and more. Gaming analysts have estimated Thunder Valley's annual profits to be between $400 million and $500 million. (Sacramento Bee 8 January 2009).

The Casino owns a wastewater treatment plant which will be expanded from 0.35 million gallons per day (mgd) to 0.875 mgd to accommodate the increased flows. The discharge from the

wastewater treatment plant is regulated under an NPDES permit issued by the Central Valley Regional Water Quality Control Board (Regional Board). The Regional Board has issued a tentative permit to allow for the expansion. The tentative permit acknowledges that chronic toxicity testing results demonstrate that the discharge has a reasonable potential to exceed toxicity water quality objectives (page F-46). The tentative permit relaxes limitations for ammonia, arsenic, atrazine, boron, bromoform, chlorodibromomethane, copper, dichlorobromomethane, fluoride, MBAS, nitrate, persistent chlorinated hydrocarbon pesticides (except delta-BHC and endrin aldehyde), settleable solids, sulfate, total trihalomethanes, and turbidity which were present in the existing permit, Order No. R5-2005-0032 (pages F-50 and 51). An accompanying Time Schedule Order (TSO) states that: Immediate compliance with the new effluent limitations for cadmium, lead, and zinc are not possible or practicable. Compliance with the limits for cadmium, lead and zinc will not be required under the TSO until 1 January 2015. The permit, Table F-2, shows that under the existing Order the Casino violated limitations for total coliform organisms, pesticides, aluminum, boron, electrical conductivity, copper, dibromochloromethane and pH. The Regional Board issued Administrative Civil Liability (ACL) Complaint No. R5-2006-0502 on 7 March 2006, which proposed to assess an administrative civil liability of $435,000 against the Casino for violations of Order Nos. 5-01-068 and R5-2005-0032, but the penalty was reduced to paying a $150,000 fine and work on a project to and complete the John D. Vincent Vernal Pool Preserve Enhancement Plan Supplemental Environmental Project.

The Regional Board is allowing for a major expansion of the Casino's wastewater treatment plant to accommodate a $1 billion project to build a hotel and other amenities anticipated to be complete in 2010. An expansion of the wastewater treatment plant will require significant design and construction. The Regional Board is not however requiring that the Casino build an expanded treatment system that can comply with permit limitations. The Regional Board is instead allowing until January 2015 for the Casino to comply with wastewater discharge limits. It is reasonable if the Casino is designing and constructing a major expansion of the wastewater treatment plant to design and construct one that can comply with discharge limits.

The City of Lincoln's wastewater treatment plant is visible from the Casino's parking lot. The Lincoln wastewater treatment plant is recognized by the Regional Board as regional system with a much better compliance history than the Casino's operation. The Regional Board has allowed for extensive compliance schedules for the City of Auburn and Placer County wastewater treatment systems to encourage them to tie into the regional City of Lincoln wastewater system. The Regional Board has adopted a reclamation policy stating that regionalization of wastewater facilities is a priority. The Regional Board's Executive Officer has stated numerous times in public presentations that wastewater regionalization is a high priority of the Regional Board. Yet, the Regional Board has done nothing to require or encourage the Casino eliminate their wastewater discharge and to cross a field to tie into the City of Lincoln's wastewater treatment system.

Effluent from the WWTP is discharged to Orchard Creek, an ephemeral stream that is tributary to Auburn Ravine Creek and ultimately the Sacramento River, an impaired water body. Both the Auburn Ravine and the Sacramento River are known to support protected steelhead trout and are designated as Critical Habitat for Central Valley steelhead. The October 2009 NOAA/NMFS Draft Recovery Plan/Recovery Plan for Central Valley steelhead specifically notes the presence of steelhead in the Auburn Ravine and lists water temperature and water quality as primary stressors. During periods of hydraulic continuity, Orchard Creek may impact the quality of water flowing in the Auburn Ravine and the Sacramento River.

A City of Auburn WWTP Stream Study noted the substantial reduction in stream rainbow trout biomass from fall to spring near the City's WWTP. (See CH2MHILL August 1996.) In a subsequent analysis done for the Sierra Business Council, it was offered that this reduction was potentially due to downstream emigration of steelhead smolts. (See Streams of Western Placer County... December 2003) California Department of Fish and Game/CDFG fish sampling done in 2004 and 2005 found a remarkable number of steelhead trout in the Auburn Ravine, with average abundance estimates of 2,163 individuals per river mile, and up to 7,985 individuals per river mile. Large numbers of the sampled fish were found to be sexually immature. (See CDFG 1/4/08 summary of 2004 and 2005 fish community surveys in Auburn Ravine and Coon Creek, Placer County.) The April 2009 Placer County Water Agency Auburn Tunnel Outlet Modification Initial Study notes that the Auburn Ravine may constitute a steelhead spawning area due to the presence of very small juveniles during the spring, adding that year-round rearing may occur in the stream given the presence of both young-of-the-year and larger juveniles during the November, December, and April samplings.

Our specific comments are as follows:

A. The Permit is Incorrect in Allowing For an Expansion of the Wastewater Treatment System as a New or Expanded Wastewater Discharge May Not Be Allowed Into an Impaired Waterway Unless All Existing Discharges Have Been Identified and are Subject to Compliance Schedules.

Under the Clean Water Act and the NPDES permit regulations (40 CFR 122.4(i)), when a new source seeks to obtain a permit for a discharge of pollutants to a stream segment already exceeding its water quality standards for that pollutant, no permit may be issued. An exception to this prohibition is where the new source demonstrates, before the close of the public comment period for the Permit, that: (1) there are sufficient remaining pollutant load allocations for the discharge, and (2) existing dischargers in the stream segment are subject to compliance schedules designed to bring the stream segment into compliance with applicable water quality standards. The Ninth Circuit Court of Appeals has ruled in *Friends of Pinto Creek v. United States Environmental Protection Agency* that a new or expanded wastewater discharge may not be

allowed into an impaired waterway unless all existing discharges have been identified and are subject to compliance schedules.

The 2005 NPDES Permit (R5-2005-0032) regulated the facility influent flow of 0.35 MGD. The NPDES permit renewal would allow for a discharge up to 0.875 MGD of treated wastewater from the Thunder Valley Casino Wastewater Treatment Plant. In accordance with *Friends of Pinto Creek v. United States Environmental Protection Agency* the expanded flow is a "new discharge."

Wastewater is discharged to Orchard Creek, a tributary to Auburn Ravine, East Side Canal, Cross Canal, and the Sacramento River. The Sacramento River from Knights Landing to the Delta is listed as a WQLS for mercury and unknown toxicity in the 303(d) list of impaired water bodies. Effluent limitations for mercury are included in the Permit, however toxicity is present in the discharge and not adequately regulated in the discharge to eliminate toxic events. Page F-18, Freshwater Replenishment, acknowledges that the discharge impacts water quality in the Sacramento River by stating that: "When water is present in Orchard Creek, there is hydraulic continuity between Orchard Creek, Auburn Ravine, East Side Canal, Cross Canal, and the Sacramento River. During periods of hydraulic continuity, Orchard Creek adds to the water quantity and may impact the quality of water flowing downstream in the Sacramento River."

The wastewater discharge from the Casino has been shown to be chronically toxic to aquatic life (page F-46) and contains numerous limitations for toxic constituents including metals and pesticides. The Casino wastewater discharge has been shown to contain aluminum, cadmium, copper, lead and zinc above toxic levels. By the proposed adoption of a Time Schedule Order even the Regional Board is acknowledging that the discharge cannot meet the discharge limitations for toxic levels of cadmium, lead, and zinc. The discharge of toxic constituents and toxic wastewater contributes to the unknown toxicity in the Sacramento River.

TMDLs for mercury and unknown toxicity have not been completed and all existing discharges have not been identified and are not subject to compliance schedules. In accordance with 40 CFR 122.4(i) and Friends of *Pinto Creek v. United States Environmental Protection Agency* the proposed increased flow rate cannot be allowed.

