

US EPA ARCHIVE DOCUMENT

Fact Sheet
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
NO. CA 0049675
June 2010

Permittee's Name: Buena Vista Rancheria, Buena Vista Casino (formerly Flying Cloud Casino)

Mailing Address: P.O. Box 162283
Sacramento, CA 95814

Plant Location: 4650 Coal Mine Road
Ione, CA 95640

Contact Person Rhonda Pope, Tribal Chairperson
(916) 491-0011

I. Status of Permit

This is a new permit application for a facility to be constructed. This is classified as a minor permit.

II. General Information

The Buena Vista Casino will be located on a 67 acre Rancheria located in Amador County, CA approximately 4 miles south of the town of Ione.

III. Facility Information

The waste water treatment plant (WWTP) will serve a casino with approximately 56,000 square feet of gaming. Wastewater generated from the casino includes sewage, restaurant washwaters, and miscellaneous wastewater from guest support services. The WWTP will not serve residential connections, and will not accept wastewater from any industrial facilities.

The 67 acre site is relatively flat at the northern end with elevations rising several hundred feet towards the middle of the property. The site contains an area of historic archaeological and cultural significance. An archaeological survey has been conducted to determine the extent of the area. Archaeological Inventory of the Buena Vista Rancheria, Amador County, Oct, 2005. An archaeological resource protection area has been established around this area. No construction or casino-related activities will disturb the archaeological resource protection area.

A natural spring is located in the higher elevations of the site, which drains to a pond and then drains to the east of the site where it flows and drains onto the adjacent property. The spring and existing pond will not be affected by construction or casino-related activities.

A 3.93-acre jurisdictional wetland is located in the northwest corner of the site, adjacent to Coal Mine Road on the western boundary of the property. During the site inspection, the wetland was observed to drain into a culvert that flowed under Coal Mine Road. The culvert dropped approximately 5 feet from the elevation of the wetland. There appeared to be a berm separating the wetland area from a shallow drainage canal alongside the road that drained into the culvert. Because it was raining at the time of the site visit, the wetland was observed to be overflowing the berm and draining into the culvert.

The casino will be built in two phases. Phase 1 flows are anticipated to be 50,000 gallons per day (gpd) for weekdays, 100,000 gpd for weekends, and average 60,000 gpd annually. The Phase 2 WWTP is anticipated to have an average annual flow of 100,000 gpd. However, the projected flows at a casino facility may differ significantly from weekday to weekend, and the facility projects an average weekend flow of 160,000 gpd, with a contingency capacity for 200,000 gpd. The facility has therefore been designed for a peak flow of 200,000 gpd.

Wastewater from the casino will be treated through an immersed membrane bioreactor (MBR) treatment system. The permit application describes an MBR system as a tertiary system similar to an activated sludge treatment plant. The MBR is operated at a higher solids concentration than conventional activated sludge systems, which make it appropriate for treating high strength wastewater with varying flows that are typical of wastewaters produced by a casino operation.

The treatment system at the Buena Vista Casino will consist of an active oil and grease interceptor followed by a passive oil and grease separator just prior to the influent lift station. These interceptors will decrease the amount of oil and grease entering the MBR. The lift station will pump the wastewater to the plant headworks. At the headworks, wastewater will be screened by a fine screen (2 mm) with a conveyor/washer/compactor. The fine screening of large particulate matter is necessary to protect the membrane from large particles. Solids from the screen will go to a compactor and disposed at an off-site landfill. The headworks area will be covered to control odors.

Wastewater will flow to two parallel equalization/anoxic tanks, each having a capacity of 17,600 gallons and a mixer. Wastewater then flows to 2 parallel pre-aeration basins (50,400 gallons each) where a fine bubble diffuser system will be used to aerate the tanks. The wastewater then flows to 2 parallel membrane basins (18,800 gallons each).

Membrane filters are suspended in the MBR tanks and a slight vacuum is applied to pull clear effluent through the membranes. The membranes replace the clarifier and filter used in conventional tertiary treatment plants. The pore size of membranes (0.1 to 0.4 microns) is small enough so that coliform bacteria do not pass through, eliminating the need for conventional disinfection. A constant source of coarse bubble scour air is applied at the bottom of the membrane cassettes to remove solids that might accumulate between and on the surface of the membrane.

Mixed liquor from the membrane basins will be recirculated from the aeration basin to the anoxic basin at a rate of approximately 4 to 1. In case of excess flows, maintenance or emergency, the Buena Vista WWTP has two emergency storage basins (ESBs), one at the end of the process trains and one along the side of the process trains. ESB 1 will have an overflow capacity of 160,000 gallons. There is an additional overflow capacity of 113,000 gallons in ESB2.

Membranes are cleaned typically every 15 minutes to 1 hour by using a relaxation mode that lasts for 1-2 minutes. Sodium hypochlorite will be added approximately twice per year at a concentration of 0.5% to the backflow to inhibit biogrowth in the membranes.

Solids removed from the fine screen and MBR sludge line will be sent to a screw press and then sent off site to a landfill.

Final effluent will be disinfected through UV disinfection consisting of 2 UV units in series.

The casino anticipates that approximately 30 % of the treated effluent will be recycled and re-used at the casino. Recycle uses include irrigation and non-potable uses in the casino such as toilet flushing. Final effluent designated for reuse will be chlorinated and sent to a recycle water storage tank. The storage tank will contain baffle walls to double as the chlorine contact chamber.

Stormwater runoff from the WWTP area will be collected and directed back to the WWTP. Therefore, the facility does not expect to obtain coverage under the multi sector general stormwater permit.

