NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET
October 2022

Permittee Name and Address:	Cameron Trading Post P.O. Box 339 Cameron, Arizona 86020
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Facility Address:	Cameron Trading Post Wastewater Treatment Plant 466 US-89 (54 miles north of Flagstaff on Hwy 89) Cameron, Arizona 86020
Facility Contact:	Josh Atkinson, General Manager (800) 338-7385; joshalden@msn.com
NPDES Permit No.:	NN0021610

I. STATUS OF PERMIT

Cameron Trading Post (the "permittee") applied for the renewal of its National Pollutant Discharge Elimination System ("NPDES") permit to authorize the discharge of treated effluent from the Cameron Trading Post wastewater treatment facility ("WWTF") in Cameron, Arizona. The permittee applied for a permit renewal on March 3, 2022 and provided supplemental information on May 26, 2022. The facility is on private land surrounded by the Navajo Nation in an area called the Western Agency and therefore is considered Indian Country for purposes of the Clean Water Act ("CWA").

The Navajo Nation ("Tribe") is a federally recognized Indian tribe. Because the Navajo Nation EPA ("NNEPA") does not have primary regulatory responsibility for administering the NPDES permitting program, U.S. EPA Region 9 ("EPA") prepared the NPDES permit renewal and fact sheet pursuant to Section 402 of the CWA, which requires point source dischargers to control pollutants that are discharged to waters of the United States. The permit incorporates both federal standards and applicable tribal water quality requirements.

The permittee is currently under NPDES Permit (No. NN0021610) which became effective September 1, 2017, through midnight, August 31, 2022. The March 2022 application and May 2022 supplemental information were deemed complete and EPA issued an administrative continuance on June 23, 2022. Pursuant to 40 CFR § 122.6, the terms of the existing permit are administratively extended until the issuance of a new permit. This fact sheet is based on information provided by the applicant through its application, effluent discharge data, and applicable laws and regulations.

Pursuant to Section 402 of the CWA, EPA is proposing issuance of the NPDES permit renewal to the permittee for the discharge of treated domestic wastewater to the Little Colorado River segment within the Navajo Nation, a water of the United States.

II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

Table 1. Significant Changes to Previous Permit

Permit Condition	Previous Permit (2017 – 2022)	Re-issued permit (2022 – 2027)	Reason for change
DMR submittal	Hardcopy accepted for a portion of the permit period.	Require E-reporting (NetDMR)	EPA e-reporting Rule.
Biosolids report	Hardcopy accepted for a portion of the permit period.	Require E-reporting (NetDMR)	EPA e-reporting Rule.
BOD_5 and TSS mass effluent limits	Mass limits in kg/day	Mass limits in lbs/day	To be consistent with recent EPA Region 9 permits.
Copper monitoring and effluent limit	Monitoring required as part of priority pollutant scan.	Include an effluent limit and monitoring requirement for copper.	Reasonable potential exists for this constituent to exceed WQS.
Chronic Whole Effluent Toxicity (WET) testing requirements	None	Require annual WET testing.	The NNSWQS narrative objective for toxicity that requires that "All waters of the Navajo Nation shall be free of toxic pollutants from other than natural sources in amounts, concentrations, or combinations which affect the propagation of fish or which of toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food..."
Best Management Practices ("BMPs")	None	Incorporate standard BMPs language for small utilities.	Provision of 40 CFR § 122.44(k)(4)
Sanitary Sewer Overflow ("SSO")	None	Incorporate standard SSO language for small utilities.	To be consistent with EPA Region 9 policy and recent permits.

III. GENERAL DESCRIPTION OF FACILITY

Cameron Trading Post is a historical site and travel rest stop that consists of a gas station, a post office, restaurant, store, lodge, and mobile home park located off of Highway 89 in Cameron, about 54 miles north of Flagstaff, Coconino County, Arizona. Domestic wastewater from these buildings is treated by an onsite activated sludge wastewater treatment plant ("WWTP"). The WWTF is located on private land that is surrounded by the Navajo Nation with a discharge outfall at latitude 35° 52' 33.34" North and longitude 111° 24' 39.35" West (Township 29N, Range 9E, Section 22). The facility services a full-time population equivalent of 660 people and receives only domestic sewage with a design flow rate of 0.066 million gallons per day

("MGD"). Peak flows reportedly occur during the busy tourist season in July and August. A lower flow capacity basis of 0.054 MGD was used in determining the permit limits in 2001, 2007, 2012, and 2017 permits. The 2022 permit application (Table A) indicated a maximum daily discharge of 0.0288 MGD. For consistency purposes, EPA continues to apply the 0.054 MGD design flow for this permit cycle.

Figure 1. WWTF Satellite View

The WWTP comprises of three (3) activated sludge aeration tanks, two (2) sludge holding tanks, three (3) sludge drying beds, two (2) sand filter units, two (2) drying beds for turning semi-solid to solid sludge, and six (6) ultraviolet (UV) light disinfection units. Wastewater enters the WWTP through a manual bar screen that separates solids from the influent. The flow goes through an influent Parshall flume then to a splitter box that sends flow to the aeration tanks, each connected to a corresponding secondary clarifier and digester. Two activated sludge tanks have a capacity of 18,000 gallons while the third tank has a capacity of 30,000 gallons. Clarifiers are skimmed manually by turning a knob which lowers a bin to suck in floating waste. Secondary treated effluent flows off two sides of Clarifiers #1 and #2 with uneven weirs allowing effluent to flow off only the lower edge of each side, while the higher edge appeared dry. Clarifier #3 had V-notch weirs, providing for even flow distribution off the weirs.

Effluent from Clarifiers #1 and #2 are combined in an equalization tank which flows to Sand Filter Unit #1 while flow from Clarifier 3 is sent to Sand Filter Unit #2. Streams from the two sand filters flow separately into two sets of three UV disinfection units operating in series. Chlorination is a backup option in case of prolonged UV failure or power failure. After UV

disinfection, the two waste streams are merged prior to discharge to the Little Colorado River. Compliance sampling for outfall 001 is conducted prior to this mixing.

Solids are removed by the manual bar screen at the influent Parshall flume, from the oxidation tanks, and from the sand filters.