B. The Permit Fails to Require Sufficient Treatment to Eliminate Toxicity in Accordance with the Water Quality Control Plan (Basin Plan)

The Basin Plan also states, *"Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment."* The Sacramento River from Knights Landing to the Delta is listed as a WQLS for mercury and unknown toxicity in the 303(d) list of impaired water bodies. Page F-18, Freshwater

Replenishment, acknowledges that the discharge impacts water quality in the Sacramento River by stating that: "When water is present in Orchard Creek, there is hydraulic continuity between Orchard Creek, Auburn Ravine, East Side Canal, Cross Canal, and the Sacramento River. During periods of hydraulic continuity, Orchard Creek adds to the water quantity and may impact the quality of water flowing downstream in the Sacramento River."

The Permit acknowledges that chronic toxicity testing results demonstrate that the discharge has a reasonable potential to exceed toxicity water quality objectives (page F-46). The discharge is chronically toxic.

The Permit, H. Chronic Whole Effluent Toxicity Effluent Limitation (Section IV.A.1.e) states that: "Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with effluent limitations IV.A.1.e for chronic whole effluent toxicity." Monitoring will not achieve compliance with the toxicity limitation.

Membrane technology with a pore size of 0.10 microns, such as is utilized at the Casino's wastewater treatment plant will not remove heavy metals, pesticides or viruses (Wastewater Engineering, Treatment and Reuse, Metcalf and Eddy, Fourth Edition, Figure 11-34 (Metcalf and Eddy)). The Casino wastewater discharge has been shown to contain aluminum, cadmium, copper, lead and zinc above toxic levels. The discharge has also been found to contain chlorinated persistent pesticides, delta BHC and endrin aldehyde. The existing Permit includes limitations for additional persistent chlorinated hydrocarbon pesticides, which were present in the discharge. These constituents will not be reliably removed utilizing a membrane technology with a pore size of 0.1 micron according to Metcalf and Eddy. All of the listed constituents are toxicants. The Discharger does not provide, and the Regional Board does not require, adequate treatment to remove toxic constituents from the discharge.

C. California Water Code Sections 13146 and 13247 require that the Board in carrying out activities which affect water quality shall comply with state policy and assure that Wastewater Dischargers are required to provide Best Practicable Treatment and Control (BPTC) of the discharge to assure pollution will not occur and that the highest water quality consistent with the maximum benefit to the people of the State will be maintained in accordance with the Antidegradation Policy (Resolution 68-16).

The ultimate goal of the Federal Clean Water Act as expressed in Section 101 is the elimination of the discharge of pollutants into navigable waters by 1985. The Act throughout, places an emphasis on the control and reduction of the discharge of pollutants by point sources as interim goals. Technology based effluent limitations are required by Section 301 of the Act for all point sources. A standard of "best available technology" (BPT) is required by 1977, and a more stringent standard of "best available technology" (BAT) is required by 1983 for industrial point

sources. For publicly owned treatment works (POTWs), secondary treatment is required by 1977 and "best practicable treatment" (BPT) by 1983. As a part of the Antidegradation Policy, Dischargers are required to provide best practicable treatment and control of the discharge (BPTC).

BAT and BPTC are terms applied with regulations on limiting pollutant discharges with regard to the abatement strategy. Similar terms are best available techniques, best practicable means or best practicable environmental option. The term constitutes a moving target on practices, since developing societal values and advancing treatment techniques may change what is currently regarded as achievable, best practicable and best available. A literal understanding will connect it with a "spare no expense" doctrine, which prescribes the acquisition of the best state of the art technology available, without regard for traditional cost-benefit analysis.

Federal 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. The Antidegradation Policy, State Water Resources Control Board Resolution No. 68-16, states that: "Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained."

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. Waste Discharge Requirements must require that the treatments systems provide BPTC.

As stated above the Antidegradation Policy requires that any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that pollution will not occur. Pollution is defined in CWC Section 13050 as: "...an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: a) the waters for beneficial uses, b) facilities which serve these beneficial uses. Pollution may also include contamination, which is defined as an impairment of the quality of the waters of the state to a degree, which creates a hazard to the public health through poisoning or through the spread of disease. In short, the Regional Board is required to

write waste discharge requirements that result in BPTC to assure that pollution will not occur and all beneficial uses are fully protected.

Membrane technology with a pore size of 0.10 microns, such as is utilized at the Casino's wastewater treatment plant will not remove heavy metals, pesticides or viruses (Wastewater Engineering, Treatment and Reuse, Metcalf and Eddy, Fourth Edition, Figure 11-34 (Metcalf and Eddy)). The Casino wastewater discharge has been shown to contain aluminum, cadmium, copper, lead and zinc above toxic levels. The discharge has also been found to contain chlorinated persistent pesticides, delta BHC and endrin aldehyde. The existing Permit includes limitations for additional persistent chlorinated hydrocarbon pesticides, which were present in the discharge. These constituents will not be reliably removed utilizing a membrane technology with a pore size of 0.1 micron according to Metcalf and Eddy. All of the listed constituents are toxicants. The Discharger does not provide, and the Regional Board does not require, adequate treatment to remove toxic constituents from the discharge and therefore does not require BPTC.

D. The Permit fails to implement the requirements of the Basin Plan, Implementation, Policy for Application of Water Quality Objectives for Additive Toxicity which may contribute to the toxic discharge and the designated unknown toxicity in downstream waters.

The Permit contains effluent limitations for several constituents, including aluminum, copper, lead and zinc. The cited metals have a potential for exhibiting additive toxic effects. The Basin Plan, *Implementation, Policy for Application of Water Quality Objectives* requires that: "Where multiple toxic pollutants exist together in water, the potential for toxicologic interactions exists. On a case-by-case basis, the Regional Water Board will evaluate available receiving water and effluent data to determine whether there is a reasonable potential for interactive toxicity. Pollutants which are carcinogens or which manifest their toxic effects on the same organ systems or through similar mechanisms will generally be considered to have potentially additive toxicity." Additive toxicity has not been considered in developing the Permit. Additive toxicity from the cited metals may contribute to the routing failure of chronic toxicity tests (page F-46). Additive toxicity from the cited metals may contribute to the designated (303(d) list) unknown toxicity in downstream waters. The Permit does not comply with the requirements of the Basin Plan by failing to evaluate additive toxicity.

E. The Permit does not contain enforceable Effluent Limitations for chronic toxicity and therefore does not comply with the Basin Plan, Federal Regulations, at 40 CFR 122.44 (d)(1)(i) and the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP).

The Permit acknowledges that chronic toxicity testing results demonstrate that the discharge has a reasonable potential to exceed toxicity water quality objectives (page F-46). The discharge is chronically toxic.

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

The SIP, Section 4, Toxicity Control Provisions, Water Quality-Based Toxicity Control, states that: "A chronic toxicity effluent limitation is required in permits for all dischargers that will cause, have a reasonable potential to cause, or contribute to chronic toxicity in receiving waters." The SIP is a state *Policy* and 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.

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. There has been no argument that domestic sewage contains toxic substances and presents a reasonable potential to cause toxicity if not properly treated and discharged. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The Permit contains a narrative Effluent Limitation prohibiting the discharge of chronically toxic substances: however a Compliance Determination has been added to the Permit: "Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with effluent limitations contained in sections IV.A.1.d and IV.B.1.d of this Order for chronic whole effluent toxicity ". The *Compliance Determination* nullifies the Effluent Limitation and makes toxic discharges unenforceable.

The Permit includes the following: "I. Chronic Whole Effluent Toxicity Effluent Limitation. Compliance with the accelerated monitoring and TRE/TIE provisions of Provision VI.C.2.a shall constitute compliance with effluent limitations IV.A.1.g and IV.A.2.g for chronic whole effluent toxicity." Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. US EPA has interpreted 40 CFR 122.44(d) in *Central Tenets of the National Pollutant Discharge Elimination System (NPDES) Permitting Program* (Factsheets and Outreach Materials, 08/16/2002) that although States will likely have unique implementation policies there are certain tenets that may not be waived by State procedures. These tenets include that "where calculations indicate reasonable potential, a specific numeric limit MUST be included in the permit. Additional "studies" or data collection efforts may not be substituted for enforceable permit limits where "reasonable potential" has been determined." A study or TRE/TIE is not an acceptable replacement for a numeric effluent limitation.

