NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET
June 2015

Permittee Name:	Table Mountain Rancheria WWTP
Mailing Address:	P.O. Box 410 Friant, CA 93626
Facility Location:	8206 Table Mountain Road Friant, CA 93626
Contact Person(s):	Richard Rodriguez, WWTP Manager (559) 822-2485
NPDES Permit No.:	CA0084280

I. STATUS OF PERMIT

Table Mountain Rancheria Wastewater Treatment Plant (the "permittee") has applied for the renewal of its National Pollutant Discharge Elimination System ("NPDES") permit to authorize the discharge of treated effluent to an unnamed tributary to Little Dry Creek located in Friant, Fresno County, California. A complete application was submitted on March 24, 2015. EPA Region IX has developed this permit and fact sheet pursuant to Section 402 of the Clean Water Act, which requires point source dischargers to control the amount of pollutants that are discharged to waters of the United States through obtaining a NPDES permit.

The permittee is currently discharging under NPDES permit CA0084280 issued on June 16, 2010.

This permittee has been classified as a Minor discharger.

II. GENERAL DESCRIPTION OF FACILITY

Table Mountain Rancheria is a 200-acre parcel of Chukchansi Mono tribal land located 7 miles east of the town of Friant in Fresno County, California. The wastewater treatment plant (WWTP) for Table Mountain Rancheria serves a population of approximately 10,000, largely associated with the tribal casino. The WWTP also serves 14 private residential connections and a church, and does not accept wastewater from any industrial facilities. Wastewater generated from the casino includes sewage, restaurant washwaters, and blowdown from the air conditioning system. Restaurants in the casino are equipped with grease traps and oil separators to prevent flow of oil and grease to the WWTP.

The current was constructed in February 2005 and has a design flow of 0.5 MGD, with a peak instantaneous flow capacity of 1.5 MGD. In the past year, the facility experienced a .13 MGD average flow, down from .23 MGD in 2013. Wastewater is pumped through a headworks equipped with trash and grit removal into two sequencing batch reactors (SBRs). The average

retention time in the SBRs (which hold approximately 500,000 gallons each) is 57.0 hours at design flows. Approximately 25% of each batch is decanted and pumped to an equalization basin. The decant from the equalization basin is sent to 3 rapid mix sand filters with polymer addition. Backwash from the sand filters is sent back to the headworks. Effluent from the sand filters is sent to a series of ultraviolet (UV) disinfection units (Trojan System UV 3000 Plus).

The SBR tanks are enclosed and equipped with a vapor collection system. The vapors are pumped to a wet scrubber to control odor emissions. The wet scrubber blowdown is returned to the headworks of the treatment plant.

Final effluent is pumped to two 500,000 gallon storage tanks. The effluent is used in the casino air conditioning system and for irrigation, and the Tribe must maintain 640,000 gallons in storage at all times for firefighting. The Tribe intermittently discharges all remaining effluent through outfall point 005, located at N 36°59'05", W 119°38'10".

Sludge generated from the SBRs is sent to an aerobic digester and then sent offsite for composting. A backup generator for the WWTP is maintained onsite to be used in case of a power failure.

Raw wastewater flowing into the WWTP is fairly high strength due to water use in the casino, with average influent concentrations as shown in Table 1.

Table 1. Influent Monitoring Data.[(1)]

Parameter	**Influent Concentration**
Biochemical Oxygen Demand (5-day)	433 mg/L
Total Suspended Solids	515 mg/L

[(1)]Based on WWTP influent DMR data since February 2012

III. DESCRIPTION OF RECEIVING WATER

An unnamed tributary to Little Dry Creek runs next to the WWTP, passes around the casino, and runs for approximately 7.5 miles until connecting with Little Dry Creek, which is about 1.0 mile from a continuously flowing segment of the San Joaquin River. The unnamed wash contains a small seasonal flow that originates from a spring located about 100 yards upstream of the discharge point. Outfall 005 flows approximately 200 yards through a constructed ditch before discharging into the unnamed tributary.