IV. Receiving Water

The effluent from the WWTP will discharge to a constructed, vegetated swale south of the parking garage and casino which will travel on-site for approximately ½ mile. At the southwest corner of the property (at Coal Mine Rd), the water will flow through a reverse siphon into a drain under Coal Mine Road to an unnamed tributary/drainage channel which flows east for several miles before entering Jackson Creek. Jackson Creek subsequently flows into Dry Creek and to the lower Mokelumne River.

The Tribe does not have approved water quality standards for discharges to waters located on the Buena Vista Rancheria. However, the discharge of wastewater from the WWTP flows to a tributary of the Mokelumne River (via Dry Creek and Jackson Creek), for which the State of California has established water quality standards. Therefore, water quality standards applicable to the Mokelumne River (Camanche Reservoir to Delta) and its tributaries must be met at the point where the effluent discharges to State waters. As noted above, the effluent will enter State waters shortly after discharging. EPA has not considered the availability of any water which may dilute the effluent prior to reaching State waters, and EPA has therefore evaluated

compliance of the discharge with meeting State standards as criteria at the end of pipe.

Therefore, EPA has applied water quality standards consistent with the provisions of the Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins - Fourth Edition - 1998", as adopted by the Central Valley Regional Water Quality Control Board and hereafter referred to as the Basin Plan.

The Basin Plan on page II-2.00 states: "Existing and potential beneficial uses which currently apply to surface waters of the basin plan are presented in Figure II-1 and Table II-1. The beneficial uses of any specifically identified water body generally apply to its tributary streams". There are no specifically identified beneficial uses for the tributaries of Dry Creek. Therefore, the beneficial uses designated for Jackson Creek are those that apply to the Mokelumne River from Camanche Reservoir to the Delta and are listed as: Agricultural supply (AGR), Water Contact Recreation (REC-1), Non-contact Recreation (REC-2), Warm Freshwater Habitat (WARM), Cold Freshwater Habitat (COLD), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or early Development (SPWN) and Wildlife Habitat (WILD). Additionally, the California State Water Resources Control Board Resolution 88-63, incorporated into the Basin Plan pursuant to Regional Board Resolution 89-056, requires that municipal and domestic supply (MUN) use be applied to surface waterbodies that do not have beneficial uses listed in Table II-1. Therefore, MUN also applies to tributaries to the Mokelumne River.

V. Description of Discharge

The discharge will be tertiary treated municipal wastewater. Disinfection will be by UV disinfection prior to discharge.

The permit application lists the following design parameters for the new treatment system:

Pollutant or parameter	Influent Concentration	Effluent Concentration
BOD5	450-600 mg/L	<10 mg/L
TSS	450-600 mg/L	<10 mg/L
Total Nitrogen	N/A	<10 mg/L Total Nitrogen
NH4-N	N/A	< 2 mg/L NH3-N

VI. Regulatory Basis for NPDES Permit Effluent Limitations

Section 301(a) of the Clean Water Act provides that the discharge of any pollutant to waters of the United States is unlawful except in accordance with an NPDES permit. Section 402 of the Act establishes the NPDES program. The program is designed to limit the discharge of

pollutants into waters of the U.S. from point sources (40 CFR 122.1 (b)(1)) through a combination of various requirements including technology-based and water quality-based effluent limitations.

Technology-based effluent limitations

Under 40 CFR Part 125.3(c)(2), Technology based treatment requirements may be imposed on a case-by-case basis under Section 402(a)(1) of the Act, to the extent that EPA promulgated effluent limitations are inapplicable, i.e., the regulation allows the permit writer to consider the appropriate technology for the category or class of point sources and any unique factors relating to the applicant.

The minimum levels of effluent quality attainable by secondary treatment for Settleable Solids, as specified in the EPA Region IX Policy memo dated May 14, 1979, are listed below:

Settleable Solids:
Concentration based Limits
30-day average - 1 ml/l
Daily maximum - 2 ml/l

The minimum levels of effluent quality attainable by secondary treatment for Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), and pH, as defined in 40 CFR 133.102, are listed below:

BOD:
Concentration-based Limits
30-day average - 30 mg/l
7-day average - 45 mg/l
Removal Efficiency - minimum of 85%

Mass-based Limits
30-day average - $(30 \text{ mg/l})(0.10 \text{ mgd})(8.34 \text{ conversion factor}) = 25 \text{ lbs/day}$
7-day average - $(45 \text{ mg/l})(0.20 \text{ mgd})(8.34 \text{ conversion factor}) = 75 \text{ lbs/day}$

TSS:
Concentration-based Limits
30 - day average - 30 mg/l
7 - day average - 45 mg/l
Removal efficiency - Minimum of 85%

Mass-based Limits
30-day average - $(30 \text{ mg/l})(0.10 \text{ mgd})(8.34 \text{ conversion factor}) = 25 \text{ lbs/day}$

7-day average - (45 mg/l)(0.20 mgd)(8.34 conversion factor) = 75 lbs/day

pH:

Instantaneous Measurement: 6.0 - 9.0 standard units (s.u.)

2. Water Quality-Based Effluent Limitations

Sections 402 and 301(b)(1)(C) of the Clean Water Act require that the permit contain effluent limitations to meet water quality standards. 40 CFR 122.44(d) provides that an NPDES permit must contain:

“Water quality standards and State requirements: any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality.”

40 CFR 122.44 (d)(1)(i) states:

“Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality.”

40 CFR 122.44 (d) (1) (ii) states:

“When determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and non-point sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity) and where appropriate, the dilution of the effluent in the receiving water.”

40 CFR 122.44 (d)(1) (iii) states:

“When the permitting authority determines using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant.”