Biosolids Handling

Solids from the 3 clarifiers are sent to their respective digesters. Digesters #1 and #2 are stand-alone units set into the ground while Digester #3 is attached to the package treatment unit with activated sludge tank and Clarifier #3. Liquid leachate coming off the drying beds is sent back to the headworks. Solids are then placed in drying beds onsite before being disposed of at the Cinder Lake landfill or the Wildcat Wastewater Reclamation Facility in Flagstaff.

IV. DESCRIPTION OF RECEIVING WATER

The discharge outfall is located approximately one third of a mile downstream of the WWTF where treated effluent flows approximately 200 feet before its confluence with the Little Colorado River segment within the Navajo Nation, which is a water of the United States. The discharge is steady and creates a consistent stream in an otherwise dry wash on the side of the riverbank. Although the outfall is somewhat secluded, evidence of animal and livestock activity was present in the vicinity of the discharge.

V. DESCRIPTION OF DISCHARGE

A. Application Discharge Data

Table 2 shows data related to discharge from Outfall 001 based on the permittee's NPDES renewal application and supplemental data. Pollutants believed to be absent or never detected in the effluent are not included.

Table 2. Application Discharge Data

Pollutant Parameter	Units	Discharge Data		Number of Samples
		Max Daily Discharge	Average Daily Discharge	
Flow	MGD	0.0288	0.0195	60
Biochemical oxygen demand, 5-day (BOD_5)	mg/L	4	n/a	60
	kg/d	n/a	0.042 kg/d	60
pH	S.U.	6.74 to 8.12		1
Temperature (winter)	°C	7.5		30
Temperature (summer)	°C	26.8		30
Fecal Coliform	CFU	14.8	<1	60
Total Suspended Solids (TSS)	mg/L	4	0.056 kg/d	60
Ammonia (as N)	mg/L	19.05	0.97	60
Chlorine, total residual (TRC)	mg/L	0	0	60
Total Dissolved Solids (TDS)	mg/L	3366	1926	18
Copper, total recoverable*	mg/L	52.7	52.7	1
Total phenolic compounds*	ug/L	94.1	94.1	1

*From the permittee's NPDES permit application and/or supplemental information.

B. Recent Discharge Monitoring Report Data (2017-2022)

Table 3 shows data related to discharge from Outfall 001 based on permittee's discharge monitoring reports ("DMRs") from April 2017 to April 2022. Additional information is available on Enforcement and Compliance History Online ("ECHO") at https://echo.epa.gov/detailed-facility-report?fid=NN0021610. Pollutants believed to be absent or never detected in the effluent are not included in the table.

Table 3. Effluent Data for Outfall 001 from April 2017- April 2022
Based on 0.054 MGD Design Flow

Parameters	Units	Permit Effluent Limitations			Effluent Data			
		Average Monthly	Average Weekly	Max Daily	Highest Average Monthly	Highest Average Weekly	Highest Maximum Daily	Monitoring Frequency
Flow Rate	MGD	-- (1)	--	-- (1)	0.045 (07/2017)	--	0.045 (07/2017)	Monthly
Ammonia (as N)	mg/L	-- (1)	--	-- (1)	47.82 (05/2020)	--	47.82 (05/2020)	Monthly
Ammonia Impact Ratio (AIR)	Ratio	1.0 (2)	--	1.0 (2)	19.05 (05/2020)	--	--	Monthly
Biochemical Oxygen Demand 5-day (BOD_5)	mg/L	30	45	--	8.0 (01/2019)	8.0 (01/2019)	--	Monthly
	kg/day	6.08	9.13	18.25	0.2778 (01/2019)	0.436 (01/2019)	--	
	% Removal	>85 % minimum (4)			lowest = 97.3% (01/2019)			
Total Suspended Solids (TSS)	mg/L	30	45	--	9 (10/2019)	9 (10/2019)	--	Monthly
	kg/day	6.08	9.13	18.25	1.062 (05/2017)	1.062 (05/2017)	--	
	% Removal	>85 % minimum (3)			lowest = 81.25% (10/2019)			
Chlorine, total residual (TRC)	µg/L	5	--	11.0	--	--	N/A (4)	Monthly
TDS	mg/L	--	--	--	--	--	3366 (12/2017)	Quarterly
TDS (intake public water)	mg/L	--	--	--	--	--	3415 (12/2017)	Quarterly
E. coli	CFU/ 100mL	126	--	235	14.8 (10/2019)	--	14.8 (10/2019)	Monthly
pH	S.U.	6.5 to 9.0 (min-max)			6.74 (03/2022) – 8.12 (03/20122)			Monthly
Temperature	°C	-- (1)	--	-- (1)	7.5 °C (01/2021)		26.8 °F (07/2021)	Monthly
	°F (pre-Feb 2019)	-- (1)	--	-- (1)	50.7 °F (01/2018)		80.4 °F (07/2018)	

FOOTNOTES:
(1) No effluent limits were set but monitoring and reporting were required.
(2) When monitoring for total Ammonia (as Nitrogen), pH monitoring must be concurrent. The Ammonia Impact Ratio (AIR) is calculated as the ratio of the Ammonia value in the effluent and the applicable ammonia standard from the chronic equation in the Tribal Water Quality Standards. See Attachment E for a sample log to help calculate and record the AIR values. The AIR is the ammonia effluent limit and must be reported in the DMRs in addition to the Ammonia-N and pH effluent values.

(3) Both the influent and the effluent shall be monitored. The arithmetic means of the BOD_5 and TSS values, by concentration, for effluent samples collected over a calendar month shall not exceed 15 percent of the arithmetic mean, by concentration, for influent samples collected at approximately the same times during the same period (i.e. minimum of 85% BOD_5 removal; minimum of 85% TSS removal).
(4) Facility mainly uses UV disinfection, with chlorination as a backup option.

VI. DETERMINATION OF NUMERICAL EFFLUENT LIMITATIONS

EPA 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,") and the water quality standards applicable to the downstream receiving water (e.g., "water quality-based effluent limits"). EPA has established the most stringent of applicable technology-based or water quality-based effluent limitations in the permit, as described below.

A. Applicable Technology-Based Effluent Limitations

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 CWA. The minimum levels of effluent quality attainable by secondary treatment for BOD_5, TSS, and pH, as defined in 40 CFR § 133.102(a) and listed below. Mass limits, as required by 40 CFR § 122.45(f), are included for BOD_5 and TSS. (Note: Mass limit calculations have been changed from kilograms per day to pounds per day, to be consistent with other EPA Region 9 permits.)