The Tribe does not have approved water quality standards for discharges to waters located on the Table Mountain Rancheria. Little Dry Creek is a tributary of the San Joaquin River between Friant Dam and Mendota Pool. Water quality standards applicable to the San Joaquin River and its tributaries are applicable at the point where the discharge enters State waters, and EPA has applied water quality standards based on the "Water Quality Control Plan (Basin Plan) for the Sacramento River Basin and San Joaquin River Basin – Fourth Edition – Revised October 2011", as adopted by the Central Valley Regional Water Quality Control Board and hereafter referred to as the Basin Plan. In order to be conservative, the permit applies the water quality standards applicable at the state boundary directly to the discharge location at outfall point 005.

The Basin Plan states on page II-2.00: "The beneficial uses of any specifically identified water body generally apply to its tributary streams." Therefore, the beneficial uses designated for the unnamed tributary to Little Dry Creek are those that apply to the San Joaquin River from Friant Dam to Mendota Pool: Municipal and Domestic Supply, Agricultural Supply (AGR), Industrial Process Supply (PRO), Water Contact Recreation (REC-1), Noncontact 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).

IV. DESCRIPTION OF DISCHARGE

A. Application Discharge Data

As part of the application for permit renewal, the permittee provided data from an analysis of the facility's treated wastewater discharge, shown in Table 2. The data met previous permit effluent limits (listed in Table 3).

Table 2. Application Discharge Data.

Parameter	Units	Discharge Data[1],[2]	
		Maximum Daily Discharge	Average Daily Discharge
Flow	MGD	--	0.06
pH	Standard Units	7.17-7.96 (min-max)	
Biochemical Oxygen Demand, 5-day (BOD_5)	mg/L	2.00	0.72
Total Suspended Solids (TSS)	mg/L	6.00	0.15
Ammonia (as N)	mg/L	2.80	0.53
Total Residual Chlorine	mg/L	0.00	0.00
Nitrate and Nitrite N	mg/L as N	1.20	0.81
Total Dissolved Solids (TDS)	mg/L	570	460
Fecal Coliform	MPN/ 100mL	2	2

[1] Based on permittee's NPDES renewal application.

B. Recent Discharge Monitoring Report (DMR) Data (2012-2015)

Table 3 provides a summary of effluent limitations and monitoring data based on the facility's most recent 3 years of DMRs (2012 to 2015), the time period that the facility began discharging year-round.

Table 3. Discharge Monitoring Report Data for years 2012-2015.

Parameter	Units	Previous Permit Effluent Limitations			Discharge Monitoring Data		Monitoring Requirements	
		Average Monthly	Average Weekly	Maximum Daily	Highest Reported Maximum	Average Concentration	Monitoring Frequency	Sample Type
Flow Rate	MGD	Monitoring Only	--	Monitoring Only	.31	.14	Continuous	Meter
Ammonia (as N)	mg/L	(1)	--	(1)	4.2	1.23	Once/Week	Composite
Biochemical Oxygen Demand (5-day)	mg/L	30	45	--	4.8	1.8	Once/Week	Composite
	Percent Removal	85%			99% (min)	99% (min)		
Electrical Conductivity	µmhos/cm	900 annual average.			1154	880	Once/Month	Discrete
Total Coliform Bacteria	MPN/ 100mL	2(2)		6.78	2	2	Once/Week	Discrete
Nitrate + nitrite (as N)	mg/L	10	--	29.6	2.7	.95	Once/Month	Composite
Settleable Solids	mL/L	1	--	2	.1	.069	Once/Week	Discrete
Total Suspended Solids	mg/L	30	45	--	30.9	5.0	Once/Week	Composite
	Percent Removal	85%			99% (min)	99% (min)		
Total Residual Chlorine	mg/L	0.01	--	0.02	ND	ND	Once/Day	Discrete
Turbidity(3)	NTU	2	--	5	2.72	.90	Once/Week	Discrete