Guidance for the determination of reasonable potential to discharge toxic pollutants is included in both the Technical Support Document for Water Quality-Based Toxics Control (TSD) - Office of Water Enforcement and Permits, U.S. EPA, dated March 1991 and the U.S.EPA NPDES Permit Writers Manual - Office of Water, U.S. EPA, dated December 1996. EPA's technical support document contains guidance for determining the need for permit limits. In doing so, the regulatory authority must satisfy all the

requirements of 40 CFR 122.44(d)(1)(ii). In determining whether the discharge causes, has the reasonable potential to cause or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants, the regulatory authority must consider a variety of factors. These factors include the following:

- Dilution in the receiving water,
- Existing data on toxic pollutants,
- Type of industry,
- History of compliance problems and toxic impacts,
- Type of receiving water and designated use.

Therefore, based on WWTP operations and projected waste water quality data provided in the application, EPA conducted a "reasonable potential" analysis to compare effluent discharges to water quality standards, as required by 40 CFR 122.44(d)(1)(ii), (iii) and (iv).

A. Dilution in the receiving water

Discharge from Outfall 001 is to an unnamed tributary to Jackson Creek. Jackson Creek has no natural flow during certain times of the year. Therefore, no dilution of the WWTP effluent has been considered in the development of effluent limits.

B. Existing data on toxic pollutants

This is a new discharge and therefore no discharge of effluent has been reported during the previous permit term and therefore there is no data on toxic pollutants.

The new treatment plant is designed to meet the following effluent concentrations:

BOD5 < 10 mg/l
TSS < 10 mg/l;

The WWTP will not serve any residential customers, and most of the flows originate from sanitary uses at the casino. No industrial sources will discharge to the WWTP, although there will be a restaurant in the casino. The permittee will be required to conduct a full scan of priority pollutants within 90 days of discharge from the new treatment plant and in the 3rd and 5th year thereafter. Reasonable potential will be re-evaluated at this time and the permit may be re-opened to incorporate new water quality based limits as necessary.

C. Type of Industry

Typical pollutants of concern in untreated and treated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil and grease, and solids. Chlorine and turbidity may also be of concern due to treatment plant operations.

D. Receiving Water

As described in Section IV of this Statement of Basis, numeric water quality

standards that apply to tributaries of the Mokelumne River are:

AGR, REC-1, REC-2, FW HABITAT-WARM/COLD, SPWN-WARM/COLD, WILD and MUN.

No effluent data is available for the discharge from the Permittee, therefore, EPA evaluated typical pollutants and applicable water quality standards to protect the beneficial uses of the receiving water.

E. Rationale for Effluent Limitations

EPA evaluated the typical pollutants expected to be in WWTP discharge effluent and selected the most stringent of applicable technology-based standards or water quality-based effluent limitations. Where effluent concentrations of toxic parameters are unknown or are not reasonably expected to be discharged in concentration that have the reasonable potential to cause or contribute to water quality standards, EPA has established monitoring requirements in the permit. This data will be re-evaluated and the permit re-opened to incorporate effluent limitations if necessary.

Ammonia

Treated and untreated domestic wastewater may contain levels of ammonia that are toxic to aquatic organisms. Ammonia is converted to nitrate during biological nitrification process, and then nitrate is converted to nitrogen gas through biological denitrification process. USEPA's Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life recommends acute and chronic criteria that are pH and temperature dependent. USEPA's ambient criteria recommends acute criteria that are dependent on pH and fish species and the chronic criterion is dependent on pH and temperature. At lower temperatures, the chronic criterion is also dependent on the presence or absence of early life stages of fish. The temperature dependency in the 1999 Update results in a gradual increase in the criterion as temperature decreases, and a criterion that is more stringent, at temperatures below 15 C, when early life stages of fish are expected to be present. As pH increases, both the acute and chronic toxicity of ammonia increases.

For the acute criterion, EPA reviewed effluent monitoring data submitted to EPA from other similar MBR operations (Cache Creek Casino Resort's underground injection control reports) and determined the maximum observed effluent pH concentration was 8.0. EPA believes an effluent pH of 8.0 is a reasonable and conservative assumption. Therefore, in order to protect against the short-term exposure of an organism, the acute criterion based on a maximum pH of 8.0 is 8.40 mg/L.

For the chronic criterion, EPA recommends that the thirty-day average concentration of total ammonia nitrogen not exceed, more than once every three years on the average, a criteria continuous concentration (CCC) and EPA recommends that within

the 30-day averaging period, no 4-day average concentration should exceed 2.5 times the CCC. EPA chose the maximum allowed pH value of 8.5 to be protective in the worst case scenario. Because the unnamed tributary may be dominated by effluent, EPA determined to use the worst case temperature conditions of the treated effluent to ensure compliance with ammonia toxicity. However, because this is a new discharge facility, no effluent temperature data was available. EPA therefore reviewed effluent data from a nearby POTW, the City of Jackson (NPDES permit NO. CA0079391, issued 27 October 2007 by the Central Valley Regional Water Quality Control Board) which also discharges to an effluent dominated waterbody and used the temperature of the treated effluent to establish chronic ammonia criteria. For the City of Jackson, the maximum observed 30-day effluent temperature was 75°F (23.9°C), for the rolling 30-day period ending 10 August 2005. Therefore, EPA believes this is a reasonable assumption for WWTP effluent for this geographical area, and has used this temperature as a maximum until additional effluent temperature data can be collected from the Buena Vista Casino. Using a maximum pH of 8.0 and a maximum temperature of 23.9°C, EPA determined the 30-day continuous concentration criteria to be 1.32 mg/L.