BOD_5 and TSS:

Concentration-based Limits

30-day average: 30 mg/L
7-day average: 45 mg/L
Minimum of 85% Removal Efficiency

Mass-based Limits

30-day average:

$$0.054 \frac{MG}{day} \times 30 \frac{mg}{l} \times 8.345 \frac{lb/MG}{mg/l} = 13.5 \text{ lbs per day}$$

7-day average:

$$0.054 \frac{MG}{day} \times 45 \frac{mg}{l} \times 8.345 \frac{lb/MG}{mg/l} = 20.3 \text{ lbs per day}$$

pH:

Instantaneous Measurement: 6.5 – 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 CWA, 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 discharger) (40 CFR § 125.3(c)(2)).

B. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations (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 EPA's *Technical Support Document for Water Quality-Based Toxics Control* (hereinafter, "TSD") (Office of Water, U.S. EPA, March 1991) and the *U.S. EPA NPDES Permit Writers' Manual* (Office of Water, U.S. EPA, September 2010). 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 for a Reasonable Potential Analysis

1. Applicable Standards, Designated Uses and Impairments of Receiving Water

In order to protect the designated uses of surface waters, the Tribe has developed Navajo Nation Surface Water Quality Standards ("NNSWQS") for different stream segments, depending on the level of protection required. EPA approved the 1999 NNSWQS on March 23, 2006. The NNSWQS were later revised in 2007 and approved by EPA on March 26, 2009. EPA partially approved the 2015 NNSWQS revisions on October 5, 2020, effective March 17, 2021. The approved 2015 NNSWQS revisions will be used on a best professional judgment ("BPJ") basis for purposes of developing water quality based effluent limitations. The requirements contained in the proposed permit are necessary to prevent violations of applicable water quality standards.

The following beneficial uses are designated for Little Colorado River--perennial and intermittent reaches, as listed in Table 206.1 (page 31) of the NNSWQS:

- **PrHC** – Primary Human Contact
- **ScHC** – Secondary Human Contact
- **AgWS** – Agriculture Water Supply
- **A&W**– Aquatic & Wildlife
- **FC** – Fish Consumption
- **LW** – Livestock Watering

The following water quality criteria from the NNSWQS are applied as effluent limitations:

E. coli: 126 MPN/100 mL (geometric mean, minimum four samples in 30 days)
235 MPN/100 mL (single sample maximum)

pH: 6.5-9.0 (2015 NNSWQS **PrHC** beneficial use)
Ammonia: Based on Attachment C of the permit (Table 207.20 from the 2015 NNSWQS)
AIR: AIR (Ammonia Impact Ratio) ≤ 1. NNSWQS do not have AIR criteria, but the ammonia limit is expressed as AIR. An AIR of less than or equal to 1 meets the NNSWQS Ammonia criteria.
TRC: 11 µg/l (2015 NNSWQS **A&W** beneficial use). Ultraviolet is the primary use for effluent disinfection with chlorination as a backup during prolonged UV failure or power failure. If chlorine is used then dechlorination is also necessary prior to discharge.

The waterbodies potentially affected by discharge from this facility are not listed as impaired according to CWA Section 303(d) List of Water Quality Limited Segments. Therefore, no TMDLs are applicable to permittee's discharge.

2. Dilution in the Receiving Water

Discharge Outfall 001 is to the Little Colorado River, which may have no natural flow during certain times of the year. Therefore, no dilution of the 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 treated and untreated domestic wastewater include ammonia, nitrate, oxygen demand, pathogens, temperature, pH, oil & grease, turbidity and solids. Chlorine should not be a concern when UV disinfection is in use and fully operational. The SIC code for this facility is 4952 (Sewerage Systems).

4. Compliance History and Toxic Impacts

Review of the discharge monitoring reports (DMRs) from April 1, 2017, to May 22, 2022, shows that the facility achieves consistent compliance with the NPDES permit limits, except for an exceedance of total nitrogen ammonia, as measured by the Ammonia Impact Ratio permit limit, and one incident of less than 85% removal efficiency in TSS. EPA notes several instances of late reporting.

EPA and NNEPA conducted a joint NPDES compliance evaluation inspection on August 16, 2021 and made the following observations: (1) The facility experienced a spike in total nitrogen ammonia in May 2020 during the COVID-19 pandemic closure from March 21, 2020, to August 2020. The facility operator explained that during these periods of closure, the only wastewater that the WWTP received was from the RV park and employee housing, extremely low flow that may hinder the activated sludge and kill off the biological process at the plant. (2) An asset management plan was not submitted on a timely basis as required by the permit. The facility has provided the plan in response to the request. And, (3) EPA noted the discharge outfall was a submerged pipe in the floodplain of the Little Colorado River. The outfall pipe is approximately half a mile in length with no manholes and has not had an assessment of its condition, so it is unknown if any repairs or preventative maintenance have ever been done.

5. Existing Data on Toxic Pollutants for a Reasonable Potential Analysis

For pollutants with effluent data available, EPA conducted a reasonable potential analysis based on statistical procedures outlined in EPA's *Technical support Document for Water Quality-*

based Toxics Control (TSD). These statistical procedures result in the calculation of the projected maximum effluent concentrations based on monitoring data to account for effluent variability and a limited data set. The projected maximum effluent concentrations were estimated assuming an effluent coefficient of variation of 0.6 for pollutants and the confidence interval of the 99th percentile, based on an assumed lognormal distribution of daily effluent values (see Sections 3.3.2 and 5.5.2 of EPA's TSD). EPA calculated the projected maximum effluent concentration for each pollutant using the following equation:

$$\text{Projected maximum concentration} = C_e \times \textit{reasonable potential multiplier factor}$$

where "C_e" is the reported maximum effluent value, and the multiplier factor is obtained from Table 3-1 of the TSD.