The Basin Plan narrative Toxicity Objective states that: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances. Compliance with this objective will be determined by analyses of indicator organisms, species diversity, population density, growth anomalies, and biotoxicity tests of appropriate duration or other methods as specified by the Regional Board."

According to the Basin Plan toxicity sampling is required to determine compliance with the requirement that all waters be maintained free of toxic substances. Sampling does not equate with or ensure that waters are free of toxic substances. The Permit requires the Discharger to conduct an investigation of the possible sources of toxicity if a threshold is exceeded. This language is not a limitation and essentially eviscerates the Regional Board's authority, and the authority granted to third parties under the Clean Water Act, to find the Discharger in violation for discharging chronically toxic constituents. An enforceable effluent limitation for chronic toxicity must be included in the Order.

F. The Permit fails to utilize valid, reliable, and representative effluent data in conducting a reasonable potential and limits derivation calculations contrary to US EPA's interpretation of Federal Regulations, 40 CFR 122.44(d), and should not be adopted in accordance with 40 CFR 122.4 (a), (d) and (g) and CWC Section 13377.

The Permit, Fact Sheet, Reasonable Potential Analyses, states repeatedly that the data used in determining reasonable potential was from January 2006 through December 2008. The generated wastewater is completely controlled by the Casino. The wastewater treatment system has not changed. The character of the influent wastewater has not changed. The use of

constituents such as pesticides is at the discretion of the Casino. There is no valid reason for not using all of the available data characterizing the discharge. Some constituents, such as metals and pesticides, are sampled infrequently. The use of only two years of data may result in a statistically invalid data set; the statistical T-test recommends that a data set with less than 13 data points is unreliable. In conducting a reasonable potential analysis all relevant and accurate data must be used.

Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. US EPA has interpreted 40 CFR 122.44(d) in *Central Tenets of the National Pollutant Discharge Elimination System* (NPDES) Permitting Program (Factsheets and Outreach Materials, 08/16/2002) that; although States will likely have unique implementation policies there are certain tenets that may not be waived by State procedures. These tenets include that "where valid, reliable, and representative effluent data or instream background data are available they MUST be used in applicable reasonable potential and limits derivation calculations. Data may not be arbitrarily discarded or ignored." The Regional Board has failed to use valid, reliable and representative data in developing limitations, contrary to the cited Federal Regulation.

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries Of California* (SIP), Section 1.2 requires that: "When implementing the provisions of this Policy, the RWQCB shall use all available, valid, relevant, representative data and information, as determined by the RWQCB. The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions."

Statistical procedures are valid tools for assessing trends and analyzing data. It must be recognized however that statistical procedures are not scientific laws. In wastewater engineering it is commonplace for individual data points to be peaks or depressions far from the statistical norm. This is could be attributed to slug load discharges, discharge practices from local industries, or simply the infrequency of sampling wastewater effluents. Wastewater effluent is generally not sampled continuously. It must also be recognized that wastewater treatment personnel tend to perform their daily functions as a matter of routine, such as sampling the effluent at the same time every day. The likely hood of data peaks being "real" absent erroneously reporting, questionable quality control/quality assurance practices or varying seasonal or daily conditions is more defensible than the data being an "outlier", hence the EPA and SIP requirement that data may not be arbitrarily discarded or ignored.

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. In accordance with 40 CFR 122.4 (a), (d) and (g) the Permit may not be adopted for failing to include protective limitations based on valid, reliable and representative data.

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."

G. The Permit contains Effluent Limitations less stringent than the existing permit contrary to the Antibacksliding requirements of the Clean Water Act and Federal Regulations, 40 CFR 122.44 (l)(1).

The effluent limitations in the existing permit, Order No. R5-2005-0032, for ammonia, arsenic, atrazine, boron, bromoform, chlorodibromomethane, copper, dichlorobromomethane, fluoride, MBAS, nitrate, persistent chlorinated hydrocarbon pesticides (except delta-BHC and endrin aldehyde), settleable solids, sulfate, total trihalomethanes, and turbidity have either been relaxed or removed in the Permit.

Under the Clean Water Act (CWA), point source dischargers are required to obtain federal discharge (NPDES) permits and to comply with water quality based effluent limits (WQBELs) in NPDES permits sufficient to make progress toward the achievement of water quality standards or goals. The antibacksliding and antidegradation rules clearly spell out the interest of Congress in achieving the CWA's goal of continued progress toward eliminating all pollutant discharges. Congress clearly chose an overriding environmental interest in clean water through discharge reduction, imposition of technological controls, and adoption of a rule against relaxation of limitations once they are established.

Upon permit reissuance, modification, or renewal, a discharger may seek a relaxation of permit limitations. However, according to the CWA, relaxation of a WQBEL is permissible only if the requirements of the antibacksliding rule are met. The antibacksliding regulations prohibit EPA from reissuing NPDES permits containing interim effluent limitations, standards or conditions less stringent than the final limits contained in the previous permit, with limited exceptions. These regulations also prohibit, with some exceptions, the reissuance of permits originally based

on best professional judgment (BPJ) to incorporate the effluent guidelines promulgated under CWA §304(b), which would result in limits less stringent than those in the previous BPJ-based permit. Congress statutorily ratified the general prohibition against backsliding by enacting §§402(o) and 303(d)(4) under the 1987 Amendments to the CWA. The amendments preserve present pollution control levels achieved by dischargers by prohibiting the adoption of less stringent effluent limitations than those already contained in their discharge permits, except in certain narrowly defined circumstances.

When attempting to backslide from WQBELs under either the antidegradation rule or an exception to the antibacksliding rule, relaxed permit limits must not result in a violation of applicable water quality standards. The general prohibition against backsliding found in §402(o)(1) of the Act contains several exceptions. Specifically, under §402(o)(2), a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if: (A) material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation; (B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or (ii) the Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under subsection (a)(1)(B) of this section; (C) a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy [(e.g., Acts of God)]; (D) the permittee has received a permit modification under section 1311(c), 1311(g), 1311(h), 1311(i), 1311(k), 1311(n), or 1326(a) of this title; or (E) the permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit, and has properly operated and maintained the facilities, but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

Even if a discharger can meet either the requirements of the antidegradation rule under §303(d)(4) or one of the statutory exceptions listed in §402(o)(2), there are still limitations as to how far a permit may be allowed to backslide. Section 402(o)(3) acts as a floor to restrict the extent to which BPJ and water quality-based permit limitations may be relaxed under the antibacksliding rule. Under this subsection, even if EPA allows a permit to backslide from its previous permit requirements, EPA may never allow the reissued permit to contain effluent limitations which are less stringent than the current effluent limitation guidelines for that pollutant, or which would cause the receiving waters to violate the applicable state water quality standard adopted under the authority of §303.49.

Federal regulations 40 CFR 122.44 (l)(1) have been adopted to implement the antibacksliding requirements of the CWA:

> (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under Sec. 122.62.)
>
> (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.
>
> (i) Exceptions--A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if:
>
> > (A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;
> > (B)(1) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or (2) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b);
> > (C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;
> > (D) The permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or
> > (E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

> (ii) Limitations. In no event may a permit with respect to which paragraph (l)(2) of this section applies be renewed, reissued, or modified to contain an effluent limitation which is less stringent than required by effluent guidelines in effect at the time the permit is renewed, reissued, or modified. In no event may such a permit to discharge into waters be renewed, issued, or modified to contain a less stringent effluent limitation if the implementation of such limitation would result in a violation of a water quality standard under section 303 applicable to such waters.

