

toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, *"In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits."* The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, this Order requires that the Discharger implement best management practices for compliance with the Basin Plan's narrative toxicity objective, as allowed under 40 CFR 122.44(k).

To ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E, section V). Furthermore, the Special Provision contained at VI.C.2.a. of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate, effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

D. Final Effluent Limitations

Table F-8. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis ¹
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	MGD ²	--	--	0.35	--	--	DC
	MGD ³	--	--	0.7	--	--	DC
	MGD ⁴	--	--	0.875	--	--	DC

2002-0122 and R4-2002-0124 for Los Coyotes and Long Beach Wastewater Reclamation Plants Issued by the California Regional Water Quality Control Board, Los Angeles Region SWRCB/OCC FILES A-1496 AND 1496(a).

Parameter	Units	Effluent Limitations					Basis ¹
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Conventional Pollutants							
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20	--	--	TTC
	lbs/day ^{2,5}	29	44	58	--	--	
	lbs/day ^{3,6}	58	88	117	--	--	
	lbs/day ^{4,7}	73	109	146	--	--	
	% Removal	85	--	--	--	--	CFR
pH	standard units	--	--	--	6.5	8.5	BP
Total Suspended Solids	mg/L	10	15	20	--	--	TTC
	lbs/day ^{2,5}	29	44	58	--	--	
	lbs/day ^{3,6}	58	88	117	--	--	
	lbs/day ^{4,7}	73	109	146	--	--	
	% Removal	85	--	--	--	--	CFR
Priority Pollutants							
Cadmium, Total Recoverable	µg/L	0.05	--	0.10	--	--	CTR
Delta-BHC	µg/L	--	--	--	--	ND	BP
Endrin Aldehyde	µg/L	--	--	--	--	ND	BP
Lead, Total Recoverable	µg/L	0.05	--	0.10	--	--	CTR
Mercury, Total Recoverable	lbs/month ²	0.00020 ⁸	--	--	--	--	PB
Zinc, Total Recoverable	µg/L	10	--	20	--	--	CTR
Non-Conventional Pollutants							
Aluminum, Total Recoverable	µg/L	76	--	128	--	--	NAWQC
Ammonia Nitrogen, Total (as N)	mg/L	1.1	--	2.1	--	--	NAWQC
	lbs/day ^{2,5}	3.2	--	6.1	--	--	
	lbs/day ^{3,6}	6.4	--	12	--	--	
	lbs/day ^{4,7}	8.0	--	15	--	--	
Chlorine, Total Residual	mg/L	--	0.011 ⁹	0.019 ¹⁰	--	--	NAWQC
Electrical Conductivity @ 20°C	µmhos/cm	700	--	--	--	--	AGR
Iron, Total Recoverable	µg/L	300 ¹¹	--	--	--	--	SEC MCL
Manganese, Total Recoverable	µg/L	50 ¹¹	--	--	--	--	SEC MCL
Total Coliform Organisms	MPN/100 mL	--	2.2 ¹²	23 ¹³	--	240	Title 22

Parameter	Units	Effluent Limitations					Basis ¹
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	

ND – Non-detect

- ¹ DC – Based on the design capacity of the Facility.
TTC – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
CFR – Based on secondary treatment standards contained in 40 CFR Part 133.
BP – Based on water quality objectives contained in the Basin Plan.
CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
PB – Based on the performance of the treatment system.
NAWQC – Based on USEPA’s National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
SEC MCL – Based on the Secondary Maximum Contaminant Level.
Title 22 – Based on CA Department of Public Health Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).
- ² Applicable until completion of the first phase of upgrades to the Facility.
- ³ Applicable upon completion of the first phase of upgrades to the Facility and until completion of the second phase of upgrades to the Facility.
- ⁴ Applicable upon completion of the second phase of upgrades to the Facility.
- ⁵ Based on the design flow of the existing Facility of 0.35 MGD.
- ⁶ Based on the design flow of the Facility after completion of the first phase of upgrades to 0.7 MGD.
- ⁷ Based on the design flow of the Facility after completion of the second phase of upgrades to 0.875 MGD.
- ⁸ The total monthly mass discharge of mercury from the current Facility shall not exceed 0.00020 lbs.
- ⁹ Applied as a 4-day average effluent limitation.
- ¹⁰ Applied as a 1-hour average effluent limitation.
- ¹¹ Applied as an annual average effluent limitation.
- ¹² Applied as a 7-day median effluent limitation.
- ¹³ Effluent total coliform organisms are not to exceed 23 MPN/100 mL more than once in any 30-day period.

1. Mass-based Effluent Limitations

40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations have been established in this Order for BOD₅, TSS, and ammonia because they are oxygen-demanding substances. Mass-based effluent limitations have been established for mercury because it is a bioaccumulative pollutant and because the Sacramento River is listed as impaired due to mercury. Mass-based effluent limitations were calculated based upon the permitted maximum daily effluent flow allowed in Section IV.A.1.f of the Limitations and Discharge Requirements.

Except for the pollutants listed above, mass-based effluent limitations are not included in this Order for pollutant parameters for which effluent limitations are based on water quality objectives and criteria that are concentration-based.

2. Averaging Periods for Effluent Limitations

40 CFR 122.45(d) requires average weekly and average monthly discharge limitations for publicly owned treatment works (POTWs) unless impracticable. However, for toxic pollutants and pollutant parameters in water quality permitting, USEPA recommends the use of an MDEL in lieu of average weekly effluent limitations for two reasons. *“First, the basis for the 7-day average for POTWs derives from the secondary treatment requirements. This basis is not related to the need for assuring achievement of water quality standards. Second, a 7-day average, which could comprise up to seven or more daily samples, could average out peak toxic concentrations and therefore the discharge’s potential for causing acute toxic effects would be missed.”* (TSD, pg. 96) This Order utilizes MDELs in lieu of average weekly effluent limitations for ammonia, lead, and zinc as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. Furthermore, for BOD₅, chlorine residual, pH, total coliform organisms, and TSS, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3. of this Fact Sheet.

For effluent limitations based on Secondary MCLs, this Order includes annual average effluent limitations. The Secondary MCLs are drinking water standards contained in Title 22 of the California Code of Regulations. Title 22 requires compliance with these standards on an annual average basis, when sampling at least quarterly. Since it is necessary to determine compliance on an annual average basis, it is impracticable to calculate average weekly and average monthly effluent limitations.

3. Satisfaction of Anti-Backsliding Requirements

The Clean Water Act specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in Clean Water Act sections 402(o) or 303(d)(4), or, where applicable, 40 CFR 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in Order No. R5-2005-0032, with the exception of effluent 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. The effluent limitations for these pollutants are less stringent than those in Order No. R5-2005-0032. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

This Order includes revised effluent limitations for ammonia based on monitoring data conducted over the term of Order No. R5-2005-0032 and calculated according to SIP procedures. Based on updated monitoring data used to determine applicable criteria (i.e., paired effluent pH and temperature data collected between January 2006 and December 2008) that was not available at the time Order No. R5-2005-0032 was issued, the applicable AMEL is less stringent than the AMEL established in Order No. R5-2005-0032. Additionally, the 1-hour average effluent limitation contained in Order No. R5-2005-0032 has been revised to an MDEL; however, the magnitude of the MDEL is more stringent than the 1-hour average effluent limitation. The new effluent limitations for ammonia are protective of water quality standards. Therefore, relaxation of effluent limitations is allowed under CWA section 402(o)(2)(B)(i). As described in section IV.D.4 of the Fact Sheet, the establishment of less stringent effluent limitations for ammonia is consistent 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 insignificant. Therefore, relaxation of effluent limitations is allowed under CWA section 303(d)(4).

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. Based on updated monitoring data that was not available at the time Order No. R5-2005-0032 was issued, these parameters do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Therefore, relaxation of effluent limitations is allowed under CWA section 402(o)(2)(B)(i). The discharge does not have 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 maintained. As described in section IV.D.4 of the Fact Sheet, discontinuing effluent limitations for these parameters is consistent 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 insignificant. Therefore, relaxation of effluent limitations is allowed under CWA section 303(d)(4).

Order No. R5-2005-0032 contained effluent limitations for turbidity. The prior limitations were solely an operational check to ensure the treatment system was functioning properly and could meet the limits for solids and coliform. The prior effluent limitations were not intended to regulate turbidity in the receiving water. Rather, turbidity is an operational parameter to determine proper system functioning and not a WQBEL.

This Order contains performance-based operational turbidity specifications to be met prior to disinfection in lieu of effluent limitations. The revised Order does not include effluent limitations for turbidity. However, the performance-based specification in this Order is an equivalent limit that is not less stringent, and therefore does not constitute backsliding.

The operational specifications for turbidity have been revised to be consistent with Title 22 requirements. (See Special Provisions VI.C.4.b, Ultraviolet Disinfection (UV)

System Operating Specifications for turbidity specifications.) The revised Order moves the point of compliance from the final effluent after disinfection to an internal compliance point prior to disinfection. These revisions are consistent with state regulations implementing recycled water requirements.