Due to the potential for ammonia to be present in sanitary wastewater at toxic levels and due to the conversion of ammonia to nitrate, effluent limitations are established for ammonia.

Based on EPA's approach in the Technical Support Document (EPA/505/2/90-001)

EPA calculated the Long Term Averages (LTA):

Acute LTA = 8.40 mg/L criteria x 0.321 multiplier based on Cv=0.6 and 99th percentile)
= 2.70 mg/L

Chronic LTA 1.32 mg/L criteria x 0.840 multiplier based on Cv=0.6, 95th percentile, and 30 day averaging period) = 1.11 mg/L

EPA selected the lowest of the LTAs (1.11 mg/L) and calculated the:

Average Monthly Limit = 1.11 mg/L x 1.55 multiplier based on Cv=0.6, 95th percentile, and n=4 samples per month
= 1.72 mg/L

Maximum Daily Limit = 1.11 mg/L x 3.11 multiplier based on Cv=0.6, 99th percentile
= 3.45 mg/L

Nitrate

Treated and untreated domestic wastewater may contain levels of ammonia that are toxic to aquatic organisms. Ammonia is converted to nitrate during biological nitrification process, and then nitrate is converted to nitrogen gas through biological denitrification process.

The primary MCL for protection of MUN is 10 mg/L and the EPA Ambient Water

Quality Criteria for the Protection of Human Health is also 10 mg/L for non-cancer effects. Due to the potential for ammonia to be present in sanitary wastewater and due to the conversion of ammonia to nitrate, effluent limitations are established for nitrate (measured as N).

Total Dissolved Solids/Electrical Conductivity

The Basin Plan does not contain numeric criteria for TDS or EC. To protect the beneficial uses of water for agriculture uses, studies by the United Nations have recommended a goal of 700 umhos/cm. The California Department of Health Services has recommended an SMCL for EC of 900 umhos/cm, with an upper level of 1600 umhos/cm and a short term level of 2200 umhos/cm.

Due to lack of discharge data, it is unknown at this time if the discharge from the new WWTP will have the reasonable potential to cause or contribute to an exceedance of water quality standards. Due to previous studies conducted by the RWQCB on the origin of dissolved solids impairment, it is unlikely that the WWTP will be a significant contributor of dissolved solids. Therefore, the draft permit establishes monthly monitoring requirements for EC and TDS to assess reasonable potential.

pH:

The basin plan requires that a pH of 6.5-8.5 must be met at all times and that changes in normal ambient pH level not exceed 0.5 units. This is more stringent than technology based requirements for pH; therefore, this limit is included in the permit.

Fecal Coliform:

Based on the nature of WWTP effluent, there is a reasonable potential for fecal coliform to violate water quality standards. Based on REC-1 Beneficial Use fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed 200/100 ml, nor shall more than 10% of the total number of samples during any 30-day period exceed 400/100 ml - 10% of samples for 30-day period. Based on MUN standards, fecal coliform must not exceed 2.2 /100mL in a 7 day average. Since the MUN is the most stringent standard, this limit is included in the permit.

The effluent is designed to meet California (Title 22) disinfection standards for the re-use of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered and that the effluent total coliform levels not exceed 2.2 MPN/100 ml as a 7-day median. Although a limit for fecal coliform and turbidity has been required in the permit that are analogous to Title 22 standards, EPA is not including effluent limits in the permit to demonstrate full compliance with California Title 22 disinfection standards.

Total Residual Chlorine:

Chlorine will not be used to disinfect WWTP effluent (which is disinfected through

the use of filtration and UV disinfection) and is not expected to be present in the effluent in detectable concentrations. Chlorine will be added to recycled effluent immediately prior to storage in the recycle water storage tanks. This water will not be discharged. However, due to the use of chlorine at the facility, EPA has included effluent limits in the proposed permit to ensure that the effluent does not contain chlorine in concentrations that will exceed water quality standards .

Dissolved oxygen

The basin plan requires that dissolved oxygen not be reduced below 7.0 mg/L based on COLD and SPWN beneficial uses. Therefore, this is included in the permit.

Oil and Grease

Treated and untreated domestic wastewater may contain levels of oil and grease which may be toxic to aquatic organisms. There are no numeric water quality standards for oil and grease. Therefore, an effluent limit based on Best Professional Judgment is included in the permit.

Toxicity:

The basin plan includes language that “All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life.” Therefore, the permit requires monitoring for toxicity based on Whole Effluent Toxicity Procedures to assess the reasonable potential of the discharge to have toxic effects on aquatic organisms. The permit also requires monitoring for priority pollutants to assess the reasonable potential of the discharge to cause or contribute to a water quality standard violation.

3. Narrative water quality standards:

The following narrative water quality standards contained in the permit are based upon water quality objectives contained in the Basin Plan.

The discharge shall not cause the following in downstream waters:

1. The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mg/L or cause more than 10 percent of total samples taken during any 30-day period to exceed 400 MPN/100 mg/L.
2. Biostimulatory substances that promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. Esthetically undesirable discoloration.
4. Concentrations of dissolved oxygen to fall below 7.0 mg/L. The monthly median of the

mean daily dissolved oxygen concentration shall not fall below 85 percent of saturation in the main water mass, and the 95th percentile concentration shall not fall below 75 percent of saturation.

5. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
6. Oils, greases, waxes, or other materials to accumulate in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.
7. The ambient pH to fall below 6.5, exceed 8.5, or change by more than 0.5 units. A one month averaging period may be applied when calculating the pH change of 0.5 units.
8. Radionuclides to be present in concentrations that harm human, plant, animal or aquatic life; or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
9. Deposition of material that causes nuisance or adversely affects beneficial uses.
10. Taste- or odor-producing substances to impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin or to cause nuisance or adversely affect beneficial uses.
11. The ambient temperature to increase more than 5 degrees F.
12. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses; that produce detrimental response in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health.
13. The turbidity to increase as follows:
 - a. More than 1 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs.
 - b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
 - c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.
 - d. More than 10 percent where natural turbidity is greater than 100 NTUs.When wastewater is treated to a tertiary level (including coagulation) or equivalent, a one-month averaging period may be used when determining compliance with Receiving Water Limitation E.13.a.
14. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

VII. Monitoring Requirements

1. Priority Pollutants

The discharger must conduct a comprehensive screening test for the Priority Toxic Pollutants listed for the California Toxics Rule in the Code of Federal Regulations (CFR) at 40 CFR Section 131.38, within 90 days of discharge from the new treatment plant, and in the 3rd and 5th years of the permit. If an exceedance of a criteria, or a reasonable potential for exceedance of a criteria is detected the permit may be re-opened to require appropriate limits.

2. Whole Effluent Toxicity

The permit establishes tests for toxicity for chronic toxicity.

Chronic toxicity testing evaluates reduced growth/reproduction at 100 percent effluent. Chronic toxicity is to be reported based on the No Observed Effect Concentration (NOEC). The permittee shall conduct short-term tests with the water flea, *Ceriodaphnia dubia* (survival and reproduction test), the fathead minnow, *Pimephales promelas* (larval survival and growth test) and the green alga, *Raphidocelis subcapitata* (growth test). The presence of chronic toxicity shall be estimated as specified by the methods in the 40 CFR Part 136 as amended on November 19, 2002.

VIII. Special Conditions

1. Erosion Control

The Permittee shall implement best management practices to safeguard against erosion from the discharge and prevent adverse impact to adjacent wetlands.

2. Pretreatment Requirements

As described above, there are no industrial facilities discharging to the WWTP. Therefore, there are no pretreatment requirements in this permit.

3. Re-use Standards

The Rancheria will re-use wastewater for on-site irrigation and non-potable water uses such as toilet flushing. Therefore, the Tribe has agreed to follow the reclamation criteria established by the California Department of Health Services to protect public health and the environment. The California Department of Health Services (DHS) has established statewide reclamation criteria in Chapter 3, Division 4, Title 22, California Code of Regulations (CCR), Section 60304, et seq. (hereafter Title 22) for the use of reclaimed water. The permit's re-use requirements implement the reclamation criteria in Title 22.

Although the Tribe is not required to comply with these State criteria, the Tribe has agreed to follow criteria for the re-use of its wastewater, and these terms are therefore included in the

permit.

IX. Threatened and Endangered Species

No federal listed species occur on or near the project site. As federal listed species are known from the region of the project site, the U.S. Fish and Wildlife Service (USFWS) has expressed concerns regarding potential impacts to federal listed species. On March 10, 2006, the USFWS prepared a letter responding to an NPDES permit application under consideration by the EPA (USFWS File No. 1-1-06-0864). Similarly, in a letter dated March 5, 2007, the USFWS prepared a comment letter on the circulated Draft Tribal Environmental Impact Report (DTEIR) (USFWS File No. 1-1-07-I-0692). In both letters the USFWS stated that the project may affect federal listed species and requested documentation for endangered species studies. Both letters state that the USFWS is “concerned about the potential adverse effects of this project on threatened California tiger salamander, vernal pool fairy shrimp (*Branchinecta lynchi*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), Ione manzanita (*Arctostaphylos myrtifolia*), Ione buckwheat (*Eriogonum apricum* var. *apricum*), and endangered vernal pool tadpole shrimp (*Lepidurus packardi*), Irish Hill buckwheat (*Eriogonum apricum* var. *prostratum*) and Sacramento Valley Orcutt grass (*Orcuttia viscida*).” In the March 10th, 2006 letter, the USFWS recommends that surveys following the Service’s *Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander* be completed.

In response to these concerns, Monk & Associates (M&A) requested authorization from USFWS to conduct protocol California tiger salamander larval surveys via an email and subsequent Habitat Assessment Report submitted to Dr. Jeffrey Jorgenson of USFWS. M&A received permission from the USFWS to conduct protocol spring larval surveys on March 27, 2006 (USFWS File No. 1-1-06-I-0864). Following the completion of the spring larval surveys in 2006, M&A prepared a winter survey plan requesting authorization to conduct a protocol wet season (winter) survey using drift fencing and pitfall traps. This request was submitted to the USFWS on October 3, 2006. M&A received permission from the USFWS to conduct protocol winter surveys via an email from Dr. Jorgenson on October 4, 2006 (USFWS ID # 1-1-07-TA-0002).

On June 24, 2008, M&A submitted a Biological Assessment report to the Corps and USFWS that assessed potential impacts to the above-mentioned federally-listed species on the Buena Vista Rancheria casino site (USFWS Reference No. 81420-2008-I-1829-1; Corps File No. 2000-003-57). On August 26, 2008, the USFWS concurred with M&A’s determination that the Casino project would not affect federally-listed species, including the California tiger salamander (*Ambystoma californiense*) (CTS) and the California red-legged frog (*Rana aurora draytonii*) (CRLF) on the Casino site.

On October 27, 2008, the USFWS requested that the Corps reinstate consultation of the Buena Vista Rancheria Casino Project, to take into consideration all related on-site and off-site projects associated with the Buena Vista Rancheria Casino project that were not heretofore addressed in the original Biological Assessment prepared by M&A on June 24, 2008. USFWS also requested

more information regarding the potential presence of vernal pool branchiopods on the Casino site.