The effluent limitations in the existing permit, Order No. R5-2005-0032, for ammonia, arsenic, atrazine, boron, bromoform, chlorodibromomethane, copper, dichlorobromomethane, fluoride, MBAS, nitrate, persistent chlorinated hydrocarbon pesticides (except delta-BHC and endrin aldehyde), settleable solids, sulfate, total trihalomethanes, and turbidity have either been relaxed or removed in the Permit. The Permit, Fact Sheet, Reasonable Potential Analyses, states repeatedly that the data used in determining reasonable potential was from January 2006 through December 2008. The generated wastewater is completely controlled by the Casino. The wastewater treatment system has not changed. The character of the influent wastewater has not changed. The use of constituents such as pesticides is at the discretion of the Casino. There is no valid reason for not using all of the available data characterizing the discharge. Some constituents, such as metals and pesticides, are sampled infrequently. The use of only two years of data may result in a statistically invalid data set; the statistical T-test recommends that a data set with less than 13 data points is unreliable. In conducting a reasonable potential analysis all relevant and accurate data must be used.

The Permit Effluent Limit for ammonia is based on paired effluent pH and temperature data collected between January 2006 and December 2008. The average monthly Effluent Limit (AMEL) for ammonia is less stringent than the AMEL established in Order No. R5-2005-0032. There is no explanation why the Regional Board excluded the data used to determine reasonable potential in Order R5-2005-0032. The pairing of pH and temperature data points makes an invalid assumption that pH shifts will only occur with temperature shifts and that a relationship exists. There is no evidence in the record that pH and temperature are related and will only change in harmony. The original reasonable potential analysis assumed that the recorded worst case pH and the recorded worst case temperature could occur at the same time, no evidence has been submitted to show that this is untrue. If the assumption used in Order R5-2005-0032 is correct then the Permit does not contain an Effluent Limitation for ammonia that is protective of water quality and the aquatic life beneficial use of the receiving stream.

Order No. R5-2005-0032 established effluent limitations for arsenic, atrazine, boron, bromoform, chlorodibromomethane, copper, dichlorobromomethane, fluoride, MBAS, nitrate, persistent chlorinated hydrocarbon pesticides, settleable solids, sulfate, and total trihalomethanes which were based on monitoring data from the wastewater discharge. The generated wastewater

is completely controlled by the Casino. The wastewater treatment system has not changed. The character of the influent wastewater has not changed. The use of constituents such as pesticides is at the discretion of the Casino. There is no valid reason for not using all of the available data characterizing the discharge including that used to determine reasonable potential in Order No. R5-2005-0023. Some constituents, such as metals and pesticides, are sampled infrequently. The use of only two years of data may result in a statistically invalid data set; the statistical T-test recommends that a data set with less than 13 data points is unreliable. In conducting a reasonable potential analysis all relevant and accurate data must be used. The relaxation of effluent limitations is not allowed under CWA section 402(o)(2)(B)(i). The discharge has the reasonable potential to cause or contribute to an exceedance of water quality standards for these parameters in the receiving water and all beneficial uses will be degraded without inclusion of the Effluent Limitations. Elimination of the effluent limitations for these parameters is inconsistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Any impact on existing water quality will be significant. Therefore, relaxation of effluent limitations is not allowed under CWA section 303(d)(4).

The Permit Fact Sheet discusses Pathogens and states that the previous Order established Effluent Limitations for turbidity. Turbidity limitations are maintained in the Permit but have been moved to "Special Provisions", they are no longer Effluent Limitations. The Fact Sheet Pathogen discussion states that infectious agents in sewage are bacteria, parasites and viruses and that tertiary treatment is necessary to effectively remove these agents. This discussion also states that turbidity limitations were originally established: "...to ensure that the treatment system was functioning properly and could meet the limits for total coliform organisms. This discussion is incorrect. First, coliform organism limitations are also an indicator parameter of the effectiveness of tertiary treatment. The coliform limitations in the proposed and past Permit are significantly lower than the Basin Plan Water Quality Objective and are based on the level of treatment recommended by the California Department of Public Health (DPH). Second, both the coliform limitations and turbidity are recommended by DPH as necessary to protect recreational and irrigated agricultural beneficial uses of the receiving water. Turbidity has no lesser standing than coliform organisms in the DPH recommendation. 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. There are no limitations for viruses and parasites in the Permit, which the Regional Board has indicated, are necessary to protect the contact recreation and irrigated agricultural uses of the receiving water. Both coliform and turbidity limitations are treatment effectiveness indicators that the levels of bacteria viruses and parasites are adequately removed to protect the beneficial uses. Special Provisions are not Effluent Limitations as required by the Federal Regulations. The turbidity Effluent Limitations must be restored in accordance with the Clean Water Act and Federal regulations 40 CFR 122.44 (l)(1).

In discussing and analyzing turbidity, the Regional Board has consistently ignored the secondary maximum contaminant level (MCL) for drinking water. The Basin Plan, at Water Quality Objectives for Inland Surface Waters, Chemical Constituents (p. III-3.00), requires that "[a]t 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." Municipal and domestic supply is an existing beneficial use of the surface water, which carries a Secondary MCL for turbidity of 5 NTU. An Effluent Limitation for turbidity is required based on the drinking water quality standard.

The only rational that can explain moving the turbidity from Effluent Limitations to Provisions is to protect Dischargers from mandatory minimum penalties as prescribed by the California Water Code, Section 13385. It is doubtful that it was intent of the legislature in adopting the mandatory penalty provisions to have the Regional Boards delete Effluent Limitations from permit to avoid penalties.

Order No. R5-2005-0032 established final mass-based effluent limitations for aluminum and chlorine residual. Federal Regulation, 40 CFR 122.45 (b) requires that in the case of POTWs, permit Effluent Limitations, standards, or prohibitions shall be based on design flow. Concentration is not a basis for design flow. Mass limitations are concentration multiplied by the design flow and therefore meet the regulatory requirement.

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."

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.

H. The 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.

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; while tertiary treatment may provide BPTC for pathogens, dissolved metals may simply pass through.

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

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

For example, the APU 90-004 states:

> "Factors that should be considered when determining whether the discharge is necessary to accommodate social or economic development and is consistent with maximum public benefit include: a) past, present, and probably beneficial uses of the water, b) economic and social costs, tangible and intangible, of the proposed discharge compared to benefits. The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment. The ability to pay depends on the facility's source of funds. In addition to demonstrating a financial impact on the publicly – or privately – owned facility, the analysis must show a significant adverse impact on the community. The long-term and short-term socioeconomic impacts of maintaining existing water quality must be considered. Examples of social and economic parameters that could be affected are employment, housing, community services, income, tax revenues and land value. To accurately assess the impact of the proposed project, the projected baseline socioeconomic profile of the affected community without the project should be compared to the projected profile with the project...EPA's Water Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts"

There is nothing resembling an economic or socioeconomic analysis in the Permit except to present the potential costs related to the Casino. The presented evaluation contains no comparative costs. 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." How a Casino that is reported to make annual profits between $400 million and $500 million (Sacramento Bee 8 January 2009) can state that providing additional wastewater treatment would be an economic burden is absurd, especially considering that an estimated $1 billion Casino expansion is underway.

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. If this is not the case, the antidegradation analysis must explicitly detail how and why a run-of-the-mill tertiary system that facilitate increased mass loadings of impairing constituents can be considered BPTC.

- Membrane technology with a pore size of 0.10 microns, such as is utilized at the Casino's wastewater treatment plant will not remove heavy metals, pesticides or viruses (Wastewater Engineering, Treatment and Reuse, Metcalf and Eddy, Fourth Edition, Figure 11-34 (Metcalf and Eddy)). The Casino wastewater discharge has been shown to contain aluminum, cadmium, copper, lead and zinc above toxic levels. The discharge has also been found to contain chlorinated persistent pesticides, delta BHC and endrin aldehyde. The existing Permit includes limitations for additional persistent chlorinated hydrocarbon pesticides, which were present in the discharge. These constituents will not be reliably removed utilizing a membrane technology with a pore size of 0.1 micron according to Metcalf and Eddy. All of the listed constituents are toxicants. The Discharger does not provide, and the Regional Board does not require, adequate treatment to remove toxic constituents from the discharge.

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."