The revision in the turbidity limitation is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16 because this Order imposes equivalent or more stringent requirements than Order No. R5-2005-0032 and therefore does not allow degradation.

Order No. R5-2005-0032 established final mass-based effluent limitations for aluminum and chlorine residual. 40 CFR 122.45(f)(1)(ii) states that mass limitations are not required when applicable standards and limitations are expressed in terms of other units of measurement. The numerical effluent limitations for aluminum and chlorine residual established in this Order are based on water quality standards and objectives, which are expressed in terms of concentration. Pursuant to 40 CFR 122.25(f)(1)(ii), expressing the effluent limitations in terms of concentration is in accordance with Federal Regulations. Compliance with the concentration-based limits will ensure that significantly less mass of the pollutants is discharged to the receiving water. Discontinuing mass-based effluent limitations for these parameters is consistent 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 insignificant. Therefore, relaxation of effluent limitations is allowed under CWA section 303(d)(4).

4. Satisfaction of Antidegradation Policy

As part of the January 2008 Report of Waste Discharge, and additional information provided on 26 October 2009, the Discharger provided a complete antidegradation analysis following the guidance provided by State Water Board APU 90-004. Pursuant to the guidelines, the analysis evaluated whether changes in water quality resulting from the proposed increase in discharge to Orchard Creek (from 0.35 MGD to 0.875 MGD tertiary treated wastewater) are consistent with the maximum benefit to the people of the State, will not unreasonably affect beneficial uses, will not cause water quality to be less than water quality objectives, and that the discharge provides protection for existing in-stream uses and water quality necessary to protect those uses. The Regional Water Board concurs with the antidegradation analysis.

- a. Water quality parameters and beneficial uses which will be affected by this Order and the extent of the impact.** This Order does not adversely impact beneficial uses of the receiving water or downstream receiving waters. All beneficial uses will be maintained and protected. This Order provides for an increase in the volume and mass of pollutants discharged directly to the receiving water. 40 CFR 131.12 defines the following tier designations to describe water quality in the receiving water body.

Tier 1 Designation: *Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. (40 CFR 131.12)*

Tier 2 Designation: *Where the quality of waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. (40 CFR 131.12)*

The tier designation is assigned on a pollutant-by-pollutant basis. The following is the potential effect on water quality parameters regulated in this Order, as was assessed in the antidegradation analysis:

- i. Orchard Creek was designated 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.
 - ii. Orchard Creek was designated 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. Except for zinc, each of these parameters used less than 10 percent of available assimilative capacity in Orchard Creek and did not represent a significant lowering of water quality. Thus, the proposed increased discharge will be protective of beneficial uses and will maintain greater than 90 percent of assimilative capacity in Orchard Creek.
 - iii. 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. As discussed below, the antidegradation analysis evaluated whether allowance of an increase in zinc concentrations is in the best interest of the people of the State.
 - iv. The increase in discharge would negligibly increase loading of bioaccumulative constituents, including selenium and mercury.
- b. Scientific Rationale for Determining Potential Lowering of Water Quality.**
The rationale used in the antidegradation analysis is based on 40 CFR 131.12, USEPA memorandum Regarding Tier 2 Antidegradation Reviews and Significance Thresholds (USEPA 2005), USEPA Region 9 Guidance on

Implementing the Antidegradation Provisions of 40 CFR 131.12 (USEPA 1987), State Water Board Resolution No. 68-16, a State Water Board 1987 policy memorandum to the Regional Water Boards, and an Administrative Procedures Update (APU 90-004) issued by the State Water Board to the Regional Water Boards.

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.

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.

- c. Alternative Control Measures.** The Discharger considered several alternatives that would reduce or eliminate the lowering of water quality resulting from the proposed increase in discharge from 0.35 MGD to 0.875 MGD. A number of effluent disposal alternatives were assessed to determine if any alternative would substantially reduce or eliminate the lowering of water quality as a result of the proposed increase in discharge from 0.35 MGD to 0.875 MGD. These alternatives are summarized below:
- i. Connection to the City of Lincoln Wastewater Treatment and Reclamation Facility via a Gravity Sewer Line – A gravity sewer line required to convey 100 percent of the wastewater generated by the expanded casino and hotel facilities to the City of Lincoln Wastewater Treatment and Reclamation Facility 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.

The Discharger signed a Memorandum of Agreement (MOU) with the City of Lincoln on 15 July 2008. In the MOU, the City of Lincoln agrees to install a gravity sewer line that will enable the City of Lincoln to provide sewer service to the Discharger at the City of Lincoln Wastewater Treatment and Reclamation Facility. The Discharger agreed to connect to the gravity sewer line when it becomes available. To finance the cost of the gravity sewer line, it was anticipated in the MOU that an assessment district would be formed in which the Discharger, as well as other proposed users, would participate. 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.

It is currently infeasible for the Discharger to connect to the City of Lincoln Wastewater Treatment and Reclamation Facility. The Discharger has committed to regionalization of its wastewater when that connection becomes feasible. The Order requires that the Discharger connect to the City of Lincoln Wastewater Treatment and Reclamation Facility within 1 year of the construction of a gravity sewer connection to the City of Lincoln Wastewater Treatment and Reclamation Facility or to demonstrate through an updated alternatives analysis that an alternative other than connection to the City of Lincoln Wastewater Treatment and Reclamation Facility within 1 year satisfies antidegradation requirements.

- ii. Connection to the City of Lincoln Wastewater Treatment and Reclamation Facility via a Temporary Force Main – A temporary force main required to convey 100 percent of the wastewater generated by the expanded casino and hotel facilities to the City of Lincoln Wastewater Treatment and Reclamation Facility would be constructed. 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. Pursuant to the MOU, the Discharger would connect to the gravity sewer line when it becomes available and transfer ownership of the temporary force main to the City of Lincoln.

An interim option was considered to connect to the City of Lincoln Wastewater Treatment and Reclamation Facility with a smaller diameter force main than that proposed for the SLRSS project. The MOU with the City of Lincoln states that, until the gravity sewer line is built, the City of Lincoln agrees to accept on an *interim* basis sewer flows from the Facility through a temporary force main. According to a 29 December 2009 letter from Placer County, the Discharger submitted preliminary design for construction of the force main on 23 May 2008. The plans were returned to the Discharger for minor revisions and signature on 14 October 2008. However, in weighing the costs and environmental impacts of the temporary force main and the increased discharge, the Discharger determined that a temporary connection

to the City of Lincoln Wastewater Treatment and Reclamation Facility via a temporary force main is not a feasible alternative due to the high costs in relation to expansion of the treatment plant; failure of the temporary facility 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.

It should be noted that, while regionalization is beneficial in many ways, regionalization would not decrease the discharge from the Facility to downstream receiving waters, but would simply move the discharge location directly to Auburn Ravine. The current NPDES Permit for the City of Lincoln Wastewater Treatment and Reclamation Facility (NPDES No. CA0084476, Order No. R5-2008-0156) does not include effluent limitations for zinc. Based on the effluent zinc data presented in Attachment G of the current NPDES Permit for the City of Lincoln Wastewater Treatment and Reclamation Facility (Order No. R5-2008-0156), effluent levels of zinc are as high as 60 µg/L, compared to the MEC of 89 µg/L at the Facility. Though the effluent levels of zinc at both facilities are comparable, stringent effluent limitation are established in this Order (10 µg/L and 20 µg/L as an AMEL and MDEL, respectively) based on the extremely low hardness of the effluent (12 mg/L).

- iii. Connection to the Placer County Wastewater System – Pumping and transmission facilities required to convey 100 percent of the wastewater generated by the expanded casino and hotel facilities to the South Placer Wastewater Authority wastewater collection facilities, for ultimate treatment at the City of Roseville's Pleasant Grove Wastewater Treatment Plant (WWTP), would be constructed. 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 because neither the existing sewer system nor the Pleasant Grove WWTP has sufficient capacity to accommodate the additional discharge from the Facility. Additional capacity at the Pleasant Grove WWTP will not be available until the next planned expansion is constructed. Because the next expansion is driven by future development, due to the economic recession, this date is currently unknown. Further, the Facility is outside the service area of the Pleasant Grove WWTP, and, as such, the City of Roseville is under no obligation to serve the Facility.

- iv. Onsite Treatment/Disposal to Spray Fields – The expanded wastewater treatment plant would be constructed, and spray fields would be used for disposal of the treated effluent. Water would be applied to the spray fields at agronomic rates throughout the year. Tailwater and runoff would be captured and returned to the disposal area. Seasonal storage would be required.

This alternative is infeasible because the amount of land necessary to

dispose of the effluent from the Facility is not available. A water balance was performed and determined that 64 acres of spray fields and a large seasonal storage basin would be required to dispose of the effluent from the Facility. This amount of land is not available on the 49-acre, developed property that the Facility is located on. The land surrounding the property is currently a wetland mitigation bank, open space with protected vernal pools, and land used or proposed for urban/industrial development.