pH	Standard Units	Within 6.5 and 8.5 at all times			6.71-8.43	7.51	Once/Day	Discrete
Temperature	°C	Monitoring Only			19-32.7	25.4	Once/Week	Discrete
Hardness, total (as $CaCO_3$)	mg/L	Monitoring Only			46	--	Once/Year	Composite
Toxicity, chronic	TU_c	1	--	1.6	1.6	1	Once/Quarter	Composite
Copper, total recoverable	µg/L	12	--	18	ND	ND	Once/Month	Composite
Zinc, total recoverable	µg/L	110	--	160	ND	ND	Once/Month	Composite
Benzene	µg/L	1	--	1.46	ND	ND	Once/Month	Discrete
1,2-dichloroethane	µg/L	0.38	--	0.55	ND	ND	Once/Month	Discrete
Methyl bromide	µg/L	48	--	70	ND	ND	Once/Month	Discrete
Toluene	µg/L	150	--	219	ND	ND	Once/Month	Discrete
Pentachlorophenol	µg/L	0.28	--	0.41	ND	ND	Once/Month	Composite
Indeno(1,2,3-cd)pyrene	µg/L	0.0044	--	0.0064	ND	ND	Once/Month	Composite
1,2-trans-dichloroethylene	µg/L	10	--	14.6	ND	ND	Once/Month	Composite

(1) Previous ammonia effluent limitations varied by month.
(2) As a weekly median.
ND= Non-detect

V. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

Significant changes from previous permit include:

- Removal of limits for turbidity, zinc, benzene, 1,2-dichloroethane, methyl bromide, toluene, pentachlorophenol, ideno(1,2,3-cd)pyrene, and 1,2-trans-dichloroethylene.
- More stringent tertiary treatment limits for BOD and TSS.
- Incorporation of Ammonia Impact Ratio for reporting ammonia.
- Incorporation of Test of Significant Toxicity for monitoring chronic toxicity.
- Reduction in monitoring frequency for most parameters due to record of compliance.

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

EPA has developed effluent limitations and monitoring requirements in the permit based on an evaluation of the technology used to treat the pollutant (e.g., "technology-based effluent limits"), the water quality standards applicable to the receiving water (e.g., "water quality-based effluent limits"), and the performance capabilities of the WWTP. EPA has established the most stringent of applicable technology-based or water quality-based standards in the final permit, as described below.

A. Applicable Technology-based Effluent Limitations for Publicly Owned Wastewater Treatment Systems (POTWs)

EPA developed technology-based treatment standards for municipal wastewater treatment plants in accordance with Section 301(b)(1)(B) of the Clean Water Act. The minimum levels of effluent quality attainable by secondary treatment for Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), and pH, as defined in 40 CFR 133.102.

The applicant operates a tertiary treatment facility which includes chemically-assisted filtration. The California State Water Resources Control Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Water in California*, requires implementation of Best Practicable Treatment or Control (BPTC) to ensure that the highest water quality is maintained. Consistent with the performance capabilities of the facility, BPTC, and other permits issued by US EPA, the below standards for BOD_5 and TSS have been incorporated into the permit.

Mass limits, as required by 40 CFR 122.45(f), are also included for BOD_5 and TSS.

BOD_5

Concentration-based Limits

30-day average – 10 mg/L
7-day average – 15 mg/L
Removal Efficiency – minimum of 85%

Mass-based Limits

30-day average – (10 mg/L)(0.5 MGD)(8.345 conversion factor) = 42 lbs/day
7-day average – (15 mg/L)(0.5 MGD)(8.345 conversion factor) = 63 lbs/day

TSS

Concentration-based Limits

30-day average – 10 mg/L
7-day average – 15 mg/L
Removal efficiency – Minimum of 85%

Mass-based Limits

30-day average – (10 mg/L)(0.5 MGD)(8.345 conversion factor) = 42 lbs/day
7-day average – (15 mg/L)(0.5 MGD)(8.345 conversion factor) = 63 lbs/day

pH

Instantaneous Measurement: 6.0 – 9.0 standard units (S.U.)

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) (40 CFR 125.3(c)(2)).

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

30-day average – 1 mL/L
Daily maximum – 2 mL/L

Effluent limits for BOD_5, TSS, and settleable solids are established in the final permit as stated above. However, Basin Plan standards for pH are more stringent than technology-based limits (see Part C).

B. Water Quality-Based Effluent Limitations ("WQBELs")

Water quality-based effluent limitations, or WQBELS, are required in NPDES permits when the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an excursion above any water quality standard (40 CFR 122.44(d)(1)).

When determining whether an effluent discharge causes, has the reasonable potential to cause, or contributes to an excursion above narrative or numeric criteria, 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)(ii)).