- The Permit designates Orchard Creek as a Tier 1 receiving water for aluminum, iron, manganese, and beta-BHC because these constituents were detected in the receiving water above water quality criteria.

- The Permit designates Orchard Creek as a Tier 2 receiving water for ammonia, arsenic, barium, boron, chloride, copper, electrical conductivity, endrin aldehyde, fluoride, methylene blue active substances, lead, mercury, nickel, nitrate, nitrite, sulfate, total dissolved solids, and zinc. The provided rational is that except for zinc, each of these parameters used less than 10 percent of available assimilative capacity in Orchard Creek. The Permit surmised that the proposed increased discharge will be protective of beneficial uses and will maintain greater than 90 percent of assimilative capacity in Orchard Creek. This completely ignores that fact that the Permit, pages F-17, Municipal and Domestic Supply and Agricultural Irrigation and F-26 Assimilative Capacity/Mixing Zone, confirms that Orchard Creek is an ephemeral stream; there is no assimilative capacity in an ephemeral stream.

- The Permit states that: "The Discharger estimated that the increased discharge would result in the use of 20 percent of available assimilative capacity for zinc. Effluent limitations have been established in this Order which are protective of beneficial uses." Again, this completely ignores that fact that the Permit, pages F-17, Municipal and

Domestic Supply and Agricultural Irrigation and F-26 Assimilative Capacity/Mixing Zone, confirms that Orchard Creek is an ephemeral stream; there is no assimilative capacity in an ephemeral stream.

- The Permit states that: "The increase in discharge would negligibly increase loading of bioaccumulative constituents, including selenium and mercury." This statement is made without any support or merit. Mercury is the subject of a controversial TMDL, which has not been completed. Since the Casino's wastewater discharge enters the Delta via the Sacramento River, the discharge could be subject to the provision of the TMDL. The water quality standard for selenium is in a state of transition and a new water quality standard is expected to be issued by US EPA. The statements and the Casino's Antidegradation Policy analysis do not seriously address mercury or selenium.

- The Permit states that: *"The scientific rationale used in the antidegradation analysis to determine if the Order allows a lowering of water quality is to determine the reduction of assimilative capacity. Assimilative capacity was calculated on a mass-balanced, concentration basis and, for bioaccumulative constituents, calculated on a mass loading basis. This approach is consistent with recent USEPA guidance and addresses a key objective of the antidegradation analysis to "[c]ompare receiving water quality to the water quality objectives established to protect designated beneficial uses" (APU 90-004). USEPA has recommended ten (10) percent as a measure of significance for identifying those substantial lowerings of water quality that should receive a full tier 2 antidegradation review. APU 90-004 requires the consideration of "feasible alternative control measures" as part of the procedures for a complete antidegradation analysis."* Again, this completely ignores that fact that the Permit, pages F-17, Municipal and Domestic Supply and Agricultural Irrigation and F-26 Assimilative Capacity/Mixing Zone, confirms that Orchard Creek is an ephemeral stream; there is no assimilative capacity in an ephemeral stream.

- The Permit states that: *"The antidegradation analysis analyzed each pollutant detected in the effluent and receiving water to determine if the proposed increase in discharge from 0.35 MGD to 0.875 MGD authorized by this Order potentially allows significant increase of the amount of pollutants present in the upstream and downstream receiving water influenced by the proposed discharge. Pollutants that significantly increased concentration or mass downstream required an alternatives analysis to determine whether implementation of alternatives to the proposed action would be in the best socioeconomic interest of the people of the region, and be to the maximum benefit of the people of the State. Details on the scientific rationale are discussed in detail in the antidegradation analysis. The Regional Water Board concurs with this scientific approach."*

The City of Lincoln's wastewater treatment plant is visible from the Casino's parking lot. The Lincoln wastewater treatment plant is recognized by the Regional Board as regional system with a much better compliance history than the Casino's operation. The Regional Board has allowed for extensive compliance schedules for the City of Auburn and Placer County wastewater treatment systems to encourage them to tie into the regional City of Lincoln wastewater system. The Regional Board has adopted a reclamation policy stating that regionalization of wastewater facilities is a priority. The Regional Board's Executive Officer has stated numerous times in public presentations that wastewater regionalization is a high priority of the Regional Board. Yet, the Regional Board has done nothing to require or encourage the Casino to cross a field to tie into the City of Lincoln's wastewater treatment system. The Regional Board's commitment to regionalization can be determined by their action on this Permit.

The Permit concludes that: *"Connection to the City of Lincoln Wastewater System – Pumping and transmission facilities required to convey 100 percent of the wastewater generated by the expanded casino and hotel facilities to the City of Lincoln wastewater collection and treatment facilities would be constructed as part of the South Lincoln Regional Sewer System (SLRSS) project. The expanded wastewater treatment plant would not be constructed. The existing wastewater treatment plant would be decommissioned and effluent flow to Orchard Creek at this outfall location would cease. This alternative is currently infeasible due to the lack of funding from other industrial and property owners to support the SLRSS project, as well as the lack of required easements and permits to construct the new gravity sewer line. An interim option was considered to connect to the City of Lincoln wastewater treatment plant (WWTP) with a smaller diameter force main than that proposed for the SLRSS project. However, this option is infeasible due to the high costs, failure to meet the long-term needs of the Facility, lack of benefits to surrounding properties, high potential for odor due to excessive hydraulic retention time in the force main system, high power usage from pumping the wastewater a long distance, and the potential for spills if a force main break occurs. Additionally, because the City of Lincoln WWTP discharges wastewater to Auburn Ravine, to which Orchard Creek is tributary, this option would not decrease the discharge from the Facility to downstream waters, but would simply change the discharge location."* The City of Lincoln's wastewater treatment plant has a significantly better compliance history that does the Casino's system. The Lincoln wastewater treatment plant was design to comply with CTR based limitations and contains temperature limitations to protect cold-water aquatic life. The Casino is reported to make annual profits between $400 million and $500 million (Sacramento Bee 8 January 2009) with an estimated $1 billion Casino expansion underway. With these costs in mind it is difficult to believe that the cost of a pipeline across a field to tie into the City of Lincoln wastewater treatment plant is cost prohibitive. Odors and spill prevention are routine collection system issues that are

effectively overcome in the wastewater industry daily. Each of the presented reasons for rejecting a tie-in to the Lincoln regional wastewater system is without merit.

- The Permit states that: *"Additional Treatment to Remove Zinc – As described above, the proposed flow increase would result in the use of 20 percent of available assimilative capacity. The Discharger evaluated additional alternatives for reducing levels of zinc in the discharge. The Facility utilizes a state-of-the-art membrane bioreactor (MBR) treatment process with ultrafiltration membranes that provide the highest degree of filtration with the exception of reverse osmosis. Treating the effluent with reverse osmosis is not a feasible alternative due to the high capital and operating costs, high rates of power consumption, and high rates of greenhouse gas generation associated with the construction and operation of a reverse osmosis treatment system. As part of the Discharger's 26 October 2009 infeasiblity report for zinc, the Discharger proposed a series of actions to address zinc in the discharge, including preparation of a Pollution Prevention Plan, chemical addition of passivation agents to coat the interior of distribution pipes to reduce corrosion, and chemical addition of precipitants to remove zinc. These measures, along with the current use of MBR technology, will provide best practical, treatment and control (BPTC) for the discharge."*

  Again, this discussion completely ignores that fact that the Permit, pages F-17, Municipal and Domestic Supply and Agricultural Irrigation and F-26 Assimilative Capacity/Mixing Zone, confirms that Orchard Creek is an ephemeral stream; there is no assimilative capacity in an ephemeral stream.

  The Permit discussion is quite simply wrong with regard to available treatment technologies. The City of Lincoln for example utilizes a system of maturation ponds to remove metal peak values to maintain compliance. Membrane technology with a pore size of 0.10 microns, such as is utilized at the Casino's wastewater treatment plant will not remove heavy metals, pesticides or viruses (Wastewater Engineering, Treatment and Reuse, Metcalf and Eddy, Fourth Edition, Figure 11-34 (Metcalf and Eddy)). There are also ultrafiltration and nanofiltration technologies available that lie between microfiltration and reverse osmosis systems. The difference in these membrane technologies is pore size. It is typical that reverse osmosis systems are used as scare tactics in the local wastewater industry and regulatory community. It must be noted that local industry utilizes reverse osmosis systems routinely for treating cooling towers and boiler supply.