Table 4. Summary of Reasonable Potential Statistical Analysis

Pollutant Parameter (1)	Maximum Observed Effluent Concentration	*n*	RP Multiplier	Projected Maximum Effluent Concentration	Most Stringent Water Quality Criterion	Statistical Reasonable Potential?
Ammonia (as N)	47.82 mg/L	55	2.3	109.99 mg/L	0.3 to 4.9 mg/L for chronic (2) (3)	Yes
AIR	19.05	55	2.3	43.82	1	Yes
Copper, total recoverable	52.7 µg/L	1	13.2	695.64 µg/L	17.6 µg/L (4)	Yes
E. Coli	14.8 CFU/ 100mL	55	2.3	34.04	126(5)	No
TRC	< 1.0 µg/L	55	2.3	< 2.3 µg/L	11.0 µg/L	No

FOOTNOTES:
(1) For purposes of RP analysis, parameters measured as Non-Detect are considered to be zero. Only detected pollutants are included in this analysis.
(2) Based on Attachment C of the permit (Table 207.20 from the 2015 NNSWQS).
(3) EPA's Guidance for *Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater 2013* recommends using acute and chronic criteria dependent on pH and temperature.
(4) The applicable NNSWQS for hardness-dependent metals are based on an assumed hardness value of 220 mg/L.
(5) Geometric mean of samples collected for *E. Coli.*

C. Rationale for Numeric Effluent Limits and Monitoring

EPA evaluated pollutants expected to be present in the effluent and selected the most stringent of applicable technology-based effluent limits 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. Effluent limits are explained below and summarized in Table 5.

Flow:

No limits have been established for flow, but flow rates must be monitored and reported. Continuous monitoring is required for flow when discharging at Outfall 001.

BOD_5 and TSS:

EPA retains the more stringent effluent limits for BOD_5 and TSS, which are based on the technical capability of the secondary treatment process as defined by 40 CFR § 133.105(a) and (b). Mass limits are also required for BOD_5 and TSS under 40 CFR § 122.45(f). Based on the 0.054 MGD design flow, the mass-based limits are included in the permit. Monitoring is required monthly.

E. coli:

Presence of pathogens in untreated and treated domestic wastewater indicates that E. coli bacteria exists in the effluent. Although the statistical analysis did not show a numerical reasonable potential, *E. Coli* is a common pathogen in wastewater effluent, and there is reasonable potential to exceed NNSWQS based on the type of facility. The limits will continue to maintain protection of water quality and are based on the NNSWQS for protection of **PrHC** (page 20). As required by the permit, the monthly geometric mean of *E. coli* bacteria must not exceed 126/100 ml as a monthly average and 235/100 ml as a single sample maximum. The monitoring frequency is once per month, consistent with the previous permit.

Total Residual Chorine ("TRC"):

No reasonable potential exists for TRC as UV light is being used for effluent disinfection purposes with chlorination as a backup option. Therefore, regulating TRC is superfluous, and EPA is removing the previous TRC effluent limit consistent with the anti-backsliding exception related to material and substantial alternations or additions to the permitted facility. See section D below.

Total Dissolved Solids ("TDS"):

TDS is an indicator parameter for salinity. Monitoring data showed the presence of solids in untreated and treated domestic wastewater in the effluent. While the NNSWQS do not include criteria for TDS, the regulations at 40 CFR §122.44(i) allow requirements for monitoring as determined to be necessary. No limits are set at this time. The monitoring frequency is quarterly, consistent with the previous permit.

Ammonia and Ammonia Impact Ratio ("AIR"):

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 the biological denitrification process. Due to the potential for ammonia to be present in sanitary wastewater at toxic levels, the establishment of reasonable potential for ammonia levels to cause an excursion above water quality standards, and due to the conversion of ammonia to nitrate, effluent limitations using the AIR are carried over from the previous permit.

AIR is determined by the concurrent measurement of ammonia concentration, pH and temperature. AIR is calculated by dividing the ammonia concentration in the effluent by the applicable ammonia criteria as described in Attachment D of the permit. The NNSWQS for Ammonia in freshwater for protection of **A&W** are listed in Table 207.21 (page 68) of the 2015 NNSWQS and listed in Attachment C of the permit. The ammonia criteria are pH and temperature-dependent; therefore, pH, temperature, and ammonia sampling must be concurrent. A sample log to help calculate and record the AIR values can be found in Attachment D of the

permit. The AIR effluent limitation value is 1.0, carried over from the previous permit.

The permittee also must monitor and report ammonia effluent values in addition to the AIR value. AIR provides more flexibility than a specific, fixed effluent concentration and is protective of water quality standards since the value is set relative to the water quality standard, with consideration of dilution. If the reported value exceeds the AIR limitation, then the effluent ammonia-N concentration exceeded the ammonia water quality criterion. Any AIR value in excess of 1.0 will indicate an exceedance of the permit limit.

pH:

Untreated and treated domestic wastewater could be contaminated with substances that affect pH, which indicates reasonable potential for pH levels in the effluent to cause or contribute to an excursion above the WQS. To ensure adequate protection of beneficial uses of the receiving water, a minimum pH limit of 6.5 and a maximum limit of 9.0 S.U. are established in Section 207.C of the 2015 NNSWQS (page 20). The permit limit is carried over from the previous permit, and the monitoring frequency is once per month. Measurements for pH are required to be taken concurrently with ammonia and temperature measurements.

Temperature:

To support the Navajo Nation's established Ammonia standards and their dependence on temperature, monthly temperature monitoring is to be performed concurrently with ammonia and pH measurements.

Copper:

To conduct the reasonable potential analysis, EPA compared the most stringent, applicable water quality standard to the projected maximum expected value in the discharge in accordance with EPA's TSD. As shown in Table 4 above, there is reasonable potential for copper in the effluent to cause or contribute to exceedances above the applicable water quality criteria.

The NNSWQS includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. (See Tables 207.8 and 207.8, pages 56-57 of the NNSWQS). Using an assumed effluent hardness reading of 220 mg/L and default dissolved-to-total metal translators, EPA calculated the Criterion Maximum Concentration ("CMC") and Criterion Continuous Concentration ("CCC") for copper as shown below:

$$CMC = [e^{(0.9422\,[\ln(220)] - 1.700)}] \times 0.960 = 28.25\ \mu g/L$$

$$CCC = [e^{(0.8545\,[\ln(220)] - 1.702)}] \times 0.960 = 17.57\ \mu g/L$$

Monitoring of copper has been included in the priority pollutant scan. However, because copper monitoring was conducted by the permittee only once during the previous permit cycle, there was not sufficient data to calculate representative geometric means from multiple data points to evaluate compliance with the applicable water quality standards. Therefore, the draft permit establishes a new effluent limit and annual monitoring requirement for copper.