EPA evaluated the reasonable potential to discharge toxic pollutants according to guidance provided in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers Manual* (Office of Water, U.S. EPA, December 1996). These factors include:

1. Applicable standards, designated uses and impairments of receiving water

2. Dilution in the receiving water
3. Type of industry
4. History of compliance problems and toxic impacts
5. Existing data on toxic pollutants - Reasonable Potential analysis

1. Applicable standards, designated uses and impairments of receiving water

As described in Section III of this Fact Sheet, the Basin Plan establishes water quality criteria for the following beneficial uses:

MUN Municipal and Domestic Supply
AGR Agricultural Supply
PRO Industrial Process Supply
REC-1 Water Contact Recreation
REC-2 Noncontact Recreation
WARM Warm Freshwater Habitat
COLD Cold Freshwater Habitat
MIGR Migration of Aquatic Organisms
SPWN Spawning, Reproduction, and/or Early Development
WILD Wildlife Habitat

Applicable water quality standards establish water quality criteria for the protection of aquatic wildlife from acute and chronic exposure to certain metals that are hardness dependent. Based on limited available hardness data from the previous permit term, this permit establishes water quality standards for these metals based on the hardness value assumption of 140 mg/L used in the previous limit calculation.

The San Joaquin River from Friant Dam to Mendota Pool (into which Little Dry Creek flows) is listed as impaired for exotic species according to the CWA Section 303(d) List of Water Quality Limited Segments; however, discharge from the WWTP is not expected to introduce exotic species to the San Joaquin River.

To protect WARM and COLD beneficial uses, EPA's National Recommended Water Quality Criteria for protection of freshwater aquatic life are applied for chlorine and ammonia.

2. Dilution in the receiving water

Discharge from outfall point 005 is to a tributary of Little Dry Creek, which may have no natural flow during certain times of the year. Therefore, no dilution of the WWTP effluent has been considered in the development of water quality based effluent limits applicable to the discharge.

3. 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.

4. History of compliance problems and toxic impacts

The have been no inspections since the previous permit was issued. There were no known effluent limit exceedances.

5. Existing data on toxic pollutants

For pollutants with effluent data available, EPA has conducted a reasonable potential analysis based on statistical procedures outlined in EPA's *Technical Support Document for Water Quality-based Toxics Control* herein after referred to as EPA's TSD (EPA 1991). These statistical procedures result in the calculation of the projected maximum effluent concentration based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming a coefficient of variation of 0.6 for n<10, and the 99 percent confidence interval of the 99th percentile based on an assumed lognormal distribution of daily effluent values (sections 3.3.2 and 5.5.2 of EPA's TSD). For n>10, the CV was calculated as the standard deviation ÷ mean for each parameter. EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

Projected maximum concentration = C_e × *reasonable potential multiplier factor*.

Where "C_e" is the reported maximum effluent value ("Maximum Observed Concentration") and the multiplier factor is obtained from Table 3-1 of the TSD ("RP Multiplier").

For pollutants monitored at least annually, data used in reasonable potential analysis spans from February 2012 to January 2015, when the discharger altered operations to year-round discharge. For all other pollutants, data ranges since last permit issuance (August 2010).

Table 4. Summary of Reasonable Potential Statistical Analysis.

Parameter[(1)]	**Maximum Observed Concentration**[(2)] **(µg/L or other)**	***n***	**CV**	**RP Multiplier**	**Projected Maximum Effluent Concentration (µg/L or other)**	**Most Stringent Water Quality Criterion (µg/L or other)**	**Statistical Reasonable Potential?**
Ammonia (as N)	4.2	72	0.2	1.3	5.46	0.95	**Yes**
Electrical Conductivity	1154	36	0.2	1.3	1500	150	**Yes**
Nitrate + nitrite (as N)	2.7	72	0.2	1.3	3.51	10	No
Turbidity	2.72	72	0.2	1.3	3.54	5	No
Copper, total recoverable	5.1	6	0.6	3.8	19.4	12	**Yes**
Zinc, total recoverable	19	6	0.6	3.8	72	110	No
Benzene	ND	6	0.6	3.8	-	1	No
1,2-dichloroethane	ND	6	0.6	3.8	-	.38	No
Methyl bromide	ND	6	0.6	3.8	-	48	No