- v. Onsite treatment/Disposal to Leach Fields – The expanded wastewater treatment plant would be constructed, and conventional leach fields would be used for disposal of the treated effluent.

This alternative is infeasible due to incompatible soils conditions underlying the site and surrounding area, as well as the lack of available land.

- vi. 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 costs of installing the treatment system, high operation and maintenance costs, high rates of power consumption, high rates of greenhouse gas generation associated with the construction and operation of a reverse osmosis treatment system, and disposal of the highly concentrated brine.

As part of the Discharger's 26 October 2009 infeasibility 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.

The Discharger evaluated each of these alternatives in detail in the Thunder Valley WWTP Expansion Water/Wastewater Feasibility Study (Hydroscience Engineers, 2007), and further in supplemental information submitted to the Regional Water Board on 26 October 2009. As described above, the detailed analysis did not find that treatment at alternative facilities was feasible. The detailed analysis found that land disposal was not feasible because of local land use patterns and restrictions, widespread occurrence of vernal pools over the potential disposal site, and unsuitable soils. None of the feasible alternatives evaluated would substantially reduce or eliminate significant water quality impacts of the proposed action, because the proposed action would not significantly degrade water quality. Some of the alternatives may result in water

quality effects elsewhere, or other environmental impacts, that are worse than those identified for the proposed action.

As described in section IV.C.4.c.i of this Fact Sheet, it is currently infeasible for the Discharger to connect to the City of Lincoln Wastewater Treatment and Reclamation Facility. Pursuant to the MOU with the City of Lincoln, the Discharger has committed to regionalization of its wastewater when that connection becomes feasible. This Order requires that the Discharger connect to the City of Lincoln Wastewater Treatment and Reclamation Facility within 1 year of the construction of a gravity sewer connection to the City of Lincoln Wastewater Treatment and Reclamation Facility or to demonstrate through an updated alternatives analysis that an alternative other than connection to the City of Lincoln Wastewater Treatment and Reclamation Facility within 1 year satisfies antidegradation requirements.

- d. Socioeconomic Evaluation.** The objective of the socioeconomic analysis was to determine if the lowering of Orchard Creek water quality is in the maximum interest of the people of the State. In the Supplemental Anti-Degradation Analysis submitted by the Discharger, discharger analyzed in detail the socioeconomic benefits of Facility expansion and the socioeconomic impacts of maintaining water quality. The socioeconomic evaluation considered the benefits of the Facility expansion and resulting increase in flow to Orchard Creek, including increases in local employment, increases in taxes and fees paid to local agencies, increased support/patronage of local businesses, and availability of local community social and cultural resources. Without the expansion project, these numerous short- and long-term benefits to the United Auburn Indian Community, surrounding local communities, Placer County, and the State would not occur.
- e. Justification for Allowing Degradation.** Potential degradation identified in the Antidegradation Analysis due to this Order is justified by the following considerations:

 - i.** The proposed action will accommodate important economic and social development in the area and provide maximum benefit to the people of the State. Foregoing the proposed project would inhibit socioeconomic growth making it economically infeasible for any new development to occur.
 - ii.** The Discharger's planned wastewater treatment facility will produce Title 22 tertiary treated effluent that will result in minimal water quality degradation. The Discharger's planned wastewater treatment process will meet or exceed the highest statutory and regulatory requirements which meets or exceeds BPTC;
 - iii.** The Order is fully protective of beneficial uses of Orchard Creek. The anticipated water quality changes in Orchard Creek will not reduce or impair its designated beneficial uses and is consistent with State and federal antidegradation policies;

- iv. No feasible alternatives currently exist to reduce the impacts available; and
- v. The Discharger has fully satisfied the requirements of the intergovernmental coordination and public participation provisions of the State's continuing planning process concurrent with the public participation period of this Order.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD₅ and TSS. The WQBELs consist of restrictions on aluminum, ammonia, cadmium, chlorine residual, delta-BHC, electrical conductivity, endrin aldehyde, iron, lead, manganese, mercury, pH, total coliform organisms, and zinc. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for pathogens to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in CWC section 13241 in establishing these requirements.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications

The Discharger uses tertiary treated wastewater to irrigate on-site landscaping in the areas surrounding the Thunder Valley Casino and the Facility. In keeping with the intent of the Recycled Water Policy, this Order contains recycled water specifications consistent with WQO No. 2009-0006-DWQ. These requirements are necessary to ensure that the use of reclaimed water does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.
2. **Temperature.** 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. Based on the study results, the receiving water limitation requiring that the effluent shall not cause the ambient temperature to be increased more than 5°F is adequately protective and effluent limitations for temperature are not necessary. Therefore, this Order retains the receiving water limitation for temperature from Order No. R5-2005-0032, consistent with the water quality objective for temperature in the Basin Plan.

3. **pH.** According the Basin Plan, when determining compliance with the changes in normal ambient pH levels above 0.5 in fresh waters with designated COLD or WARM beneficial uses, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Order No. R5-2005-0032 allowed for the use of a monthly averaging period for determining compliance with the pH change objective. This Order carries forward the averaging period for determining compliance with the Basin Plan pH change objective.

B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits fecal coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.
3. The Discharger contains all wastewater flows in systems that do not utilize land disposal. All wastewater is contained in treatment units. The wastewater collection and treatment systems do not threaten groundwater quality. Consistent with Order No. R5-2005-0032, this Order includes a groundwater limitation requiring that the discharge from the Facility shall not cause the underlying groundwater to be degraded.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (Attachment E) of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for the Facility.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD₅ and TSS percent reduction requirements). The monitoring frequencies for flow (continuous), BOD₅ (daily), and TSS (daily) have been retained from Order No. R5-2009-0032.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.
2. Effluent monitoring frequencies and sample types for BOD₅ (daily), TSS (daily), electrical conductivity (three times per week), pH (daily), total coliform organisms (daily), flow (continuous), temperature (daily), and aluminum (monthly) have been retained from Order No. R5-2005-0032 to characterize the effluent and determine compliance with applicable effluent limitations.
3. Monitoring data collected over the existing permit term for settleable solids, copper, bromoform, dibromochloromethane, dichlorobromomethane, atrazine, boron, fluoride, arsenic, MBAS, nitrate, total trihalomethanes, sulfate, and persistent chlorinated hydrocarbon pesticides (except delta-BHC and endrin aldehyde) did not demonstrate reasonable potential to exceed water quality objectives/criteria. Thus, specific monitoring requirements for these parameters have not been retained from Order No. R5-2005-0032.
4. Order No. R5-2005-0032 established weekly monitoring for total dissolved solids. This Order requires effluent limitations for electrical conductivity, which is an indicator parameter for salinity, including total dissolved solids. Establishing effluent limitations for electrical conductivity is expected to effectively limit the constituents that contribute to salinity, including total dissolved solids. Thus, monitoring for total dissolved solids has been reduced from weekly to monthly.
5. Order No. R5-2005-0032 established continuous monitoring for chlorine residual. The Discharger does not use chlorine continuously; however, sodium hypochlorite is added into the backpulse flow during the period of the backpulse sequence to inhibit biogrowth in the membrane modules. Therefore, this Order requires the Discharger to monitor for chlorine residual continuously during periods when chlorine is being used in the treatment system.
6. Order No. R5-2005-0032 required the Discharger to monitor daily for both ionized and un-ionized ammonia. Because this Order requires effluent limitations for total ammonia (i.e., ionized) only, this Order discontinues the monitoring requirements for un-ionized ammonia.

7. This Order includes operational specifications for turbidity. (See Special Provisions VI.C.4.c. UV System Operating Specifications for turbidity specifications.) This Order moves the point of compliance from the final effluent after disinfection to an internal compliance point prior to disinfection. Therefore, monitoring for turbidity is required at Monitoring Location UVS-001 and effluent monitoring requirements have not been retained in this Order.
8. Monitoring data collected over the term of Order No. R5-2005-0032 for cadmium, delta-BHC, endrin aldehyde, lead, mercury, zinc, iron, and manganese indicates reasonable potential to exceed water quality criteria. Therefore, monthly effluent monitoring for these parameters has been established in this Order.
9. Order No. R5-2005-0032 established quarterly monitoring for hardness. This Order increases the monitoring frequency from quarterly to monthly in order to collect adequate information to determine protective aquatic life criteria for hardness-based metals.
10. Priority pollutant data for the effluent has been provided by the Discharger over the term of Order No. R5-2005-0032, and was used to conduct a meaningful RPA. In accordance with Section 1.3 of the SIP, periodic monitoring for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. The monitoring frequency for priority pollutants has been reduced from semi-annually to quarterly during the third year of the permit term because the data provided during the term of Order No. R5-2005-0032 indicated no reasonable potential for those pollutants for which no WQBELs were established. Monitoring during the third year of the permit term will allow for the characterization of the effluent subsequent to the proposed upgrades to the Facility. See Attachment I for more detailed requirements related to performing priority pollutant monitoring.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing using grab samples, consistent with Order No. R5-2005-0032, is required to demonstrate compliance with the effluent limitation for acute toxicity.
2. **Chronic Toxicity.** Quarterly chronic whole effluent toxicity testing using 24-hour composite samples, consistent with Order No. R5-2005-0032, is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