Whole Effluent Toxicity (WET):

The NNSWQS includes a narrative objective for toxicity that requires that "All

waters of the Navajo Nation shall be free of toxic pollutants from other than natural sources in amounts, concentrations, or combinations which affect the propagation of fish or which of toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food..."

In order to evaluate the secondary effects of discharged nutrients, and to comply with the NNSWQS for a designated use of **A&W**, a minimum standard for chronic toxicity has been incorporated into the permit. Testing for chronic WET must be completed in accordance with Part II, Section C of the permit. The draft permit includes monitoring requirements for chronic WET to be conducted **annually** using a 24-hour composite sample of the treated effluent for Fathead minnow *(Pimephales promelas)* and Daphnid *(Ceriodaphnia dubia).* Testing must be conducted concurrent with the priority pollutant scan. This is a new requirement.

Priority Pollutant Scan:

The draft permit includes a monitoring requirement for the full list of priority pollutants as listed in 40 CFR Part 423, Appendix A during the first quarter of Year 5 of the permit cycle. Monitoring must be performed concurrently with WET testing. No limit is set at this time.

Table 5. Discharge Limitations—Outfall Number 001

Effluent Parameter	Units	Monthly Average	Weekly Average	Daily Maximum	Monitoring Frequency (2)	Sample Type
Flow	MGD	--(1)	--	--(1)	Monthly	Instantaneous
BOD_5 (3)	mg/L	30	45	--	Monthly	Composite
	lbs/day	13.5	20.3	--		
	%	≥ 85 percent removal efficiency				
TSS (3)	mg/L	30	45	--	Monthly	Composite
	lbs/day	13.5	20.3	--		
	% Removal	≥ 85 percent removal efficiency				
E. coli	CFU/100 ml	126 (4)	--	235 (5)	Monthly	Grab
Solids, total dissolved (6)	mg/L	--(1)	--	--(1)	Quarterly	Grab
Copper, total recoverable	µg/L	--	--	17.6	Annually	Grab
Ammonia, total (7)	mg/L	--(8)	--	--(8)	Monthly	Grab
AIR (7)	--	1.0	--	--	Monthly	Grab
pH (7)	std. units	between 6.5 to 9.0			Monthly	Grab
Temperature (7)	deg °C	--	--	--	Monthly	Grab
Priority Pollutant Scan (8)	µg/L	--	--	--(1)	1st Quarter of Year 5	24-hr Composite

FOOTNOTES:
'MGD' indicates units of Million Gallons per Day; 'CFU' is Colony Forming Units.

(1) No effluent limits are set at this time but monitoring and reporting is required.

(2) At minimum, at least one sample per year must be taken concurrent with annual whole effluent toxicity monitoring.

(3) Both the influent and the effluent shall be monitored and reported. The average monthly effluent concentration of BOD_5 and TSS must not exceed 15 percent of the average monthly influent concentration collected at the same time. The mass limits are calculated based upon the 0.054 MGD design flow.

(4) Geometric mean of samples collected during the calendar month.
(5) Single sample maximum.
(6) Both the plant influent and effluent flows (Outfall Number 001) shall be sampled and reported. The incremental increase is the difference between the two sample analyses. Salinity ("TDS") is determined by the "calculation method" (sum of constituents) as described in the latest edition of "Techniques of Water Resources Investigations of the United States Geological Survey-Methods for Collection and Analysis of Water Samples for Dissolved Minerals and Gases."
(7) Table 207.21 in the NNSWQS defines water quality standards for total ammonia (in mg-N/liter). (See Attachment C in this permit). The criteria for ammonia are pH- and temperature-dependent; therefore, field measurements for ammonia, pH, and temperature shall be taken concurrently and reported on the Ammonia Impact Ratio ("AIR") worksheet. (See Attachment D of the permit).
(8) Priority Pollutants: During the first quarter of Year 5 in the permit cycle, the permittee must monitor for the full list of priority pollutants set forth in 40 CFR Part 423, Appendix A. See Attachment E of the permit for the list. No limit is set at this time, other than for those parameters identified in this table.

D. Anti-Backsliding

CWA § 402(o) and § 303(d)(4) and 40 CFR § 122.44(l)(1) prohibit the renewal or reissuance of an NPDES permit that contains effluent limits and permit conditions less stringent than those established in the previous permit, except as provided in the statute and regulation. The permit limits are equal to or more stringent than those in the previous permit.

The permit removes the effluent limit for total residual chlorine (TRC) as ultraviolet (UV) is the primary use for effluent disinfection with no chlorination in use at the facility. All other effluent limits are retained from the prior permit to this permit.

The permit establishes less stringent technology-based effluent limitations for TRC. This is based on new information (effluent monitoring results) gathered over the course of the prior permit timeframe and analysis shows there is no reasonable potential for TRC; this is consistent with CWA Section 303(d)(4) so there is no backsliding.

E. Antidegradation Policy

EPA's antidegradation policy under CWA § 303(d)(4) and 40 CFR § 131.12, and the NNSWQS require that existing water uses and the level of water quality necessary to protect the existing uses be maintained. Permit limits are equal or more stringent than those in the previous permit; accordingly, the discharge is not expected to adversely affect receiving waterbodies or result in any degradation of water quality. The receiving water is not listed as an impaired waterbody under CWA § 303(d)(4) and 40 CFR § 131.12.

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, so these limits will apply at the end of pipe without consideration of dilution in the receiving water. A priority pollutant scan has been conducted of the effluent, demonstrating that most pollutants will be discharged below detection levels. While the permit only establishes limits for copper and does not establish limits for the remaining parameters in the priority pollutant scan, the permittee is required to monitor for the full list of priority pollutants as listed at 40 CFR Part 423, Appendix A. Thus, due to the low levels of toxic pollutants present in the effluent, and inclusion of water quality-based effluent limitations where needed, the discharge is not expected to adversely affect receiving water bodies or result in any degradation of water quality.

VII. NARRATIVE WATER QUALITY-BASED EFFLUENT LIMITS

The approved 2015 NNSWQS revisions contain narrative water quality standards for pollutants applicable to the receiving water. Thus, the permit incorporates applicable narrative water quality standards. Pursuant to the narrative surface water quality standards (Section 203 of the 2015 NNSWQS), the discharge shall be free from pollutants in amounts or combinations that cause solids, oil, grease, foam, scum, or any other form of objectionable floating debris on the surface of the water body; may cause a film or iridescent appearance on the surface of the water body; or that may cause a deposit on a shoreline, on a bank, or on aquatic vegetation.