A new Biological Assessment was submitted to the Corps on September 15, 2009 that responds to the October 2008 USFWS request. This Biological Assessment addresses the effects of the wastewater treatment plant and storm water discharge system that are now required to be constructed as part of the proposed project. In addition, the Biological Assessment addresses the potential effects of the project on federal listed species that could occur from construction of required off-site improvements. *The Biological Assessment concludes that the proposed project (on and offsite) will have no effects on plants or animals protected pursuant to the Federal Endangered Species Act.*

Below, we provide a complete review of federal listed species issues with respect to the project site and off-site road improvement areas based upon federally listed species known from the region of the project site and off-site road improvement areas.

Four federally listed plant species and four federally listed wildlife species are known to occur in the project region: Ione manzanita, succulent owl's clover, Ione buckwheat, Irish Hill buckwheat, vernal pool fairy shrimp, vernal pool tadpole shrimp, California tiger salamander, and California red-legged frog. Below we briefly discuss each of these species:

1. Ione Manzanita

Ione manzanita (*Arctostaphylos myrtifolia*) is a federally threatened species and is on CNPS List 1B.2. The Biological Assessment addresses the potential for the impacts to this species, and concludes that Ione manzanita will not be affected by the proposed project.

2. Succulent Owl's Clover

Succulent owl's clover (*Castilleja campestris* ssp. *succulenta*) is a federal-listed threatened species, a state-listed endangered species, and is on CNPS List 1B.2. The Biological Assessment has determined that succulent owl's clover will not be affected by the proposed project.

3. Ione Buckwheat

Ione buckwheat (*Eriogonum apricum* ssp. *apricum*) is a federal-listed endangered species and a state-listed endangered species. It is on CNPS List 1B.1. Project-related threats to Ione buckwheat were evaluated in the attached Biological Assessment. This document demonstrates that Ione buckwheat will not be affected by the proposed project.

4. Irish Hill Buckwheat

Irish Hill buckwheat (*Eriogonum apricum* ssp. *prostratum*) is a federal-listed endangered species and a state-listed endangered species. Project-related threats to Irish Hill buckwheat were evaluated in the Biological Assessment. This document demonstrates that Irish Hill buckwheat will not be affected by the proposed project.

5. Vernal Pool Fairy Shrimp

In a letter dated January 5, 2001 (USFWS File No. 200000357), the USFWS provided a review of the proposed casino project in consultation with the National Indian Gaming Commission conducted pursuant to Section 7 of the Endangered Species Act of 1973, as amended. In that letter, the potential presence of vernal pool branchiopods in wetlands found on the project site was dismissed by the USFWS.

Regarding off-site proposed road improvements, project related threats to potential branchiopod habitats adjacent to the project area were evaluated in the Biological Assessment. This document demonstrates that the project will not affect vernal pool fairy shrimp.

6. Vernal Pool Tadpole Shrimp

In a letter dated January 5, 2001 (USFWS File No. 200000357), the USFWS provided a review of the proposed project as part of the informal consultation on this project under Section 7 of the Endangered Species Act of 1973, as amended. In that letter, the potential presence of vernal pool branchiopods on the project site was dismissed by the USFWS.

Regarding off-site proposed road improvements, project related threats to potential branchiopod habitats adjacent to the project area were evaluated in the Biological Assessment. This document demonstrates that the project will not affect vernal pool tadpole shrimp.

7. Valley Elderberry Longhorn Beetle

Blue elderberry (*Sambucus mexicana*), the host plant for valley elderberry longhorn beetle, occurs on the bluffs south of the proposed project. The shrubs are outside of the proposed impact area¹. As such, blue elderberry shrubs and the valley elderberry longhorn beetle will not be impacted by the proposed project.

8. California Tiger Salamander

M&A conducted USFWS-approved protocol surveys for California tiger salamander on the project site in 2006-2007. No California tiger salamander adults, larvae, or eggs were observed during that survey. A formal California tiger salamander survey report reporting negative findings was prepared and submitted to USFWS on June 1, 2007. In a letter dated August 26, 2008 (Ref # 81420-2008-I-1829-1), the USFWS concurred with M&A's determination that the proposed casino project site would not be likely to adversely affect California tiger salamander on the project site.

Regarding off-site proposed road improvements, project-related threats to California tiger salamanders were evaluated in the Biological Assessment. The document concludes that the project will not affect California tiger salamanders.

9. California Red-Legged Frog

¹ North Fork Associates 2005. Biological Resource Assessment for the 67-acre Buena Vista Rancheria Project. Amador County, California. September 26.

A California red-legged frog site survey report was prepared by Ms. Trish Tatarian (Wildlife Research Associates) in December of 2005. This report concludes that based on the lack of known occurrence data, and the results of field surveys, the proposed project will not affect California red-legged frogs. Additionally, M&A believes California red-legged frog would have been detected on the site during the California tiger salamander surveys conducted in 2006-2007. In a letter dated August 26, 2008 (Ref # 81420-2008-I-1829-1), the USFWS concurred with M&A's determination that the proposed project would not be likely to adversely affect California red-legged frogs on the project site.

Regarding off-site proposed road improvements, project-related threats to California red-legged frogs were evaluated in the Biological Assessment. The document concludes that the project will not affect California red-legged frogs.

10. Summary

Based upon studies that have been completed by qualified, competent biologists, M&A concludes that the proposed project will not impact species protected pursuant to the Federal Endangered Species Act. On September 15, 2009, M&A provided the Corps and USFWS with a revised Biological Assessment that demonstrated the proposed project will have "no effects" on federally listed species.