- b. Receiving water monitoring frequencies (weekly) and sample types (grab) for dissolved oxygen, pH, turbidity, temperature, electrical conductivity, and fecal coliform have been retained from Order No. R5-2005-0032.
- c. Order No. R5-2005-0032 required the Discharger to monitor quarterly for both ionized and un-ionized ammonia. Because this Order requires effluent limitations for total ammonia (i.e., ionized) only, this Order discontinues the monitoring requirements for un-ionized ammonia.
- d. This Order requires monthly receiving water monitoring for hardness in order to collect adequate information to determine protective aquatic life criteria for hardness-based metals.
- e. Consistent with the effluent monitoring requirements, quarterly monitoring during the third year of the permit term for priority pollutants upstream of Discharge Point No. 001 at RSW-001 is required to collect the necessary data to determine reasonable potential as required in section 1.2 of the SIP. The hardness (as CaCO₃) of the upstream receiving water shall also be monitoring concurrently with the priority pollutants as well as pH to ensure the water quality criteria/objectives are correctly adjusted for the receiving water when determining reasonable potential as specified in section 1.3 of the SIP. See Attachment I for more detailed requirements related to performing priority pollutant monitoring.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the biosolids disposal requirements contained in Special Provision VI.C.5 of this Order. Biosolids disposal requirements are imposed pursuant to 40 CFR Part 503 to protect public health and prevent groundwater degradation.

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater. This Order increases the monitoring frequency from annually to quarterly for electrical conductivity and total dissolved solids to characterize contributions of salinity to the Facility.

3. Ultraviolet Disinfection System Monitoring

UV System specifications and monitoring and reporting is required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses) in the wastewater. UV disinfection system monitoring requirements are imposed pursuant to requirements established by DPH and the National Water Research Institute (NWRI) and American Water Works Association Research

Foundation NWRI/AWWARF's "*Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*".

4. Reclaimed Water Monitoring

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 surrounding the Thunder Valley Casino and the Facility. In keeping with the intent of the Recycled Water Policy, this Order contains recycled water monitoring and reporting requirements consistent with WQO No. 2009-0006-DWQ (General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water). These requirements are necessary to ensure that the use of reclaimed water does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water. Monitoring and reporting requirements include monthly reports on recycled water production and use, as well as annual reports in accordance with the requirements of Attachment M.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

- a. **Mercury.** This provision allows the Regional Water Board to reopen this Order in the event mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL is adopted. In addition, this Order may be reopened if the Regional Water Board determines that a mercury offset program is feasible for dischargers subject to NPDES permits.
- b. **Whole Effluent Toxicity.** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity

through a Toxicity Reduction Evaluation (TRE). This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.

- c. **Water Effects Ratio (WER) and Metal Translators.** Except for copper, a default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for cadmium, lead and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies and Additional Monitoring Requirements

- a. **Chronic Whole Effluent Toxicity Requirements.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at page III-8.00.) Based on whole effluent chronic toxicity testing performed by the Discharger from January 2006 through December 2008, the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

This provision requires the Discharger to develop a TRE Workplan in accordance with USEPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity has been demonstrated.

Monitoring Trigger. A numeric toxicity monitoring trigger of >1 TUC (where TUC = $100/\text{NOEC}$) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100 percent effluent.

Accelerated Monitoring. The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests in a 6-week period (i.e., one test every 2 weeks) using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation

is provided in the *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD). The TSD at page 118 states, "EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e., toxicity present exceeding the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

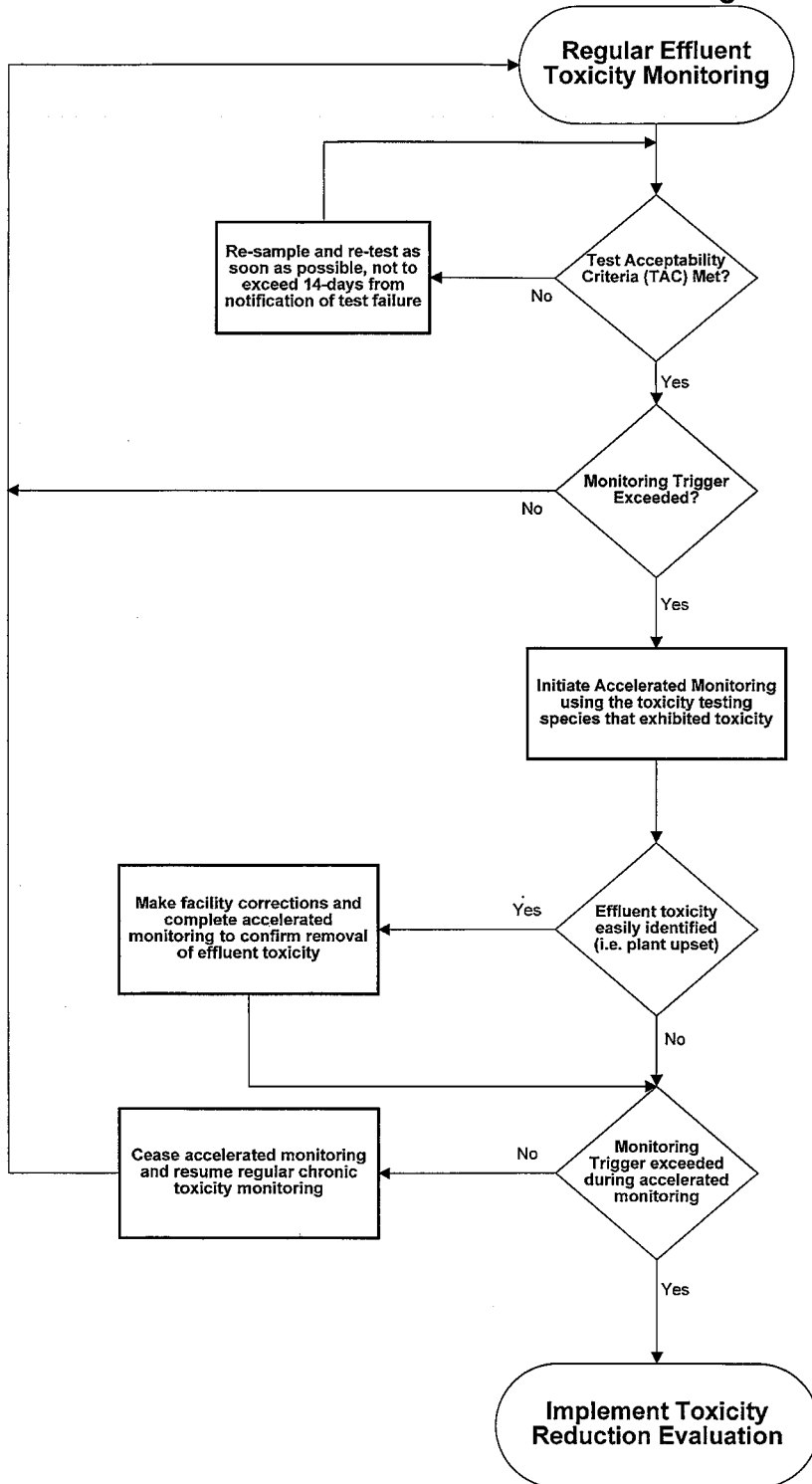
See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

TRE Guidance. The Discharger is required to prepare a TRE Workplan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833-B-99/002, August 1999.
- Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), EPA/600/2-88/070, April 1989.
- Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/003, February 1991.
- Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA/600/6-91/005F, May 1992.
- Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA/600/R-92/080, September 1993.
- Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA 600/R-92/081, September 1993.
- Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.
- Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002.

- Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991.

Figure F-1
WET Accelerated Monitoring Flow Chart



3. Best Management Practices and Pollution Prevention

- a. **Salinity Evaluation and Minimization Plan.** An Evaluation and Minimization Plan for salinity is required in this Order to ensure adequate measures are developed and implemented by the Discharger to reduce the discharge of salinity to Orchard Creek. Order No. R5-2005-0032 contained a provision requiring the Discharger to “*use the best practicable cost-effective control technique currently available to limit mineralization to no more than a reasonable increment.*” This requirement is not retained in this Order, however the development of a salinity evaluation and minimization plan should also ensure that mineralization is minimized.

4. Construction, Operation, and Maintenance Specifications

- a. Consistent with Order No. R5-2005-0032, this Order requires that the treatment facilities be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- b. **Ultraviolet Disinfection (UV) System Operating Specifications.** UV disinfection system specifications and monitoring and reporting requirements are required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses) in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV disinfection system. Monitoring and reporting of these parameters is necessary to determine compliance with minimum dosage requirements established by DPH and the National Water Research Institute (NWRI) and American Water Works Association Research Foundation NWRI/AWWARF’s “*Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*” first published in December 2000 revised as a Second Edition dated May 2003. In addition, a memorandum dated 1 November 2004 issued by DPH to Regional Water Board executive officers recommended that provisions be included in permits to water recycling treatment plants employing UV disinfection requiring dischargers to establish fixed cleaning frequency of quartz sleeves as well as include provisions that specify minimum delivered UV dose that must be maintained (as recommended by the NWRI/AWWARF UV Disinfection Guidelines).