VIII. MONITORING AND REPORTING REQUIREMENTS

The permit requires the permittee to conduct monitoring for all pollutants or parameters in Table 5, at the minimum frequency specified. Additionally, where effluent concentrations of pollutant parameters are unknown or where data are insufficient to determine reasonable potential, monitoring may be required for pollutant parameters where effluent limits have not been established.

A. Influent and Effluent Monitoring and Reporting

The permit requires influent and effluent monitoring to evaluate compliance with the 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 Part 136, unless otherwise specified in the permit. All monitoring data shall be reported on monthly Discharge Monitoring Reports ("DMRs") monthly, as specified in the permit, using the electronic reporting tools (NetDMR) provided by EPA Region 9.

B. Priority Toxic Pollutants Scan

A priority toxic pollutants scan must be conducted at least once during the first quarter of Year 5 of the permit cycle to ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. The permittee must conduct the priority pollutants scan concurrent with a quarterly whole effluent toxicity testing. Permit Attachment E provides a complete list of Priority Toxic Pollutants, including identifying the volatile compounds that should be collected via grab sample procedures. The permittee must 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 Part 136, unless otherwise specified in the permit or by EPA. This is consistent with Priority pollutants listed in 40 CFR § 131.36.

C. Whole Effluent Toxicity (WET) Requirements

Aquatic life is a public resource protected in surface waters covered by the CWA. As evidence that CWA requirements protecting aquatic life from toxicity are met in surface waters receiving the NPDES discharge, samples are collected from the effluent and tested for toxicity in a laboratory using EPA's WET methods. These aquatic toxicity test results are used to determine if the NPDES effluent causes toxicity to aquatic organisms. Toxicity testing is important because for scores of individual chemicals and compounds, chemical-specific environmentally protective levels for toxicity to aquatic life have not been developed or set as water quality standards. These chemicals and compounds can eventually make their way into effluents and their receiving

surface waters. When this happens, toxicity tests of effluents can demonstrate toxicity due to present, but unknown, toxicants (including possible synergistic and additive effects), signaling a water quality problem for aquatic life.

EPA's WET methods are systematically designed instructions for laboratory experiments that expose sensitive life stages of a test species (e.g., fish, invertebrate, algae) to both an NPDES effluent sample and a negative control sample. During the toxicity test, each exposed test organism can show a difference in biological response; some will be undesirable differences. Examples of undesirable biological responses include, but are not limited to, eggs not fertilized, early life stages that grow too slowly or abnormally, or death. At the end of a toxicity test, the different biological responses of the organisms in the effluent group and the organisms in the control group are summarized using common descriptive statistics (e.g., means, standard deviations, coefficients of variation). The effluent and control groups are then compared using an applicable inferential statistical approach (i.e., hypothesis testing or point estimate model) chosen by the permitting authority and specified in the NPDES permit. The chosen statistical approach is compatible with both the experimental design of the WET method and the applicable toxicity water quality standard. Based on this statistical comparison, a toxicity test will demonstrate that the effluent is either toxic or not toxic, in relation to the permit's toxicity level for the effluent, which is set to protect the quality of surface waters receiving the NPDES discharge. EPA's WET methods are specified under 40 CFR Part 136 and/or in applicable water quality standards.

EPA recommends inferential statistical approaches that a permitting authority chooses from to set a protective level for toxicity in an NPDES discharge. The statistical approach chosen for this permit is based on bioequivalence hypothesis testing and is called the Test of Significant Toxicity (TST) statistical approach. It is described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document* (EPA 833-R-10-004, 2010; TST Technical Document) and Denton DL, Diamond J, and Zheng L. 2011.

Test of significant toxicity: A statistical application for assessing whether an effluent or site water is truly toxic. *Environ Toxicol Chem* 30:1117-1126. This statistical approach supports important choices made within a toxicity laboratory which favor quality data and EPA's intended levels for statistical power when true toxicity is statistically determined to be unacceptably high (≥ 25 PE, Percent (%) Effect), or acceptably low (< 10 PE). Example choices are practices supporting healthy test organisms, increasing the minimum recommended replication component of the WET method's experimental design (if needed), technician training, etc.

TST results do not often differ from other EPA-recommended statistical approaches using hypothesis testing (Diamond D, Denton D, Roberts J, Zheng L. 2013. *Evaluation of the Test of Significant Toxicity for determining the toxicity of effluents and ambient water samples-- Environ Toxicol Chem* 32:1101-1108). The TST maintains EPA's desired low false positive rate for WET methods—the probability of declaring toxicity when true toxicity is acceptably low ≤ 5%—when quality toxicity laboratories conduct toxicity tests (TST Technical Document; Fox JF, Denton DL, Diamond J, and Stuber R. 2019. *Comparison of false-positive rates of 2 hypothesis-test approaches in relation to laboratory toxicity test performance*. *Environ Toxicol Chem* 38:511-523). Note: The false positive rate is a long-run property for the toxicity laboratory conducting a WET method. A low false positive rate is indicted by a low long-run toxicity

laboratory control coefficent of variation for the test species/WET method, using a minimum of 30 to 50 toxicity tests.

In accordance with 40 CFR § 122.44(d)(1), reasonable potential for chronic toxicity has not been established. This is because no chronic toxicity test result is Fail (1) indicating unacceptable toxicity is not present in the effluent, and no associated PE (Percent (%) Effect) value is ≥ 10 indicating toxicity at a level higher than acceptable is present in the effluent (see Section 1.4 in TST Technical Document). Thus, no chronic toxicity WQBELs are required for the permitted discharge (40 CFR § 122.44(d)(1)). However, monitoring and reporting both the median monthly and maximum daily effluent results for the parameter of chronic toxicity are required, so that effluent toxicity can be assessed in relation to these WQBELs for the permitted discharge (see Part I, Table 2 in NPDES permit).