  It must also be noted that the Thunder Valley Casino utilized a reverse osmosis system when their water supply system was found to be staining and discoloring their interior fixtures due to the salinity of the water. There was no outcry of the high costs of RO

when the Casino's fancy plumbing fixtures were threatened. Since the RO system has been abandoned it could be used for wastewater treatment saving on the purchase costs.

The Casino wastewater discharge has been shown to contain aluminum, cadmium, copper, lead and zinc above toxic levels. The discharge has also been found to contain chlorinated persistent pesticides, delta BHC and endrin aldehyde. The existing Permit includes limitations for additional persistent chlorinated hydrocarbon pesticides, which were present in the discharge. These constituents will not be reliably removed utilizing a membrane technology with a pore size of 0.1 micron according to Metcalf and Eddy. All of the listed constituents are toxicants. The Discharger does not provide, and the Regional Board does not require, adequate treatment to remove toxic constituents from the discharge.

- The socioeconomic analysis did not consider the costs and impacts to society from increased gambling. Is the expansion of any vice considered by the Regional Board to be in the best interest of the people of California if it produces jobs? Elimination of the discharge tying into the City of Lincoln's wastewater system would allow a continued discharge. Providing adequate treatment would allow a continued discharge.

- The Permit acknowledges that chronic toxicity testing results demonstrate that the discharge has a reasonable potential to exceed toxicity water quality objectives (page F-46). The discharge is chronically toxic. The aquatic life beneficial use is not protected. The Antidegradation analysis does not discuss these toxic discharges or any remedy.

- The Permit acknowledges that an accompanying Time Schedule Order (TSO) states that: Immediate compliance with the new effluent limitations for cadmium, lead, and zinc are not possible or practicable. Compliance with the limits for cadmium, lead and zinc will not be required under the TSO until 1 January 2015. The Antidegradation analysis does not discuss why compliance is not practicable. How is BPTC being provided at a non-compliant wastewater treatment plant?

- The Antidegradation analysis does not discuss that the Permit relaxes limitations for ammonia, arsenic, atrazine, boron, bromoform, chlorodibromomethane, copper, dichlorobromomethane, fluoride, MBAS, nitrate, persistent chlorinated hydrocarbon pesticides (except delta-BHC and endrin aldehyde), settleable solids, sulfate, total trihalomethanes, and turbidity.

- Page 61 of the Antidegradation analysis incorrectly bases assessments on the absence of salmonids.

- Most of the Antidegradation analysis is based on assimilative capacity in the receiving stream, which is ephemeral and therefore has no assimilative capacity.

- The Antidegradation analysis does not discuss the abundance of toxic metals and their additive impacts as required by the Basin Plan. This is particularly important since the discharge has been shown to be toxic.

- Order No. R5-2005-0032 required the Discharger to conduct a study of the thermal impacts of the discharge on the beneficial uses of Orchard Creek to be submitted by 1 February 2006. The Discharger submitted their Thermal Impact Report in April 2006. Based on the study results, the Discharger concluded that the discharge does not cause a significant impact on beneficial uses, particularly aquatic life, in Orchard Creek or downstream waters. The Discharger found that thermal impacts from the discharge to fisheries and overall biota in Orchard Creek are less than significant.

  Page 61 of the Antidegradation analysis incorrectly bases assessments on the absence of salmonids. Salmonids are present in the receiving water (see ammonia discussion). The presence of salmonids results in low receiving water limitations. The City of Lincoln discharges wastewater downstream in Auburn Ravine and has restrictive temperature limits in their NPDES permit. It would appear that the Casino's temperature study is likely incorrect. High temperature discharges can significantly impact the cold freshwater aquatic life beneficial use of the receiving water.

I. The Permit improperly removes an Effluent Limitation for copper based on an inadequate Water Effects Ratio contrary to federal regulation 40 CFR 122.44.

On March 24, 2000 the US Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS) issued a biological opinion on the effects of the final promulgation of the CTR on listed species and critical habitats in California in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.; Act). The biological opinion was issued to the U.S. Environmental Protection Agency, Region 9, with regard to the "Final Rule for the Promulgation of Water Quality Standards: Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California" (CTR)". The document represented the Services' final biological opinion on the effects of the final promulgation of the CTR on listed species and critical habitats in California in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.; Act). The biological opinion contained the following discussion with regard to water effects ratios (WERs).

"Formulas for all the hardness dependant metals also include a Water Effects Ratio (WER), a number that acts as a multiplication factor. If no site-specific WER is determined, then the WER is presumed to be 1 and would not modify a formula result. A WER purportedly accounts for the

difference in toxicity of a metal in site water relative to the toxicity of the same metal in reconstituted laboratory water. The contention is that natural waters commonly contain constituents which "synthetic" or "reconstituted" laboratory waters lack, such as dissolved organic compounds, that may act to bind metals and reduce their bioavailability. Where such constituents act to modify the toxicity of a metal in site water compared to the toxicity of the same metal in laboratory water, a "water effect" is observed.

Example WER calculation:

Suppose the LC50 of Cu in site water is 30 µg/L.
Suppose the LC50 of Cu in laboratory water is 20 µg/L.
Assume a site hardness of 40 mg/L.
The freshwater conversion factor (CF) for Cu = 0.96.

$$WER = \frac{\text{Site } \mathbf{LC50}}{\text{Lab } \mathbf{LC50}} = \frac{30\ \mu g/L}{20\ \mu g/L} = 1.5$$

$$\text{Cu Site-Specific CCC} = WER \times CF \times e^{(m[\ln(40)]+b)}$$
$$= 1.5 \times 0.96 \times 4.3$$
$$= 6.2\ \mu g/L$$

What follows are discussions of the Services' concerns regarding the applications of WER, CF and the attendant translators, and deficiencies of the hardness-dependent factors in formula-based determinations of criteria for As, Cd, Cr (III), Cr (VI), Cu, Pb, Hg, Ni, Se (in saltwater), Ag, and Zn.

Water Effect Ratios

Except in waters that are extremely effluent-dominated, WERs are > 1 and result in higher numeric criteria. Note that, in the examples above, use of a site-specific WER for copper raised the criterion concentration allowed at the site from 4.1 µg/L to 6.2 µg/L, an increase of 50 percent. A WER may be more important than site water hardness or metal-specific conversion factors and translators in determining a criterion and hence the metal loading allowed (see hardness discussions below).

EPA has published guidelines for determining a site-specific WER, which outline procedures for water sampling, toxicity testing, acclimating test organisms, etc. (USEPA 1994). When site water toxicity is lower than laboratory water toxicity, criteria may be raised because: 1) differences in calcium to magnesium ratios in hardness between laboratory water and site water can significantly alter the WER; 2) toxicity testing for WER development is not required across the same range of test organisms used in criteria development; and 3) the inherent variabilities associated with living organisms used in toxicity testing can be magnified when used in a ratio.

EPA guidelines for WER determinations (USEPA 1994) instruct users to reconstitute laboratory waters according to protocols that result in a calcium-to-magnesium ratio of ~0.7 across the range of hardness values (USEPA 1989, 1991). This proportion (~0.7) of calcium to magnesium is far less than the ratio found in most natural waters (Welsh et al. 1997). The Services agree with Welsh et al. (1997) that imbalances in Ca-to-Mg ratios between site waters and dilution waters may result in WERs which are overestimated because calcium ions are more protective of metals toxicity than are magnesium ions. The EPA has noted this problem with determining WERs but limits the suggested correction of matching the laboratory Ca-to-Mg ratio and the site ratio to a single sentence at the end of the proposed rule. Thus, the significance and correction of this problem is not adequately addressed.