Turbidity is included as an operational specification as an indicator of the effectiveness of the treatment process and to assure compliance with effluent limitations for total coliform organisms. The tertiary treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 0.2 nephelometric turbidity units (NTU) as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not

exceed 0.2 NTU as a daily average; 0.5 NTU, more than 5 percent of the time within a 24-hour period, and an instantaneous maximum of 1 NTU.

Minimum UV dosage and turbidity specifications are included as operating criteria in section VI.C.4.b of this Order and section IX.C of the Monitoring and Reporting Program (Attachment E) to ensure that adequate disinfection of wastewater is achieved.

- c. **Reclaimed Water.** 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 surrounding the Thunder Valley Casino and the Facility. In keeping with the intent of the Recycled Water Policy, this Order contains recycled water provisions consistent with WQO No. 2009-0006-DWQ (General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water). These provisions are necessary to ensure that the use of reclaimed water does not unreasonably affect present and anticipated beneficial uses of groundwater and surface water.
- d. **Title 22 Requirements.** Consistent with Order No. R5-2005-0032, this Order requires that wastewater discharged to Orchard Creek be oxidized, coagulated, filtered, and adequately disinfected pursuant to Title 22 reclamation criteria to protect the beneficial uses of the receiving water.

5. Special Provisions for Municipal Facilities (POTWs Only)

- a. **Sludge/Biosolids Requirements.** Sludge is dewatered by belt filter presses and is disposed off-site. This Order requires the Discharger to comply with sludge/biosolids discharge specifications, biosolids disposal requirements, and biosolids storage requirements.
- b. **Continuous Monitoring Systems.** This permit, and the Monitoring and Reporting Program which is a part of this permit, requires that certain parameters be monitored on a continuous basis. The Facility is staffed from 7 a.m. to 1:30 a.m. daily and is unattended for 5.5 hours per day. Permit violations or system upsets can go undetected during this period. The Discharger is required to establish an electronic system for operator notification for continuous recording device alarms. The Discharger has a system in place to automatically contact Facility operators in the event of alarms generated at the wastewater treatment plant. The Discharger shall upgrade this system with future facility expansions/upgrades, as necessary, to ensure timely notification. For continuous monitoring systems installed following permit adoption, the notification system shall be installed simultaneously.

6. Other Special Provisions

- a. **Phase 1 Facility Expansion.** The Discharger is planning to expand the Facility to treat up to 0.7 MGD in Phase 1 of the Thunder Valley Casino Upgrade Project. This Order includes requirements that must be met prior to an allowable increase in the flow rate.

- b. Phase 2 Facility Expansion.** The Discharger is planning to expand the Facility to treat up to 0.875 MGD in Phase 2 of the Thunder Valley Casino Upgrade Project. As described in section IV.D.4 of this Fact Sheet, several alternatives to the increased flow are not currently feasible. However, regionalization may become feasible prior to the need to complete Phase 2 of the Thunder Valley Casino Upgrade Project. This Order requires the Discharger to submit an updated alternatives analysis prior to commencement of construction of the Phase 2 Facility Expansion for approval by the Executive Officer. The alternatives analysis shall evaluate implementation of feasible alternative control measures which might reduce or eliminate the need for the increased discharge. The analysis must consider, at a minimum, whether regionalization has become feasible. This Order also includes additional requirements that must be met prior to an allowable increase in the flow rate.
- c. Regionalization.** The Discharger has committed to participating in a permanent gravity sewer line project connecting the Facility to the City of Lincoln Wastewater Treatment and Reclamation Facility in accordance with an MOU with the City of Lincoln. The gravity sewer line is not currently available due to lack of funding from other potential users and the lack of required easements and permits. The Discharger agreed in the MOU to connect to the gravity sewer line when it becomes available. The Regional Water Board adopted Resolution No. R5-2009-0028 in support of Regionalization, Reclamation, Recycling, and Conservation for Wastewater Treatment Plants on 23 April 2009 which requires the Regional Water Board to facilitate and encourage opportunities for wastewater regionalization. As described further in Resolution No. R5-2009-0028, regionalization reduces the per capita costs of wastewater treatment and disposal and increases the technical and economical feasibility of providing a higher level of wastewater treatment. In accordance with Resolution No. R5-2009-0028, this Order requires the Discharger to submit to the Regional Water Board no later than 6 months prior to the anticipated completion of the gravity sewer line connection a time schedule for ceasing the discharge from the Facility to Orchard Creek and connecting to the permanent gravity sewer line. The time schedule shall provide for connection to the permanent sewer line no later than 1 year after the completion of a permanent gravity sewer line. Any request for extension of the 1 year time schedule, or for continued discharge to Orchard Creek, shall be supported by an updated alternatives analysis demonstrating that connection within 1 year is not feasible and the proposed alternative meets the anti-degradation provisions of 40 CFR 131.12 and Resolution No. 68-16.

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through by posting in public areas (the nearest courthouse or city hall, the post office nearest the Facility, and near the entrance of the Facility) by 16 November 2009.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **10 December 2009**.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: 28 January 2010
Time: 8:30 a.m.
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/centralvalley where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street

Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Diana Messina at (916) 464-4828.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Aluminum, Total Recoverable	µg/L	71	550	87	750 ¹	87 ²	--	--	--	200	Yes
Ammonia Nitrogen, Total (as N)	mg/L	1.2	0.21	1.24	2.14 ¹	1.24 ³	--	--	--	--	Yes
Antimony, Total Recoverable	µg/L	1.5	2.6	6	--	--	14	4,300	--	6	No
Arsenic, Total Recoverable	µg/L	2.8	2.8	10	340	150	--	--	--	10	No
Barium, Total Recoverable	µg/L	11	88	1,000	--	--	--	--	--	1,000	No
Beta-BHC	µg/L	<0.005	0.12	ND	--	--	0.014	0.046	ND	--	No
Boron, Total Recoverable	µg/L	180	37	700 ⁴	--	--	--	--	--	--	No
Cadmium, Total Recoverable	µg/L	0.24	<0.25	0.10 ⁵ /1.4 ⁶	0.10 ⁵ /2.0 ⁶	0.47 ⁵ /1.4 ⁶	--	--	--	5	Yes
Chloride	µg/L	59,000	10,000	106,000 ⁴	--	--	--	--	--	250,000	No
Chlorine, Total Residual	mg/L	0.001	NA	0.011	0.019 ¹	0.011 ²	--	--	--	--	Yes
Chloroform	µg/L	0.49	<0.5	80	--	--	--	--	--	80	No
Chromium (Total)	µg/L	0.89	0.97	50	--	--	--	--	--	50	No
Copper, Total Recoverable	µg/L	16	3.6	37 ⁵ /5.0 ⁶	47 ⁵ /7.0 ⁶	37 ⁵ /5.0 ⁶	1,300	--	--	1,000	No
Delta-BHC	µg/L	0.066	<0.005	ND	--	--	--	--	ND	--	Yes
Dichlorobromomethane	µg/L	0.2	<0.5	0.56	--	--	0.56	46	--	80	No
Di-n-butyl phthalate	µg/L	<5	4.6	2,700	--	--	2,700	12,000	--	--	No
Electrical Conductivity @ 25°C	µmhos/cm	3,500	440	700 ⁴	--	--	--	--	--	900	Yes
Endrin Aldehyde	µg/L	0.18	<0.01	ND	--	--	0.76	0.81	ND	--	Yes
Fluoranthene	µg/L	0.082	0.066	300	--	--	300	370	--	--	No
Fluorene	µg/L	0.18	<0.2	1,300	--	--	1,300	14,000	--	--	No
Fluoride, Total	µg/L	470	290	2,000	--	--	--	--	--	2,000	No
Iron, Total Recoverable	µg/L	220 ⁸	780 ⁸	300	--	--	--	--	--	300	Yes
Lead, Total Recoverable	µg/L	1.1	0.94	0.06 ⁵ /1.2 ⁶	1.5 ⁵ /32 ⁶	0.06 ⁵ /1.2 ⁶	--	--	--	15	Yes
Manganese, Total Recoverable	µg/L	10 ⁸	83 ⁸	50	--	--	--	--	--	50	Yes