Parameter[(1)]	Maximum Observed Concentration[(2)] (µg/L or other)	*n*	CV	RP Multiplier	Projected Maximum Effluent Concentration (µg/L or other)	Most Stringent Water Quality Criterion (µg/L or other)	Statistical Reasonable Potential?
Toluene	ND	6	0.6	3.8	-	150	No
Pentachlorophenol	ND	6	0.6	3.8	-	.28	No
Indeno(1,2,3-cd)pyrene	ND	6	0.6	3.8	-	.0044	No
1,2-trans-dichloroethylene	ND	6	0.6	3.8	-	10	No

[(1)] For purposes of RP analysis, parameters measured as Non-Detect ("ND") are considered to be zeroes. Only parameters with Maximum Observed Concentration >0 are included in this analysis.

C. Rationale for Effluent Limits

EPA evaluated the typical pollutants expected to be present in the 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 violations, EPA may establish monitoring requirements in the permit. Where monitoring is required, data will be re-evaluated and the permit may be re-opened to incorporate effluent limitations as necessary.

Flow

No limits are established for flow, but flow rates must be monitored and reported. Continuous monitoring is required.

BOD_5, TSS, Settleable Solids

There are no water-quality based limits for BOD_5, TSS, and settleable solids in the Basin Plan; therefore, technology-based limits established for POTWs for these parameters as described in Part A are incorporated into the permit. As required by 40 CFR 122.45(f), mass limits have been included for BOD_5 and TSS based on the design flow of the facility (0.5 MGD).

pH

The Basin Plan requires that a pH of 6.5-8.5 must be met at all times. As this is more stringent than technology-based requirements for pH, this limit is included in the permit. The Basin Plan has removed the requirement that changes in normal ambient pH levels shall not exceed 0.5; therefore, this condition has been omitted from the final permit.

Ammonia

EPA's *1999 Update of Ambient Water Quality Criteria for Ammonia* recommends acute criteria that are expressed as a function of pH and the presence or absence of salmonids, and chronic criteria that are expressed as a function of pH, temperature, and the presence or absence of fish early life stages. As ammonia data indicates that they have the ability to exceed reasonable potential of the most stringent standards, limits have been established.

Because ammonia criteria are pH-dependent, the permittee is required to calculate an Ammonia Impact Ratio ("AIR"). The AIR is calculated as the ratio of the ammonia value in the

effluent and the applicable ammonia standards as determined by using pH data to derive an appropriate value from the ammonia criteria table in Attachment E of the permit. The AIR limitation has been established as a monthly average of 1.0, equivalent to the standard. The permittee is required to report maximum daily and average monthly ammonia (as N) concentrations in addition to an average monthly AIR.

Nitrate + Nitrite

The previous permit contained limits for nitrate + nitrite. Although the effluent has not demonstrated reasonable potential for nitrate + nitrite, limitations have been retained from the previous permit to ensure that the facility is treating their effluent to a level consistent with a tertiary treatment facility.

Total Residual Chlorine

Chlorine is not used to disinfect the facility's effluent (it is disinfected through filtration and UV disinfection). However, chlorine is intermittently applied to treated wastewater in the 500,000-gallon storage tanks to remove bacteria for spray irrigation and wastewater reuse (firefighting and air conditioning).

Chlorine is known to cause toxicity to aquatic organisms when discharged to surface waters. Therefore, the use of chlorine at the facility presents a reasonable potential that it could be discharged in toxic concentrations even though it is not used for primary disinfection. In order to prevent the discharge of wastewater containing chlorine to surface waters, chlorine will not be added to the storage tanks when discharge is anticipated.

EPA's National Recommended Water Quality Criteria proposes chlorine limits of 0.02 mg/L as a 1-hour average or 0.01 mg/L as a 4-day average. The previous permit contained effluent limitations based on these criteria. The Basin Plan does not contain any criteria or objectives for chlorine concentrations. Therefore, previous effluent limitations for chlorine are retained in the permit.

Electrical Conductivity (EC)

Salt has been identified as a pollutant impairing the lower reaches of San Joaquin River. Due to water reuse at Table Mountain Rancheria, there is reasonable potential for elevated salinity (measured as EC and TDS concentrations) in WWTP effluent. Water quality standards for EC and TDS are listed in Table 8.