EPA metal criteria are based on over 900 records of laboratory toxicity tests (USEPA 1992) using hundreds of thousands of individual test organisms, including dozens of species across many genera, trophic levels, and sensitivities to provide protection to an estimated 95 percent of the genera most of the time (USEPA 1985f). The use of a ratio based WER determined with 2 or 3 test species limits the reliability of the resultant site-specific criteria and calls into question the level of protection provided for families or genera not represented in the WER testing. The inherent variability of toxicity testing can also have a significant effect on the final WER determination, especially because it is used in a ratio. As discussed above, the EPA has developed its criteria based on a relatively large database. However, even with such a large database variability in test results can still cause difficulty in determining a criteria value. For example, Cd data were so variable that EPA abandoned the acute to chronic ratio method of determining the chronic criterion (USEPA 1985b). Instead, EPA applied the acute method to derive a chronic value. The EPA criteria document for Cd (USEPA 1985b) notes a chronic value for Chinook salmon of 1.563 µg/L with a range of 1.3 to 1.88 µg/L. This is a variability of 17 percent in either direction, which is rather good (inter and intra laboratory variability higher than 17 percent is not unusual). Therefore, if this data is used in a ratio such as a WER, the variability alone could result in a 34 percent difference in the values used. A potential WER using such data could range from 0.7 to 1.4. Thus, a site-specific criteria could increase by 40 percent due to natural variability in the toxicity testing alone. In development of a site-specific WER, fewer tests are conducted and with fewer species, increasing the likelihood that natural variation in toxicity test results could affect the outcome. Care should also be taken to make sure that test results between lab and site water are significantly different. If 95 percent confidence intervals for the tests overlap then they are likely not significantly different and should not be used to determine a WER. Thus, toxicity tests should be conducted and carefully evaluated to minimize experimental variance when collecting data to calculate WERs.

Zooplanktons such as cladocerans (Daphnia sp.) are commonly used in bioassays to determine national and site-specific criteria or develop WERs and translation factors. As sensitive as cladocerans seem to be it is possible that the life stage of cladocerans being used in most

bioassays are not the most sensitive. Shurin and Dodson (1997) found that sexual reproduction in cladocerans is more sensitive to toxicants than the asexual reproductive stage and that most bioassays utilize daphnia during the asexual phase because they are well fed and cultured under low stress situations. Under stress (low temperature, drought, low food supply) cladocerans and other zooplankton use sexual reproduction to produce resting eggs that can remain dormant for months to years until more favorable conditions return. The loss or a decrease in the production of resting eggs can have a significant long-term effect on the populations of these species. Snell and Carmona (1995) found that for a rotifer zooplankton, sexual reproduction was more strongly affected by several toxicants, including cadmium, than asexual reproduction. The authors concluded that the "level of toxicants presently allowable in surface waters . . . may expose zooplankton populations to greater ecological risks than is currently believed." Other metals may also be more toxic to the sexual stage of zooplankton adding additional doubt to the protectiveness of some criteria and WERs.

Procedures for acclimation of test organisms prior to toxicity testing may also be inadequate to assure meaningful comparisons between site and laboratory waters. For the reasons stated above, the Services believe that the EPA procedures for determining WERs for metals may result in criteria that are not protective of threatened or endangered aquatic species. Thus, WERs of three (3) or less are unacceptable because they are likely within the variance of the toxicity tests. WERs over three must be carefully developed and evaluated to ensure that listed species will be protected."

The US Fish and Wildlife Service (Service) and the National Marine Fisheries Service (NMFS) concluded that US EPA must consult with the agencies before approving any WER where endangered species are present, which is the case here. Specifically the biological opinion required that: "EPA, in cooperation with the Services, will issue a clarification to the Interim *Guidance on the Determination and Use of Water-Effect Ratios for Metals* (EPA 1994) concerning the use of calcium-to-magnesium ratios in laboratory water, which can result in inaccurate and under-protective criteria values for federally listed species considered in the Services' opinion. EPA, in cooperation with the Services, will also issue a clarification to the Interim *Guidance* addressing the proper acclimation of test organisms prior to testing in applying water-effect ratios (WERs)."

J. Effluent Limitations for iron and manganese are improperly regulated as an annual average contrary to Federal Regulations 40 CFR 122.45 (d)(2) and common sense.

Federal Regulation 40 CFR 122.45 (d)(2) requires that permit for POTWs establish Effluent Limitations as average weekly and average monthly unless impracticable. The Permit establishes Effluent Limitations for iron and manganese as an annual average contrary to the cited Federal Regulation. Establishing the Effluent Limitations for iron and manganese in accordance with the Federal Regulation is not impracticable; to the contrary the Central Valley

Regional Board has a long history of having done so. Proof of impracticability is properly a steep slope and the Regional Board has not presented any evidence that properly and legally limiting iron and manganese is impracticable.

Iron is a secondary MCL based on discoloration, discoloration occurs instantaneously, not over a years period of time. Manganese is also a secondary MCL however based on taste and odor, taste and odor issues occur instantaneously, not over a year's period of time. Limiting these constituents to be regulated on an annual, average will allow for peaks well above the secondary MCLs directly impacting the numerous documented downstream domestic water users. There does not appear to be any reasoning or logic applied to the Regional Board staff's attempts to relax water quality objectives contrary to Federal Regulations. The permit must be amended to limit iron and manganese in accordance with the cited Federal Regulation.

K. The Permit fails to contain mass-based effluent limits for cadmium, delta-BHC, endrin aldehyde, lead, zinc and aluminum as required by Federal Regulations 40 CFR 122.45(b).

Federal Regulation, 40 CFR 122.45 (b) requires that in the case of POTWs, permit Effluent Limitations, standards, or prohibitions shall be based on design flow. Concentration is not a basis for design flow. Mass limitations are concentration multiplied by the design flow and therefore meet the regulatory requirement.

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.

L. The reasonable potential analysis presented in the Permit (Attachment G) fails to use the maximum effluent concentration for numerous constituents which results if inaccurate calculations.

The Regional Board presents their reasonable potential analysis summary in Attachment G. Historical Monitoring Data is presented in Table F-2. There is no discussion that invalidates any data in Table F-2. For several constituents, such as aluminum, the historical data shows higher Maximum effluent concentrations in Table F-2 (118 ug/l for aluminum) as opposed to Attachment G (71 ug/l for aluminum).

Federal Regulations, 40 CFR 122.44(d), requires that limits must be included in permits where pollutants will cause, have reasonable potential to cause, or contribute to an exceedance of the State's water quality standards. US EPA has interpreted 40 CFR 122.44(d) in *Central Tenets of the National Pollutant Discharge Elimination System (NPDES) Permitting Program* (Factsheets and Outreach Materials, 08/16/2002) that; although States will likely have unique implementation policies there are certain tenets that may not be waived by State procedures. These tenets include that "where valid, reliable, and representative effluent data or instream

background data are available they MUST be used in applicable reasonable potential and limits derivation calculations. Data may not be arbitrarily discarded or ignored." The Regional Board has failed to use valid, reliable and representative data in developing limitations, contrary to the cited Federal Regulation.

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries Of California* (SIP), Section 1.2 requires that: "When implementing the provisions of this Policy, the RWQCB shall use all available, valid, relevant, representative data and information, as determined by the RWQCB. The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include, but are not limited to, the following: evidence that a sample has been erroneously reported or is not representative of effluent or ambient receiving water quality; questionable quality control/quality assurance practices; and varying seasonal conditions."

Statistical procedures are valid tools for assessing trends and analyzing data. It must be recognized however that statistical procedures are not scientific laws. In wastewater engineering it is commonplace for individual data points to be peaks or depressions far from the statistical norm. This is could be attributed to slug load discharges, discharge practices from local industries, or simply the infrequency of sampling wastewater effluents. Wastewater effluent is generally not sampled continuously. It must also be recognized that wastewater treatment personnel tend to perform their daily functions as a matter of routine, such as sampling the effluent at the same time every day. The likely hood of data peaks being "real" absent erroneously reporting, questionable quality control/quality assurance practices or varying seasonal or daily conditions is more defensible than the data being an "outlier", hence the EPA and SIP requirement that data may not be arbitrarily discarded or ignored.