X. National Historic Preservation Act

EPA determined that the proposed project is an "undertaking," as defined in 36 C.F.R. § 800.16(y); Consistent with the provisions of the NHPA regulations and its federal trust responsibility, EPA initiated consultation with the California State Historic Preservation Officer (SHPO). EPA requested consultation with Tribes that may attach religious or cultural significance to historic properties that might be affected by the undertaking. EPA identified Tribes based on their historical connection, and current geographic proximity to the area where the project is proposed. Additionally, EPA contacted the National Indian Gaming Commission, the Bureau of Indian Affairs, the Army Corps of Engineers, the Advisory Council on Historic Preservation, Amador County, the Friends of Amador County, and individuals with historic ties to the area for consultation.

Consistent with the provisions of 36 C.F.R. § 800.4, EPA identified the geographic areas that the undertaking may directly or indirectly cause alterations in the character or use of historic properties to determine the area of potential effect (APE). EPA's determination on the scope of the APE is based on an understanding of the proposed project and an understanding of the historic properties of traditional religious and cultural importance. Efforts to identify historic properties pursuant to 36 CFR § 800.4 within the APE of the undertaking have been conducted, resulting in archaeological survey coverage of the APE by archaeologists and other cultural

resource professionals². Identification efforts included background research, interviews with persons knowledgeable about local cultural resources, Native American consultation, archaeological surveys, and archaeological excavations.

In a letter dated February 17, 2007, the EPA initiated Section 106 consultation with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR § 800.3(c). The EPA requested SHPO's comments concerning the EPA's proposal to serve as the lead federal agency and the EPA's determination that the proposed project constitutes an undertaking. The EPA also requested SHPO's comments of the scope of historic-property identification efforts conducted thus far and the identification of other potential consulting parties to the Section 106 process³.

The efforts to identify historic properties in the APE included a review of previous studies conducted on geographic areas that include the entire APE, as well as site-specific field efforts and discussions with Tribes. Identification efforts in the APE are based on previous cultural resource studies which consisted of records searches and literature reviews, archival research, correspondence and interviews with local Native Americans, archaeological surveys, presence/absence test excavations, test excavations, non-invasive burial detection, and remote-sensing surveys.

In addition to the direct APE, EPA determined that the undertaking may indirectly cause alterations in the character or use of historic properties (indirect APE) based on the traditional cultural properties that have been documented through identification efforts. Specifically, EPA

² Clark, Matthew R. 2001. *Buena Vista Rancheria Casino Project: Preliminary Evaluative Report of Archaeological Investigations for the Buena Vista Me-Wuk Rancheria Casino Project, Amador County, California*. May 30. Holman & Associates, San Francisco. Prepared for Buena Vista Rancheria of Me-Wuk Indians of California, Ione.

Gross, Charlane S., and Steve Heipel. 2000. *Cultural Resources Inventory for the Buena Vista Rancheria, Amador County, California*. November. KEA Environmental, Inc., Sacramento, California. Prepared for Buena Vista Rancheria, Ione, California, and Cascade Entertainment Group, Tiburon, California. On file, North Central Information Center, California Historical Resources Information System, Sacramento (Study 2815).

Johnson, Anne H. 2006. *Historical Perspective on Buena Vista Rancheria and Vicinity*. Pacific Legacy, Cameron Park, California. Prepared for Buena Vista Rancheria, Sacramento, California.

Shapiro, Lisa, Robert Jackson, Sharyn Jones, Jennifer Burns, and Erik Whiteman 2006. *Archaeological Inventory of the Buena Vista Rancheria, Amador County, California*. September. Pacific Legacy, Cameron Park, California. Prepared for The Buena Vista Rancheria of Me-Wuk Indians, Sacramento, California.

Theodoratus, Dorothea, Robert Jackson, Kathleen McBride, and Jennifer Burns. 2006. *Ethnographic and Ethnohistoric Overview for the Buena Vista Rancheria of Me-Wuk Indians, Amador County, California*. October. Pacific Legacy, Cameron Park, California. Prepared for The Buena Vista Rancheria of Me-Wuk Indians, Sacramento, California.

³ Strauss, Alexis. 2007. Letter Regarding Request for Consultation under the National Historic Preservation Act for an Undertaking at the Buena Vista Rancheria, Amador County, California. February 17. Region IX, United State Environmental Protection Agency, San Francisco. Submitted to Office of Historic Preservation, California Department of Parks and Recreation, Sacramento.

has determined that the undertaking may result in visual intrusions and may introduce auditory elements that may affect the character or use of historic and cultural properties. EPA has determined that the geographic areas where the undertaking may indirectly affect historic properties.

EPA conducted a series of meetings with interested parties as part of the NHPPA consultation to identify historic properties; determine the Area of Potential Affects; evaluate adverse impacts and to develop a memorandum of agreement (MOA) and historic properties treatment plan (HPTP). EPA facilitated a consultation meeting among the SHPO, the Corps, Buena Vista Rancheria of Me-Wuk Indians, the Ione Band of Miwok Indians, and other Miwok individuals on May 1, 2007. The attending parties are all consulting parties to the Section 106 process or potential consulting parties. The meeting was called to discuss the undertaking's area of potential effects (APE), efforts to identify historic properties, and likely effects of the undertaking on historic properties, should any be identified.