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Mercury, Total Recoverable	µg/L	0.0022	0.00848	0.5	--	--	0.050	0.051	--	2	Yes ⁹
Methylene Blue Active Substances	µg/L	57 ⁸	50 ⁸	500	--	--	--	--	--	500	No
Nickel, Total Recoverable	µg/L	3.2	5.9	8.7 ⁵ /28 ⁶	78 ⁵ /252 ⁶	8.7 ⁵ /28 ⁶	610	4,600	--	100	No
Nitrate Nitrogen, Total (as N)	µg/L	6,700	560	10,000	--	--	--	--	--	10,000	No
Nitrite Nitrogen, Total (as N)	µg/L	45	27	1,000	--	--	--	--	--	1,000	No
Phenanthrene	µg/L	0.26	0.3	--	--	--	--	--	--	--	No
Phosphorus	µg/L	4,400	64	--	--	--	--	--	--	--	No
Selenium, Total Recoverable	µg/L	3	<5	5	20	5	--	--	--	20	No
Sulfate	µg/L	19,786 ⁸	8,000 ⁸	250,000	--	--	--	--	--	250,000	No
Sulfide	µg/L	<1,000	2,000	--	--	--	--	--	--	--	No
Sulfite	µg/L	2,000	1,300	--	--	--	--	--	--	--	No
Thallium, Total Recoverable	µg/L	0.12	<1	1.7	--	--	1.7	6.3	--	2	No
Total Dissolved Solids	µg/L	560,000	120,000	450,000 ⁴	--	--	--	--	--	500,000	No
Total Trihalomethanes ¹⁰	µg/L	4	<0.5	80	--	--	--	--	--	80	No
Zinc, Total Recoverable	µg/L	89	7.4	20 ⁵ /64 ⁶	20 ⁵ /64 ⁶	20 ⁵ /64 ⁶	--	--	--	5,000	Yes

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
-------------	-------	-----	---	---	-----	-----	-------------	-----------	------------	-----	----------------------

MEC = Maximum Effluent Concentration

B = Maximum Receiving Water Concentration or lowest detection level, if non-detect

C = Criterion used for Reasonable Potential Analysis

CMC = Criterion Maximum Concentration (CTR or NTR)

CCC = Criterion Continuous Concentration (CTR or NTR)

Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)

Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)

Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective

MCL = Drinking Water Standards Maximum Contaminant Level

NA = Not Available

ND = Non-detect

Footnotes:

- (1) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour Average.
- (2) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day Average.
- (3) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day Average.
- (4) Water Quality for Agriculture.
- (5) Criterion to be compared to the maximum effluent concentration.
- (6) Criterion to be compared to the maximum upstream receiving water concentration.
- (7) Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the National Ambient Water Quality Criteria.
- (8) Represents the maximum observed annual average concentration for comparison with the Secondary MCL.
- (9) The Sacramento River from Knights Landing to the Delta, downstream of the discharge, is listed on the 2006 303(d) list as impaired for mercury. Therefore, this Order establishes a final, monthly average mass loading limitation for mercury.
- (10) Total trihalomethanes is the sum of bromoform, bromodichloromethane, chloroform, and dibromochloromethane.

ATTACHMENT H – CALCULATION OF WQBELS

Parameter	Units	Most Stringent Criteria			Dilution Factors			Human Health Calculations		
		HH	CMC	CCC	HH	CMC	CCC	$ECA_{HH} = AMEL_{HH}$	AMEL/MEDEL Multiplier _{HH}	MEDEL _{HH}
Aluminum, Total Recoverable	µg/L	200	750	87	--	--	--	200	1.69	339
Ammonia Nitrogen, Total (as N)	mg/L	--	2.14	1.24	--	--	--	--	--	--
Cadmium, Total Recoverable	µg/L	5.0	$0.10^1/2.0^2$	$0.47^1/1.4^2$	--	--	--	5.0	2.01	10
Lead, Total Recoverable	µg/L	15	$1.5^1/32^2$	$0.06^1/1.2^2$	--	--	--	15	2.01	30
Zinc, Total Recoverable	µg/L	5,000	$20^1/64^2$	$20^1/64^2$	--	--	--	5,000	2.01	10,031

¹ Criterion to be compared to the maximum effluent concentration.
² Criterion to be compared to the maximum upstream receiving water concentration.

Parameter	Units	Aquatic Life Calculations											Final Limitations	
		ECA _{acute}	ECA Multiplier _{acute}	LTA _{Acute}	ECA _{chronic}	ECA Multiplier _{chronic}	LTA _{chronic}	Lowest LTA	AMEL Multiplier ₉₅	AMEL _{AL}	MDEL Multiplier ₉₉	MDEL _{AL}	AMEL	MDEL
Aluminum, Total Recoverable	µg/L	750	0.43	324	87	0.64	55	55	1.37	76	2.32	128	76	128
Ammonia Nitrogen, Total (as N)	mg/L	2.14	0.32	0.68	1.24	0.78	0.97	0.68	1.55	1.1	3.11	2.1	1.1	2.1
Cadmium, Total Recoverable	µg/L	0.10 ³	0.32	0.03	0.47 ³	0.53	0.25	0.03	1.55	0.05	3.11	0.10	0.05	0.10
Lead, Total Recoverable	µg/L	1.5 ³	0.32	0.48	0.06 ³	0.53	0.03	0.03	1.55	0.05	3.11	0.10	0.05	0.10
Zinc, Total Recoverable	µg/L	20 ³	0.32	6.4	20 ³	0.53	11	6.4	1.55	10	3.11	20	10	20

³ ECA determined as described in section IV.C.2.c.ii of the Fact Sheet (Attachment F).

ATTACHMENT I – EFFLUENT AND RECEIVING WATER CHARACTERIZATION STUDY

I. Background. Sections 2.4.1 through 2.4.4 of the SIP provide minimum standards for analyses and reporting. (Copies of the SIP may be obtained from the State Water Resources Control Board, or downloaded from <http://www.waterboards.ca.gov/iswp/index.html>). To implement the SIP, effluent and receiving water data are needed for all priority pollutants. Effluent and receiving water pH and hardness are required to evaluate the toxicity of certain priority pollutants (such as heavy metals) where the toxicity of the constituents varies with pH and/or hardness. Section 3 of the SIP prescribes mandatory monitoring of dioxin congeners. In addition to specific requirements of the SIP, the Regional Water Board is requiring the following monitoring:

- A. Drinking water constituents.** Constituents for which drinking water Maximum Contaminant Levels (MCLs) have been prescribed in the California Code of Regulation are included in the *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (Basin Plan). The Basin Plan defines virtually all surface waters within the Central Valley Region as having existing or potential beneficial uses for municipal and domestic supply. The Basin Plan further requires that, at a minimum, water designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the MCLs contained in the California Code of Regulations.
- B. Effluent and receiving water temperature.** This is both a concern for application of certain temperature-sensitive constituents, such as fluoride, and for compliance with the Basin Plan's thermal discharge requirements.
- C. Effluent and receiving water hardness and pH.** These are necessary because several of the CTR constituents are hardness and pH dependent.
- D. Dioxin and furan sampling.** Section 3 of the SIP has specific requirements for the collection of samples for analysis of dioxin and furan congeners, which are detailed in Attachment J. Pursuant to Section 13267 of the California Water Code, this Order includes a requirement for the Discharger to submit monitoring data for the effluent and receiving water as described in Attachment J.

II. Monitoring Requirements.

- A. Quarterly Monitoring.** Quarterly priority pollutant samples shall be collected from the effluent and upstream receiving water (Monitoring Locations EFF-001 and RSW-001) and analyzed for the constituents listed in Table I-1. Quarterly monitoring shall be conducted during the 3rd year of the permit term for 1 year (four consecutive samples, evenly distributed throughout the year) and the results of such monitoring be submitted to the Regional Water Board, during the fourth year of the permit term. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

B. Semi-annual Monitoring (dioxins and furans only). Semi-annual monitoring is required for dioxins and furans, as specified in Attachment J. The results of dioxin and furan monitoring shall be submitted to the Regional Water Board with the quarterly priority pollutant data at the completion of the Effluent and Receiving Water Characterization Study, and during the fourth year of the permit term.

C. Concurrent Sampling. Effluent and receiving water sampling shall be performed at approximately the same time, on the same date.

D. Sample type. All effluent samples shall be taken as 24-hour flow proportioned composite samples. All receiving water samples shall be taken as grab samples.