Table 5. Salinity Water Quality Objectives

Parameter	**Agricultural WQ Goal[(1)]**	**Secondary MCLs[(2)]**	**Basin Plan WQ objective[(3)]**
Electrical Conductivity, µmhos/cm	700	900, 1600, 2200	150
Total Dissolved Solids, mg/L	450	500, 1000, 1500	--

[(1)]Agricultural water quality goals based on *Water Quality for Agriculture* (R.S. Ayers and D.W. Westcot, 1985)
[(2)]The secondary MCLs are stated as a recommended level, upper limit, and short-term limit, respectively.
[(3)]As designated for the San Joaquin River between Friant Dam and Gravelly Ford.

Agricultural and drinking water criteria are presented as an EC limit *or* a TDS limit. TDS is the dissolved portion of solids in water, including ionic, colloidal, and small, suspended particles. Ionic substances impart an ability of the water to conduct an electrical charge, measured as EC. It

is the high concentration of ions in water, and therefore high EC, that can adversely affect plant growth, drinking water, industrial use water and other beneficial uses. Thus EC limits, rather than TDS, are established to regulate salt discharge.

Agricultural water quality goals are based on maximum salinity that will cause no reduction in crop yield for salt-sensitive crops (such as beans, carrots, turnips, radishes, onions, and strawberries). Discharged effluent from Table Mountain Rancheria is not expected to be used for irrigation of salt-sensitive crops, as these crops are not grown in the vicinity of the discharge. Other crops can handle EC levels of 900 µmhos/cm or greater with no reduction in crop yield.

The Basin Plan specifies a water quality objective for EC for the San Joaquin River from Friant Dam to Gravelly Ford of 150 µmhos/cm. With steady-state dilution in the San Joaquin River under the most stringent circumstances, the WWTP could release up to 2255 µmhos/cm under design flows without exceeding this water quality objective.

Thus, the most stringent criteria applicable to the discharge are secondary MCLs, which recommend a long-term limit of 900 µmhos/cm. This limit is incorporated into the final permit as an annual average, with monthly monitoring requirements. The annual EC average shall be calculated using data only from months when discharge has occurred.

Total Coliform Bacteria

Based on the nature of WWTP effluent, there is reasonable potential for total coliform to violate water quality standards. To protect the REC-1 beneficial use, total coliform concentration shall not exceed 200/100 mL based on a minimum of not less than five samples for any 30-day period, nor shall more than 10% of the total number of samples during any 30-day period exceed 400/100 mL. 22 CCR Division 4, Chapter 15 states that no more than one sample per month may test positive for total coliform for waters designated MUN (the current method detection limit for purposes of reporting is 2 MPN/100 mL). Since MUN is the most stringent standard, limits based on this criterion are included in the permit, as calculated in Table 9.

Table 6. WQBEL Calculations for Total Coliform Bacteria.

	Human Health[(1)]
Human Health Criteria, MPN/100 mL	2
No Dilution Credit Authorized	0
Background Concentration, MPN/100 mL	0
WLA (Dissolved), MPN/100 mL	n/a
WLA (Total Recoverable), MPN/100 mL	2
WLA Multiplier (99th%)	n/a
LTA, MPN/100 mL	2
LTA_{MDL} Multiplier (99th%)	3.39
MDL, MPN/100 mL	**6.78**
LTA_{AML} Multiplier (95th%)	n/a
AML, MPN/100 mL	**2**

[(1)]Derivation of permit limit based on Section 5.4.4 of EPA's TSD

Temperature

As average monthly limits for ammonia are temperature-based, monitoring is required for effluent temperature. Temperature shall be recorded concurrent with sampling for ammonia.

Whole Effluent Toxicity

The Basin Plan states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal or aquatic life." Whole Effluent Toxicity testing performed on *Pseudokirchneriella subcapitata* with WWTP effluent in September 2014 found a toxicity value of 1.6 TUc. EPA's TSD recommends a chronic toxicity monthly median limit of 1.0 TU_c and a maximum daily limit of 1.6 TU_c. Therefore, monthly median and maximum daily limits are established for chronic whole effluent toxicity.

As chronic toxicity criteria are more stringent than acute toxicity criteria, no permit limits or monitoring requirements are established for acute toxicity.