A site visit with interested parties was also conducted to discuss the project and to evaluate the potential impacts of the project on historic properties. The interested parties participating in consultation were the SHPO, Army Corps of Engineers, Amador County, the Ione Band of Miwok Indians, the Jackson Rancheria of Me-Wuk Indians, individuals with historic ties to the area, the historic Band of Miwok Indians, the Friends of Amador County, and the Buena Vista Rancheria.

In a letter dated October 2, 2008, the EPA requested SHPO concurrence in the EPA's determination of the APE, that identification efforts in the APE are adequate, that two identified cultural resources constitute historic properties, that one property located off Reservation does not constitute a historic property, and that the undertaking will adversely affect historic properties and the Buena Vista Peaks (indirect effect). In a response letter dated April 10, 2009 SHPO concurred with EPA in these findings.

As a result of the consultation, a draft Memorandum of Agreement (MOA) with a Historic Properties Treatment Plan (HPTP) has been developed. After the Tribe, in consultation with SHPO, has determined that all measures required in the MOA have been completed, the Tribe will ensure preparation and concurrent distribution to the reviewing parties a draft report that documents the methods and results of implementing the requirements of that stipulation. The Tribe agrees to develop a plan per the HPTP section entitled, "Plan for Treatment and Disposition of Native American Remains and Associated Funerary Objects," which formalizes procedures for the treatment of Native American human remains, grave goods, ceremonial items and any cultural items that may be found during the implementation of the undertaking. Such plan, at a minimum, will include a curation agreement that ensures that all materials and records subject to curation are maintained in accordance with 36 CFR Part 79. Materials recovered from privately owned lands, other than Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony, that are to be returned to their owners, will be maintained in accordance with 36 CFR Part 79 until their analyses are complete; The parties to the MOA agree that Native American burials and related items discovered during the implementation of the MOA's measures, at a minimum, will be respectfully treated in

accordance with the herein-described plan.

The plan provisions stipulate that Archaeological and Native American on-site monitoring shall be conducted by qualified monitors during all ground-disturbing construction activities on ground that has not been previously and recently disturbed. The Tribe shall retain the services of a professional qualified archaeological firm to conduct a geo-archaeological study within the footprint area of the proposed project. The archaeological firm will conduct research and a field inspection to determine if buried sites are present in areas where Holocene geological deposits will be disturbed by project activities. The *Archaeological Discovery Plan* describes the procedures established to deal with unanticipated discoveries of archaeological resources during the course of project construction. The Tribe shall implement the *Archaeological Discovery Plan* during ground-disturbing construction activities. Procedures to deal with the unanticipated discovery of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony are described below in *Plan for Treatment and Disposition of Native American Remains and Associated Funerary Objects*.

If the Tribe determines during the implementation of either the HPTP or the Undertaking that such implementation will affect a previously unidentified property that may be eligible for inclusion in the National Register, or affect a known historic property in an unanticipated manner, then the Tribe will order that work be stopped within 100 feet of the newly identified property until a qualified archeologist can assess the significance of the property and, if necessary, develop appropriate treatment measures in consultation with the Signatory Parties and other appropriate parties as required under 36 CFR 800.13(1)(b) Discoveries without prior planning. If EPA determines, after consultation with the Tribe, that a discovered property is eligible for inclusion in the National Register, it shall be treated as such for the purposes of this MOA.

Signatories to the MOA will be the U.S. EPA and the SHPO, with concurring parties expected to include the U.S. Army Corps of Engineers, the Buena Vista Rancheria, the Ione Band of Miwok, the Jackson Rancheria of Me-Wuk, and the County of Amador.

XI. Permit Reopener

The permit contains a reopener clause to allow for modification of the permit if reasonable potential is demonstrated during the life of the permit.

XII. Standard Conditions

Conditions applicable to all NPDES permits are included in accordance with 40 CFR, Part 122.

XIII. Administrative Information

Public Notice

The public notice is the vehicle for informing all interested parties and members of the general

public of the contents of a draft NPDES permit or other significant action with respect to an NPDES permit or application. The basic intent of the requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit was public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period

Rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to EPA. After the closing of the public comment period, EPA is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing

A public hearing was held on March 21, 2006 in Ione, CA on the proposed permit which was public noticed December 21, 2005. EPA received comments from approximately 30 parties both in writing and in public testimony. All comments presented to EPA during the previous comment period and at the public hearing are considered by EPA in its final decision.

XIV. Additional Information

Additional information relating to this proposed permit may be obtained from the following locations:

U.S. Environmental Protection Agency, Region IX
CWA Standards & Permits Office Mail Code: WTR-5
75 Hawthorne Street
San Francisco, California 94105-3901
Telephone: (415) 972-3518
Attn: John Tinger

XV. Information Sources

While developing effluent limitations, monitoring requirements and special conditions for the draft permit, the following information sources were used:

1. Water Quality Control Plan for the State of California, Region 5, Water Quality Control Board, December 4, 1994.
2. EPA Technical Support Document for Water Quality-based Toxics Control dated March 1991.
3. U.S. EPA NPDES Basic Permit Writers Manual (December 1996).

4. 40 CFR Parts 122, 131, and 133.
5. Interim Final Regions 9 and 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs, May 31, 1996.
6. Permittee submittals to EPA dated May, 2005 (NPDES permit application), July 28, 2005 (email), conversations, and a site visit conducted by EPA staff on April 8, 2005.
7. Archaeological Inventory of the Buena Vista Rancheria, Amador County, California, Project Number 1550-01, October 2005 prepared by Pacific Legacy, Inc.
8. Biological Resource Assessment for the 67 acre Buena Vista Rancheria Project, prepared by North Fork Associates, September 26, 2005.
9. Final Tribal Environmental Impact Report, State Clearinghouse # 2005012029, October, 2005.