In accordance with 40 CFR § 122.44(d)(1)(ii), in setting the permit's levels for chronic toxicity and conditions for discharge, EPA is using a test species/chronic short-term WET method and a discharge Instream Waste Concentration ("IWC") representing conservative assumptions for effluent dilution necessary to protect receiving water quality. The IWC is a discharge-specific term based on the permit's authorized mixing zone or initial dilution. Generally, the dilution model result "S" from Visual Plumes/Cormix is used. S is the volumetric dilution factor, i.e. 1 volume effluent is diluted with S − 1 volumes surface water) = [(Ve + Va) / Ve]. Following the mass balance equation, if the dilution ratio D = Qs / Qe, then

$$[(Qe + Qs) / Qe] = 1 + D = S$$

For this discharge, S = 1 (i.e., no authorized dilution). The discharge-specific IWC = 1 to 1 dilution (1:1, 1/1) = 100% effluent. The IWC made by the toxicity laboratory is mixed as 1 part solute (i.e., effluent) to 0 parts dilutant (1: (1 – 1)) for a total of 1 part.

The TST's null hypothesis for chronic toxicity (H_o) is:

$$\text{IWC mean response (\% effluent)} \leq 0.75 \times \text{Control mean response}$$

The TST's alternative hypothesis (H_a) is:

$$\text{IWC mean response (\% effluent)} > 0.75 \times \text{Control mean response}$$

For this permit, results obtained from a single chronic toxicity test are analyzed using the TST statistical approach, where the required chronic toxicity IWC for Discharge Outfall Number 001 is 100% effluent.

For NPDES samples for toxicity testing, the sample hold time begins when the 24-hour composite sampling period is completed (or the last grab sample in a series of grab samples is taken) and ends at the first time of sample use (initiation of toxicity test). 40 CFR § 136.3(e)

states that the WET method's 36-hour hold time cannot be exceeded unless a variance of up to 72 hours is authorized by EPA.

Species sensitivity screening for chronic toxicity is not an automatic requirement in this permit. However, the permit retains a species sensitivity screening condition as an option for the permitting authority to exercise, particularly when the quality of the permitted discharge has changed, or is expected to change, during the permit term.

IX. SPECIAL CONDITIONS

A. Biosolids

Standard requirements for the monitoring, reporting, recordkeeping, and handling of biosolids in accordance with 40 CFR Part 503 are incorporated into the permit. The permit includes, for dischargers who are required to submit biosolids annual reports, which include major POTWs that prepare sewage sludge and other facilities designated as "Class 1 sludge management facilities," electronic reporting requirements. The permittee shall submit a biosolids annual program report on EPA's Central Data Exchange (CDX) by February 19th of the following year. The permit includes a requirement for submitting a report 120 days prior to disposal of biosolids. Electronic submittals should be copied to R9NPDES@epa.gov. Biosolids reports should be submitted through CDX. (For more information, see Compliance and Annual Biosolids Reporting.)

B. 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 that exceeds 90 percent of the annual dry-weather design capacity of the waste treatment and/or disposal facilities.

C. Development and Implementation of Best Management Practices

The permittee must develop and implement BMPs for pollution prevention. Pursuant to 40 CFR § 122.44(k)(4), EPA may impose Best Management Practices ("BMPs") "reasonably necessary…to carry out the purposes of the Act." The pollution prevention requirements or BMPs in the permit operate as technology-based limitations on effluent discharges that reflect the application of Best Available Technology and Best Control Technology. Thus, the permit requires that the permittee develop (and/or update) and implement a Pollution Prevention Plan with appropriate pollution prevention measures or BMPs designed to prevent pollutants from entering the receiving water while performing normal processing operations at the facility.

D. Asset Management

40 CFR § 122.41(e) requires permittees to properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. Asset management planning provides a framework for setting and operating quality assurance procedures and ensuring the permittee has sufficient financial and technical resources to continually maintain a targeted level of service. Asset management requirements have been established in the permit to ensure compliance with the provisions of 40 CFR § 122.41(e).

X. OTHER CONSIDERATIONS UNDER FEDERAL LAW

A. Consideration of Environmental Justice

EPA conducted a screening level evaluation of environmental justice ("EJ") vulnerabilities in the community posed to residents in the vicinity of the permitted facility using EPA's EJSCREEN tool (https://www.epa.gov/ejscreen). The purpose of the screening is to identify areas disproportionately burdened by pollutant loadings and to consider demographic characteristics of the population living near the discharge when drafting permit conditions.

On July 28, 2022, EPA conducted an EJSCREEN analysis of the community in a 5-mile radius of the vicinity of the outfall. Of the 12 environmental indicators screened through EJSCREEN, the evaluation determined elevated risk for the following factors:

Table 7. EJSCREEN Analysis – Cameron Trading Post WWTP

Cameron Trading Post WWTP

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
Environmental Justice Indexes			
EJ Index for Particulate Matter 2.5	73	55	77
EJ Index for Ozone	81	77	91
EJ Index for Diesel Particulate Matter*	58	41	63
EJ Index for Air Toxics Cancer Risk*	64	52	71
EJ Index for Air Toxics Respiratory HI*	63	49	69
EJ Index for Traffic Proximity	64	52	68
EJ Index for Lead Paint	76	56	71
EJ Index for Superfund Proximity	59	43	64
EJ Index for RMP Facility Proximity	56	38	60
EJ Index for Hazardous Waste Proximity	55	37	60
EJ Index for Underground Storage Tanks	62	47	63
EJ Index for Wastewater Discharge	69	61	84

The 5-mile radius covers the community of Cameron and outlying areas. The results, summarized in Table 7, suggest that many indicators have elevated risks as compared to the general population, though the indicator values are assigned in combination with demographic factors. For example, the population is almost entirely people of color, and many are considered low income. Air quality indices are influenced by the presence of both state and federal highways near or adjacent to the area. It is also possible that the presence of a former uranium mine outside of the community influences the indices.

As a result of the EJSCREEN analysis, EPA is aware of the environmental burdens facing the community. EPA considers the characteristics of the wastewater treatment facility operation and discharges and whether those discharges pose exposure risks that the NPDES permit needs to further address. EPA found no evidence to indicate the treatment facility discharge poses a significant risk to residents; the facility will not contribute additional degradation to the risk factors that were identified. Furthermore, EPA believes that by implementing and requiring compliance with the provisions of the Clean Water Act, which are designed to ensure full protection of human and aquatic health, as well as other beneficial uses of the receiving water, the permit is sufficient to ensure the effluent discharges do not cause or

contribute to human health risk in the vicinity of the facility. EPA is soliciting public comments on this permit and will consider any additional information that is provided during the public comment period. No comments were received during the public comment period.