Table I-1. Priority Pollutants

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	2	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2-Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (3)	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (5)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (6)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (3)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted'		
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (3)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (7)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (7)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (7)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (7)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (7)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	0.01	EPA 1632
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	0.5	EPA 7199/1636
6	Copper	7440508	National Toxics Rule	4.1 (2)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	0.1	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 (2)	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0002 (11)	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 (2)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 (8)	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (2)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.002	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 (2)	10	EPA 6020/200.8
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 (9)	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 (9)	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	EPA 643/ 515.2
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	EPA 8340/ 549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	EPA 8260B/504
	Glyphosate	1071836	Primary MCL	700	25	HPLC/EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	EPA 8318/632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	1	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/ Secondary MCL	1	1	HPLC/EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/GCMS
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 (4)		EPA 350.1
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as CaCO ₃)			5000		EPA 130.2

CTR #	Constituent	CAS Number	Controlling Water Quality Criterion for Surface Waters		Criterion Quantitation Limit ug/L or noted	Suggested Test Methods
			Basis	Criterion Concentration ug/L or noted ¹		
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO ₃)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	°F		
	Total Dissolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

- (1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical method. They do not indicate a regulatory decision that the cited concentration is either necessary or sufficient for full protection of beneficial uses. Available technology may require that effluent limits be set lower than these values.
- (2) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed correspond to a total hardness of 40 mg/L.
- (3) - For haloethers
- (4) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body. Values displayed correspond to pH 8.0 and temperature of 22°C.
- (5) - For nitrophenols.
- (6) - For chlorinated naphthalenes.
- (7) - For phthalate esters.
- (8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.
- (9) - Criteria for sum of alpha- and beta- forms.
- (10) - Criteria for sum of all PCBs.
- (11) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include:
 Method 1669: Sampling Ambient Water for Trace Metals at USEPA Water Quality Criteria Levels, USEPA; and
 Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence, USEPA

III. Additional Study Requirements

A. Laboratory Requirements. The laboratory analyzing the monitoring samples shall be certified by the Department of Health Services in accordance with the provisions of Water Code 13176 and must include quality assurance/quality control data with their reports (ELAP certified). In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided the laboratory institutes a Quality Assurance-Quality Control Program. A manual containing the steps followed in this program must be kept in the laboratory and must be available for inspection by Regional Water Board staff. The Quality Assurance-Quality

Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

- B. Criterion Quantitation Limit (CQL).** The criterion quantitation limits will be equal to or lower than the minimum levels (MLs) in Appendix 4 of the SIP or the detection limits for purposes of reporting (DLRs) below the controlling water quality criterion concentrations summarized in Table I-1 of this Order. In cases where the controlling water quality criteria concentrations are below the detection limits of all approved analytical methods, the best available procedure will be utilized that meets the lowest of the MLs and DLR. Table I-1 contains suggested analytical procedures. The Discharger is not required to use these specific procedures as long as the procedure selected achieves the desired minimum detection level.
- C. Method Detection Limit (MDL).** The method detection limit for the laboratory shall be determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).
- D. Reporting Limit (RL).** The reporting limit for the laboratory. This is the lowest quantifiable concentration that the laboratory can determine. Ideally, the RL should be equal to or lower than the CQL to meet the purposes of this monitoring.
- E. Reporting Protocols.** The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:
1. 1. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
 2. Sample results less than the reported RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
 3. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may shortened to "Est. Conc."). The laboratory, if such information is available, may include numerical estimates of the data quantity for the reported result. Numerical estimates of data quality may be percent accuracy (+ or – a percentage of the reported value), numerical ranges (low and high), or any other means considered appropriate by the laboratory.
 4. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.
- F. Data Format.** The monitoring report shall contain the following information for each pollutant:
1. The name of the constituent.
 2. Sampling location.

3. The date the sample was collected.
4. The time the sample was collected.
5. The date the sample was analyzed. For organic analyses, the extraction data will also be indicated to assure that hold times are not exceeded for prepared samples.
6. The analytical method utilized.
7. The measured or estimated concentration.
8. The required Criterion Quantitation Limit (CQL).
9. The laboratory's current Method Detection Limit (MDL), as determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).
10. The laboratory's lowest reporting limit (RL).
11. Any additional comments.

ATTACHMENT J – DIOXIN AND FURAN SAMPLING

The CTR includes criteria for 2,3,7,8-tetrachlorodibenzo-pdioxin (2,3,7,8-TCDD). In addition to this compound, there are many congeners of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) that exhibit toxic effects similar to those of 2,3,7,8-TCDD. The USEPA has published toxic equivalency factors (TEFs) for 17 of the congeners. The TEFs express the relative toxicities of the congeners compared to 2,3,7,8-TCDD (whose TEF equals 1.0). In June 1997, participants in a World Health Organization (WHO) expert meeting revised TEF values for 1,2,3,7,8-PentaCDD, OctaCDD, and OctaCDF. The current TEFs for the 17 congeners, which include the three revised values, are shown below:

Toxic Equivalency Factors (TEFs) for 2,3,7,8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

The Discharger shall conduct effluent and receiving water monitoring for the 2,3,7,8-TCDD congeners listed above to assess the presence and amounts of the congeners being discharged and already present in the receiving water. Effluent and upstream receiving water shall be monitored for the presence of the 17 congeners once during dry weather and once during wet weather for 1 year within the term of the study.

The Discharger shall report, for each congener, the analytical results of the effluent and receiving water monitoring, including the quantifiable limit and the method detection limit, and the measured or estimated concentration.

In addition, the Discharger shall multiply each measured or estimated congener concentration by its respective TEF value and report the sum of these values.

ATTACHMENT K – RECYCLED WATER USE SIGNAGE



ATTACHMENT L – BEST MANAGEMENT PRACTICES FOR RECYCLED WATER

This menu of potential Best Management Practices (BMPs) identifies some practices for the management of the production, distribution, and use of recycled water that, in addition to requirements in law¹, will help ensure the safe and efficient use of recycled water. Many of these BMPs are also intended to minimize or eliminate conditions that cause runoff, ponding, and windblown spray (drift). Recycled Water Specification IV.C.15 requires the Discharger to implement the Required BMPs identified in Section I and to consider implementing other BMPs (Sections II – IV) as appropriate for the recycled water use area.

I. REQUIRED BMPs

- A.** Implementation of operations and management plan that provides for detection of leaks, and correction either within 72 hours of learning of a leak, or prior to the release of 1,000 gallons.
- B.** Proper design and operation of sprinkler heads.
- C.** Refraining from application during precipitation events.
- D.** Management of any impoundment such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater. In the event of an unauthorized discharge, the Executive Officer of the appropriate Regional Water Board shall be notified, as described in the Monitoring and Reporting Program (Attachment E, section X.D.6).

II. OTHER POTENTIAL BMPs: GENERAL OPERATIONAL CONTROLS

- A.** The Recycled Water Use Supervisor attends regular training regarding the safe and efficient operation and maintenance of recycled water use facilities.
- B.** The Recycled Water Use Supervisor ensures that all recycled water facilities are maintained, operated and repaired at all times in a manner that does not cause illness or injury to any person and in a manner that does not cause damage or injury to the real or personal property of any person or entity.
- C.** Where feasible, different piping materials are used to assist in water system identification.

III. OTHER POTENTIAL BMPs: WORKER/PUBLIC PROTECTION

- A.** Workers, residents, and the public are made aware of the potential health risks associated with contact or ingestion of recycled water, and are educated about proper hygienic practices to protect themselves and their families.

¹ Water Code, Health and Safety Code, California Code of Regulations, etc.

- B. Workers are provided with the appropriate safety equipment and clothing during prolonged contact with recycled water.
- C. Potable drinking water is provided for workers.
- D. Toilet and washing facilities are provided.
- E. Precautions are taken to avoid contact of recycled water with food and food is not allowed into areas that are still wet with recycled water.
- F. A first aid kit is available on site, to prevent the contact of cuts and other injuries with recycled water.

IV. OTHER POTENTIAL BMPs: EFFICIENT IRRIGATION

Hardware:

- A. All irrigation systems have the appropriate equipment/hardware for the application.
- B. Irrigation system is installed according to the design.
- C. Irrigation system is designed to provide as much flexibility as possible for the operation of the irrigation system.
- D. All sprinkler heads are uniform in brand, model and nozzle size. Where different arcs are needed at the same station, match precipitation rates by changing nozzles.
- E. Sprinkler heads placed per manufacturer's recommendations and based on measured spacing between sprinkler heads.
- F. Where lower precipitation rates are required, such as on slopes, reduced nozzle size and spray angle per manufacturer's recommendations.
- G. Installed booster pumps to increase pressure where needed.
- H. Installed pressure reducers to decrease pressure where needed.
- I. Pipes sized to convey water in the quantity required by the system.
- J. Check valves installed either in-line or built into the sprinkler head assembly to minimize low head drainage after the valve has closed.
- K. Automatic flow control devices installed that shut down a system if a break or other similar high flow/low pressure situation develops during irrigation.
- L. Use centralized control systems or controllers that measure or can be programmed to use evaporation rates, or systems that use controls such as moisture sensors.

Maintenance:

- M.** Routinely adjust sprinkler heads so they achieve 80% head to head coverage throughout their intended arc. There are no obstructions that would interfere with the free rotation and smooth operation of any sprinkler, (e.g., trees, tall grass, shrubs, signs). The system is routinely tested so adjustments can be made.
- N.** Routinely adjust valves or pressure regulators so that the systems are operating at the pressure required by the sprinkler heads or emitters. Routinely test pressures periodically with a pressure gauge to maintain appropriate pressure levels.
- O.** Routinely test the accuracy of time clocks and recalibrate or repair as necessary.
- P.** Repair or replace broken risers, sprinklers, valves, etc. as soon as they are discovered; replace with appropriate make and model of equipment to maintain uniformity throughout the system.
- Q.** Routinely check backflow devices, pumps, etc. for leaks and repair or replace as necessary.
- R.** Routinely clean screens and backwash filters to keep systems operating optimally.