Copper

Criteria listed in 40 CFR 131.38 (the California Toxics Rule) for the protection of freshwater aquatic life and human health (consumption of water and organisms), as designated for inland freshwater bodies with an MUN beneficial use, apply to the receiving water. Due to the result of the reasonable potential analysis, limits based on the most stringent of these criteria are established for copper.

Table 7. WQBEL Calculations for Copper.

	Acute	**Chronic[(1)]**
Freshwater Aquatic Life Criteria, µg/L	18	12
No Dilution Credit Authorized	0	0
Background Concentration, µg/L	0	0
WLA (Dissolved), µg/L	n/a	n/a
WLA (Total Recoverable), µg/L	18	12
WLA Multiplier (99^{th}%)	0.321	0.527
LTA, µg/L	5.8	6.3
LTA_{MDL} Multiplier (99^{th}%)	3.11	--
MDL, µg/L	**18**	**--**
LTA_{AML} Multiplier (95^{th}%)	2.13	--
AML, µg/L	**12**	**--**

[(1)]Derivation of permit limit based on Section 5.4.1 of EPA's TSD

D. Anti-Backsliding.

Section 402(o) of the CWA prohibits the renewal or reissuance of an NPDES permit that contains effluent limits less stringent than those established in the previous permit, except as provided in the statute.

The permit removes limitations for turbidity, zinc, benzene, 1,2-dichloroethane, methyl bromide, toluene, pentachlorophenol, ideno(1,2,3-cd)pyrene, and 1,2-trans-dichloroethylene. In accordance with the exception allowed in 40 CFR 122.44(l)(2)(i)(B)(1), the limits have been removed as a result of new information used in determining that none of the pollutants demonstrated a reasonable potential to exceed water quality standards.

E. Antidegradation Policy

The Basin Plan and EPA's antidegradation policy at 40 CFR 131.12 require that existing water uses and the level of water quality necessary to protect the existing uses be maintained.

As described in this document, the permit establishes effluent limits and monitoring requirements to ensure that all applicable water quality standards are met. The permit does not include a mixing zone; therefore these limits will apply at the end of pipe without consideration of dilution in the receiving water. Priority toxic pollutants scans of the effluent have been conducted, demonstrating that most pollutants will be discharged below detection levels.

All limitations removed from the previous permit are for pollutants calculated not to be present in the effluent. The permit does not allow for any changes in discharge volume, quality, or location from the previous permit. Therefore, due to the low levels of toxic pollutants present in the effluent, high level of treatment being obtained, and water quality based effluent limitations, the discharge is not expected to adversely affect receiving waterbodies or result in any degradation of water quality.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

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 mL; nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400 MPN/100 mL.

2. Biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

3. Discoloration that causes nuisance or adversely affects beneficial uses.

4. Dissolved oxygen concentrations 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. 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.

8. Suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

9. Deposition of material that causes nuisance or adversely affects beneficial uses.

10. Concentrations of suspended material that cause nuisance or adversely affect beneficial uses.

11. 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.

12. The ambient temperature to increase more than 5°F.

13. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that:
    a. adversely affect beneficial uses;
    b. produce detrimental response in human, plant, animal, or aquatic life; or
    c. bioaccumulate in aquatic resources at levels which are harmful to human health.

14. The turbidity to increase as follows:
    a. Beyond 2 Nephelometric Turbidity Units (NTUs) where natural turbidity is below 1 NTU.
    b. More than 1 NTU where natural turbidity is between 1 and 5 NTUs.
    c. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
    d. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.
    e. More than 10 percent where natural turbidity is greater than 100 NTUs.
    f. 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.

15. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters where effluent limits have been established, at the minimum frequency specified. Additionally, where effluent concentrations of toxic parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutants or parameters where effluent limits have not been established.

A. Effluent Monitoring and Reporting

The permittee shall conduct effluent monitoring to evaluate compliance with the final permit conditions. The permittee shall perform all monitoring, sampling and analyses in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the final permit. All monitoring data shall be reported on monthly DMR forms and submitted quarterly as specified in the final permit.