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. In accordance with 40 CFR 122.4 (a), (d) and (g) the Permit may not be adopted for failing to include protective limitations based on valid, reliable and representative data.

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 reasonable potential analysis must be recalculated using the actual maximum effluent concentration for all detected constituents.

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. R5-2010-0005 (NPDES No. CA0084697) and remand to the Regional Board with instructions prepare and circulate a new tentative order that comports with regulatory requirements.

B. Alternatively, prepare, circulate and issue a new order that is protective of identified beneficial uses and comports with regulatory requirements.

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

CSPA's arguments and points of authority are adequately detailed in the above comments and our 10 December 2009 comment letter. Should the State Board have additional questions

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

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

A true and correct copy of this petition, without attachment, was sent electronically and by First Class Mail to Ms. Pamela Creedon, Executive Officer, Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, CA 95670-6114. A true and correct copy of this petition, without attachment, was sent to the Discharger in care of: Ms. Jessica Tavares, Chairperson, United Auburn Indian Community, 10720 Indian Hill Road, Auburn, CA 95603 and Mr. Don Brown, HydroScience Operations, Inc., 10569 Old Placerville Road, Sacramento, CA 95827.

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 10 December 2009 comment letter that was accepted into the record.

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

Dated: 26 February 2010

Respectfully submitted,

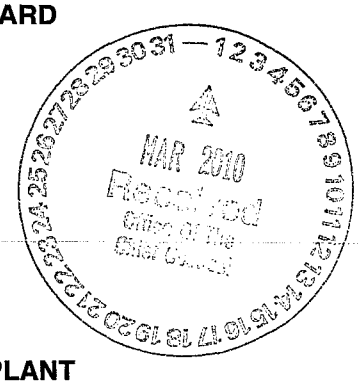
Bill Jennings, Executive Director
California Sportfishing Protection Alliance

Attachment No. 1: Order No R5-2010-0005.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL VALLEY REGION

11020 Sun Center Drive, #200 Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • Fax (916) 464-4645
http://www.waterboards.ca.gov/centralvalley



ORDER NO. R5-2010-0005
NPDES NO. CA0084697

WASTE DISCHARGE REQUIREMENTS FOR THE UNITED AUBURN INDIAN COMMUNITY THUNDER VALLEY CASINO WASTEWATER TREATMENT PLANT PLACER COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	United Auburn Indian Community
Name of Facility	Thunder Valley Casino Wastewater Treatment Plant
Facility Address	1200 Athens Avenue, Lincoln, CA 95648
	Placer County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the United Auburn Indian Community from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Municipal Wastewater	38° 50' 44" N	121° 19' 01" W	Orchard Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**28 January 2010**
This Order shall become effective on:	**19 March 2010**
This Order shall expire on:	**1 January 2015**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**5 July 2010**

I, **Pamela C. Creedon**, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **28 January 2010**.

Original Signed by Kenneth D. Landau for

Pamela C. Creedon, Executive Officer

Table of Contents

List of Tables

List of Attachments

I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	United Auburn Indian Community
Name of Facility	Thunder Valley Casino Wastewater Treatment Plant
Facility Address	1200 Athens Avenue Lincoln, CA 95648 Placer County
Facility Contact, Title, and Phone	Greg Baker, United Auburn Indian Community Tribal Administrator, (916) 240-4232 and (530) 883-2385
Mailing Address	10720 Indian Hill Road, Auburn, CA 95603
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Design Flow	0.35 million gallons per day (MGD), peak daily flow capacity 0.7 MGD (proposed, first phase of expansion) 0.875 MGD (proposed, second phase of expansion)

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. Background. The United Auburn Indian Community (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2005-0032 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0084697. The 2005 NPDES Permit regulated the facility influent flow of 0.35 MGD. The Discharger submitted a Report of Waste Discharge, dated 4 January 2008, and applied for a NPDES permit renewal to discharge up to and increased flow of 0.7 MGD (first phase of expansion) and subsequently 0.875 MGD (second phase of expansion) of treated wastewater from the Thunder Valley Casino Wastewater Treatment Plant, hereinafter Facility. The application was deemed complete on 31 March 2009.

B. Facility Description. The United Auburn Indian Community owns and operates a wastewater collection, treatment, and disposal system, and provides sewerage service to the Thunder Valley Casino (formerly known as the Auburn Rancheria Casino), a gaming and entertainment facility. Hydroscience Operations is currently contracted by the Discharger to provide operational staff at the Facility. The treatment system consists of an influent pump station, headworks (flow measurement and fine screening), immersed membrane bioreactor (IMB), and ultraviolet (UV) light disinfection. The IMB combines an anoxic zone, aeration, clarification, and membrane filtration in a single tank. The filtration treatment is a microfiltration process, in which wastewater is pulled by vacuum through membranes. The filter membrane nominal pore size is 0.1 microns. As needed, sludge is pumped directly from the process overflow tank to the belt filter press unit process and then trucked off-site to a local landfill.

The Discharger identified plans to expand the treatment capacity of the Facility to accommodate expansion of the existing gaming and restaurant facilities and the addition of a hotel, performing arts center, and parking structure. Specifically, the Discharger is planning to expand the Facility in two phases during the term of this Order to provide tertiary treatment for up to 0.7 MGD (first phase) and subsequently 0.875 MGD (second phase) of wastewater. This Order authorizes, after notification of the Regional Water Board that the two phases of expansion are complete, the discharge up to 0.7 MGD and 0.875 MGD of wastewater.

Wastewater is discharged from Discharge Point No. 001 (see table on cover page) to Orchard Creek, a water of the United States, and a tributary to Auburn Ravine, East Side Canal, Cross Canal, and the Sacramento River, within the Lower Sacramento watershed. A portion of the treated municipal wastewater is also recycled and used on-site. The specific recycled water use areas include irrigation of the landscaping on the Thunder Valley Casino property and surrounding the Facility. Attachment B provides a map of the location of the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the Clean Water Act (CWA) and implementing regulations adopted by USEPA and chapter 5.5, division 7 of the California Water Code (CWC; commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through N are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.

G. 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. This Order contains requirements, expressed as a technology equivalence requirement, that are necessary to achieve water quality standards. The Regional Water Board has considered the factors listed in CWC section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in the Fact Sheet.

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).

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised September 2009)*, for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "*...beneficial uses of any specifically identified water body generally apply to its tributary streams.*" The Basin Plan does not specifically identify beneficial uses for Orchard Creek, but does identify present and potential uses for Sacramento River from the Colusa Basin Drain to the "I" Street Bridge, to which the Orchard Creek, via Auburn Ravine, East Side Canal, and Cross Canal, is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Orchard Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Orchard Creek	Existing: Municipal and domestic supply (MUN); agricultural supply, including irrigation (AGR); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); migration of aquatic organisms, warm and cold (MIGR); spawning, reproduction, and/or early development, warm and cold (SPWN); wildlife habitat (WILD); and navigation (NAV).

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "*...those sections of lakes, streams, rivers or other fresh water bodies where*

water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" Orchard Creek, Auburn Ravine, East Side Canal, and Cross Canal are not listed on the 303(d) list of impaired water bodies. The Sacramento River from Knights Landing to the Delta is listed as a WQLS for mercury and unknown toxicity in the 303(d) list of impaired water bodies. Effluent limitations for mercury are included in this Order.

Requirements of this Order implement the Basin Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About 40 criteria in the NTR applied in California. On 18 May 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain water quality criteria for priority pollutants.

J. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 28 2000 with respect to the priority pollutant criteria promulgated for California by USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on 18 May 2000 with respect to the priority pollutant criteria promulgated by USEPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005 that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. **Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See In the Matter of Waste Discharge Requirements for Avon Refinery (State Water Board Order WQ 2001-06 at pp. 53-55). See also Communities for a Better Environment et al. v. State Water Resources Control Board, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was 25 September 1995 (see Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including