Management:

- S.** Determine the optimum duration and frequency for irrigation cycles considering evapotranspiration, soil type, plant varieties being irrigated, climatic conditions, and any other factors affecting optimum irrigation efficiencies.
- T.** Irrigation with recycled water only occurs during periods of minimal public use of the Use Area with consideration given to allow an adequate dry-out time before the Use Area will be used by the public.
- U.** The frequency of respective irrigation cycles is only as often as necessary to meet the water requirements of the landscape. This is determined by measuring the amount of moisture remaining in the root zone reservoir between irrigation cycles. Moisture levels in the root zone is measured and optimized via the use of tensiometers, gypsum blocks, soil probes, the "feel method", an on-site weather station, and or the California Irrigation Management Information System (CIMIS) to estimate soil moisture levels. These methods are reviewed, inspected, and maintained regularly to ensure accuracy and reliability.
- V.** Use automatic rain shut-off devices to reduce irrigation if significant rainfall occurs.
- W.** Use multiple rain shut-off devices to reduce ponding if precipitation rate is higher than the infiltration rate of the soil.
- X.** Majority of irrigation occurs in the evening or early morning to avoid the heat and/or windy parts of the day.
- Y.** Irrigate areas grouped into zones of similar water use.

- Z.** As needed, aerate the soil to improve infiltration of air and water into the soil.
- AA.** Perform good horticultural practices; fertilization, mowing, de-thatching, aeration, and pest control, as necessary to create the best growing environment for landscape vegetation.
- BB.** Provide infiltration areas at the lowest elevation of the Use Area.
- CC.** Install storm drain inlet valves or plugs to contain accidental discharges during dry weather.
- DD.** Implement low impact development practices to minimize runoff that contains recycled water.
- EE.** Employ water budgeting using evapotranspiration data from CIMIS or an on-site weather station and crop coefficients from Water Use Classification of Landscape Species (WUCOLS).
- FF.** Dedicate landscape water meters for monitoring of water budget and leak detection.
- GG.** Conform to local or the State Water Efficient Landscape Ordinance.
- HH.** Educate residents, customers and employees regarding the importance of efficient water use.
- II.** Each site supervisor has been provided a conductivity tester as a tool to help them determine the difference between recycled water and potable water.

ATTACHMENT M – ANNUAL RECYCLED WATER REPORT

Describe approved amendments to the approved Title 22 Engineering Report. Include copies of approval letter(s) prepared by USEPA regarding such amendments to the Title 22 Engineering Report, if any.

Provide a description of new use sites approved by USEPA. The description shall include information necessary for USEPA to evaluate new use sites pursuant to the Title 22 Requirements. Examples of necessary information may include location of backflow prevention devices, drinking fountains, groundwater wells, etc.

Describe the nature, extent, and cause of any exceedances of turbidity or disinfection standards, if any. Discuss corrective actions taken or planned to resolve the exceedances of turbidity or disinfection standards.

PERIOD INSPECTIONS OF RECYCLED WATER USE AREA

Cross-connection Prevention


Recycled Water Use Area Name	Date of Inspection(s) for cross-connection prevention:	Description of violations identified, if any:	Actions taken or planned for correcting violations:

Agronomic Rate Evaluation

Average Agronomic Demand (lbs/acre/year)	Average Nitrogen application (lbs/acre/year)

Corrective actions taken to ensure recycled water use occurs at reasonable agronomic rates

ATTACHMENT N – LIMITED WAIVER OF SOVEREIGN IMMUNITY

				
MIWOK MAIDU	United Auburn Indian Community of the Auburn Rancheria			
JESSICA TAVARES CHAIRPERSON	KIMBERLY DUBACH VICE CHAIR	DAVID KEYSER SECRETARY	BRENDA CONWAY TREASURER	GENE WHITEHOUSE COUNCIL MEMBER

TRIBAL COUNCIL RESOLUTION NO. 1-26-10-01 APPROVING A LIMITED WAIVER OF SOVEREIGN IMMUNITY

WHEREAS, the United Auburn Indian Community (hereinafter “the Tribe”) is a federally recognized Indian Tribe; and

WHEREAS, the Tribe owns the Thunder Valley Casino Wastewater Treatment Plant,

WHEREAS, the Regional Water Quality Control Board, Central Valley Region (“Central Valley Water Board”) will consider at a January 28/29, 2010, hearing (“Hearing”) the Waste Discharge Requirements for United Auburn Indian Community Thunder Valley Casino Wastewater Treatment Plant, Placer County, Order No. R5-2010-XXXX, NPDES No. CA0084697 (“Order”), a copy of which, in draft form as of January 25, 2010, is attached hereto and made a part hereof as Exhibit A; and

WHEREAS, the Board has requested that the Tribe waive its sovereign immunity as set forth in Exhibit B, attached hereto and made part hereof, to insure the enforceability of the terms of the Order, and any renewals or revisions thereof; and

WHEREAS, pursuant to the Tribe’s Constitution, the Tribal Council is the governing body of the Tribe with the power to enact resolutions relating to matters that promote the general welfare of the Tribe; and

WHEREAS, the Limited Waiver of Sovereign Immunity is hereby determined to be fair and reasonable, and consistent with such waivers that have been granted by the Tribal Council in the past;

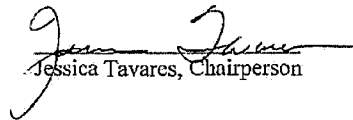
NOW THEREFORE BE IT RESOLVED by the Tribal Council of the United Auburn Indian Community as follows:

1. The Tribal Council hereby recognizes the Order, as adopted by the Central Valley Water Board after the Hearing, as a legal and binding obligation of the Tribe and the Tribal Council hereby specifically acknowledges and consents to the Limited Waiver of Sovereign Immunity set forth in Exhibit B subject to the terms and conditions of that Exhibit. This clause is subject to the qualification in Clause 2.
2. The Tribal Council acknowledges that Exhibit A is a draft of the Order to be considered by the Board and that the Board may make revisions to the draft before voting on its adoption and that such revisions shall not void the Tribal

Council's consent to the Limited Waiver of Sovereign Immunity, provided the Order as adopted at the Hearing is substantially similar to the draft form attached as Exhibit A hereto. The Tribal Council hereby agrees that the Order will be deemed substantially similar to the draft form attached as Exhibit A hereto unless a representative of the Tribal Council gives notice to the Central Valley Water Board at the Hearing prior to any vote by the Board to adopt the Order that any revisions considered by the Board at the Hearing require the Tribal Council to consider a new Resolution approving a Limited Waiver of Sovereign Immunity with regard to the final Order.

CERTIFICATION

The foregoing resolution was adopted by a vote of 4 for, and 0 against and 0 abstentions, at a duly called meeting of the Tribal Council, at which a quorum was present, on this 4th day of January, 2010.


Jessica Tavares, Chairperson

LIMITED WAIVER OF SOVEREIGN IMMUNITY

1. Conditions and Limitations of Waiver. The United Auburn Indian Community "UAIC", owner of Thunder Valley Casino ("TVC"), hereby expressly waives its sovereign immunity from unconsented administrative enforcement and judicial suit for the purposes of permitting the commencement and maintenance of administrative action or litigation by the California Regional Water Quality Control Board, Central Valley Region ("Central Valley Water Board") relative to its rights under that certain Order R5-2010-XXXX, (NPDES No. CA0084697) entitled "Waste Discharge Requirements for United Auburn Indian Community, Thunder Valley Casino Wastewater Treatment Plant, Placer County to be considered by the Central Valley Water Board after a hearing on January 28-29, 2010, and any subsequent renewals or revisions thereof. ("Order"). This waiver extends only to revenues and assets of the Tribe's wholly owned Thunder Valley Casino. The UAIC grants the limited waiver of its sovereign immunity herein, and administrative enforcement or judicial suit may be initiated if, and only if, each and every one of the following conditions is met: (i) the claim is brought by the Central Valley Water Board, including any representation of the Board by the Attorney General's Office, and not by any third party; (ii) the claim alleges a material violation by the UAIC of one or more of the specific obligations or duties set forth in the Order; (iii) the claim seeks some specific action, or discontinuance of some action, by the UAIC to bring the UAIC into full compliance with its duties and obligations set forth in the Order or, seeks money damages (except special, punitive, or exemplary damages) for a violation of the terms of the Order or mandatory minimum penalties prescribed by applicable statutes or regulations; and (iv) the claim is first made in a detailed written statement to the UAIC.

2. No Waiver of Individuals. This limited waiver shall not be construed as a waiver of any immunity of any elected or appointed officer, official, member, manager, employee or agent of the UAIC.

3. Jurisdiction of Administrative Agencies and Courts. UAIC hereby consents to the jurisdiction of the Central Valley Water Board, the State Water Resources Control Board, the United States District Court for the federal court district in which the UAIC has its principal place of business, the United States Court of Appeals for the Ninth Circuit, and the United States Supreme Court or, Placer County Superior Court, the applicable Court of Appeal and the California Supreme Court.