B. Priority Toxic Pollutants Scan

A Priority Toxic Pollutants scan shall be conducted during the fifth year of the five-year permit term to ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. The permittee shall perform all effluent sampling and analyses for the priority pollutants scan in accordance with the methods described in the most recent edition of 40 CFR 136, unless otherwise specified in the final permit or by EPA. 40 CFR 131.36 provides a complete list of Priority Toxic Pollutants.

C. Whole Effluent Toxicity Testing

The permit establishes tests for chronic toxicity. Chronic toxicity testing evaluates reduced growth/reproduction at 100 percent effluent. Chronic toxicity is to be reported based on the Test of Significant Toxicity ("TST").

IX. SPECIAL CONDITIONS

A. Biosolids

Standard requirements for the monitoring, reporting, recordkeeping, and handling of biosolids in accordance with 40 CFR 503 are incorporated into the permit.

B. Pretreatment

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

C. Capacity Attainment and Planning

The permit requires that a written report be filed within ninety (90) days if the average dry-weather wastewater treatment flow for any month exceeds 90 percent of the annual dry weather design capacity of the waste treatment and/or disposal facilities.

D. Development of an Initial Investigation TRE Workplan for Whole Effluent Toxicity

In the event effluent toxicity is triggered from WET test results, the permit requires the permittee to develop and implement a Toxics Reduction Evaluation ("TRE") Workplan. For chronic toxicity, unacceptable effluent toxicity is found in a single test result greater than 1.6 TU_c, or when any one or more monthly test results in a calculated median value greater than 1.0 TU_c. The draft permit also requires additional toxicity testing if a chronic toxicity monitoring trigger is exceeded. Within 90 days of the permit effective date, the permittee shall prepare and submit a copy of their Initial Investigation TRE Workplan (1-2 pages) for chronic toxicity to EPA for review.

X. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Impact to Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires federal agencies to ensure that any action authorized, funded, or carried out by the federal agency does not jeopardize the continued existence of a listed or candidate species, or result in the destruction or adverse modification of its habitat.

The Sacramento office of the U.S. Fish and Wildlife Service (USFWS) website generated an "Official Online Species List" of 15 threatened or endangered species that may be affected by activities in the Friant quadrant of California (in which the permittee is located). In 2009, EPA conducted a biological analysis and found that the discharge will have "no effect" on any of these listed species. Since that analysis was conducted, one species was added to the Friant quadrant: *Coccyzus americanus occidentalis* ("Western yellow-billed cuckoo"). The cuckoo's current status according to U.S. Fish and Wildlife's Species Profile identifies it as "Not Listed."

Since the newly proposed permit is consistent with the requirements of the previous permit and there are no newly-listed endangered species in the vicinity of the outfall, EPA finds that the discharge will have "no effect" on any listed species.

During the public notice period, EPA emailed a copy of the draft permit and fact sheet to USFWS for review and received no comments.

B. Impact to National Historic Properties

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effect of their undertakings on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. Pursuant to the NHPA and 36 CFR 800.3(a)(1), EPA is making a determination that issuing this NPDES permit does not have the potential to affect any historic properties or cultural properties. As a result, Section 106 does not require EPA to undertake additional consulting on this permit issuance.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR 122 and 124, this permit may be modified by EPA to include effluent limits, monitoring, or other conditions to implement new regulations, including EPA-approved water quality standards; or to address new information indicating the presence of effluent toxicity or the reasonable potential for the discharge to cause or contribute to exceedances of water quality standards.

B. Standard Provisions

The permit requires the permittee to comply with EPA Region IX Standard Federal NPDES Permit Conditions, dated July 1, 2001.

XII. ADMINISTRATIVE INFORMATION

A. Public Notice (40 CFR 124.10)

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.

B. Public Comment Period (40 CFR 124.10)

Notice of the draft permit will be placed in a daily or weekly newspaper within the area affected by the facility or activity, with a minimum of 30 days provided 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.

C. Public Hearing (40 CFR 124.12(c))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if EPA determines there is a significant amount of interest expressed during the 30-day public comment period or when it is necessary to clarify the issues involved in the permit decision.

XIII. CONTACT INFORMATION

Comments, submittals, and additional information relating to this proposal may be directed to:

Jamie Marincola, (415) 972-3520
Marincola.JamesPaul@epa.gov

EPA Region IX
75 Hawthorne Street (WTR-2-3)
San Francisco, California 94105

XIV. REFERENCES

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