B. 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 Information for Planning and Conservation ("IPaC") website for the U.S. Fish and Wildlife Service ("USFWS") Arizona office generated an Official Species list on August 11, 2022, which identifies all proposed (P), candidate (C), threatened (T) and endangered (E) species and critical habitat that may occur in the vicinity of the Cameron Trading Post WWTF discharge and the unnamed receiving water, a tributary to the Little Colorado River. (https://ipac.ecosphere.fws.gov/publicDocument/OHJHH5ZA4JCRZAKZJ2RKQZHOBQ). The listed species are provided in Table 8 below.

Table 8. Listed Species, Designated under the U.S. Endangered Species Act

Type	Common Name	Scientific Name	Status	Critical Habitat
Birds	California Condor	*Gymnogyps californianus*	E	No*
	Mexican Spotted Owl	*Strix occidentalis lucida*	T	No*
	Yellow-billed Cuckoo	*Coccyzus americanus*	T	No*
Reptile	Northern Mexican Gartersnake	*Thamnophis eques megalops*	T	No*
Insect	Monarch Butterfly	*Danaus plexippus*	C	No
Flowering Plants	Fickeisen Plains Cactus	*Pediocactus peeblesianus ssp. fickeiseniae*	E	No*

*These species have designated, proposed or final critical habitats but outside of the Action Area.

Action Area

The federal action is EPA's renewal of an existing NPDES permit. The Cameron Trading Post WWTF and its discharge outfall are established and there are no plans for new construction to expand the WWTF, nor new pipelines or hydrology alterations that will cause disruption of land or removal of habitat. The action area is defined as the wastewater treatment facility itself and includes the discharge area surrounding the outfall which is located approximately one third of a mile downstream of the WWTF where treated effluent flows approximately 200 feet before its confluence with the Little Colorado River segment within the Navajo Nation. Streamflow is steady and creates a consistent stream in an otherwise dry wash on the side of the riverbank, so the action area does not include the Little Colorado River. If, in the rare instance that the effluent is to be discharged during a precipitation event large enough to result in continuous flow from the outfall, it would be so heavily diluted during such times of high flow that it would have no effect on the waters of the Little Colorado River.

Listed Species Near the Action Area

Birds

The **California Condor** *(Gymnogyps californianus)* ranges throughout parts of California, Nevada, Colorado, Arizona, and Utah, although no known specific populations are known to occur in the action area (https://ecos.fws.gov/ecp/species/8193.) California Condors may use roosting sites on ridges, rocky outcrops, or steep canyons, and they forage for carrion, primarily in foothill grasslands and oak savanna habitats. (USFWS 2013). Stressors affecting California Condors include consumption of lead shot, predators, powerlines, starvation, consumption of micro-trash, fire, hunting, falls, and other isolated incidents (USFWS 2013). While California Condors may on occasion pass through the action area, the action area does not contain suitable sites for roosting or foraging. Periodic, short-term releases of water from the WWTF, including those authorized by this permit would not affect availability of carrion or otherwise contribute to stressors affecting California Condors. Therefore, EPA has determined that the action will have no effect on California Condors.

The **Mexican Spotted Owl** *(Strix occidentalis lucida)* is a resident of old-growth or mature forests that possess complex structural components (uneven aged stands, high canopy closure, multi-storied levels, high tree density) (https://ecos.fws.gov/ecp/species/8196.) Canyons with riparian or conifer communities are also important components. In southern Arizona and New Mexico, the mixed conifer, Madrean pine-oak, Arizona cypress, encinal oak woodlands, and associated riparian forests provide habitat in the small mountain ranges (Sky Islands) distributed across the landscape. Owls are also found in canyon habitat dominated by vertical-walled rocky cliffs within complex watersheds, including tributary side canyons. Rock walls with caves, ledges, and other areas provide protected nest and roost sites. Canyon habitat may include small isolated patches or stringers of forested vegetation including stands of mixed-conifer, ponderosa pine, pine-oak, pinyon-juniper, and/or riparian vegetation in which owls regularly roost and forage. Roosting and nesting habitats exhibit certain identifiable features, including large trees (those with a trunk diameter of 12 inches (in) (30.5 centimeters (cm)) or more (i.e., high tree basal area)), uneven aged tree stands, multi-storied canopy, a tree canopy creating shade over 40 percent or more of the ground (i.e., moderate to high canopy closure), and decadence in the form of downed logs and snags (standing dead trees). Canopy closure is typically greater than 40 percent. Owl foraging habitat includes a wide variety of forest conditions, canyon bottoms, cliff faces, tops of canyon rims, and riparian areas. The listed typical habitats of old-growth or mature forests, canyons with rock ledges, or large trees with a multi-storied canopy creating 40 percent shade are not present in the action area. Because the action area does not contain suitable habitat for the Mexican Spotted Owl and discharges would not affect owls merely flying over, EPA has determined that the action will not affect the Mexican Spotted Owl.

Critical habitat for the Mexican Spotted Owl was finalized on August 31, 2004 (69 FR 53182) in Arizona in Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Navajo, Pima, Pinal, Santa Cruz, and Yavapai counties. There is final critical habitat for this species but not near or within the action area. EPA has thus determined that its action will not affect final critical habitat for Mexican Spotted Owl.

The **Yellow-billed Cuckoo** *(Coccyzus americanus*) is a migratory bird species, traveling between its wintering grounds in Central and South America and its breeding grounds in North America (Continental U.S. and Mexico) each spring and fall often using river corridors as travel routes (https://ecos.fws.gov/ecp/species/3911). Habitat conditions through most of the Yellow-

billed Cuckoo's range are dynamic and may change within or between years depending on vegetation growth, tree regeneration, plant maturity, stream dynamics, and sediment movement and deposition. The Yellow-billed Cuckoo is known or believed to occur throughout most of Arizona and Utah, and in parts of New Mexico, Colorado, Idaho, Montana, Nevada, Texas, Wyoming, Oregon, and Washington. They are found in dense cover with water nearby, such as woodlands with low vegetation, overgrown orchards, and dense thickets along streams or marshes and riparian vegetation. Caterpillars are their primary food source, along with cicadas, katydids and crickets. They also forage on wild fruits in the summer, with seeds becoming a larger portion of their winter diet (https://ecos.fws.gov/ecp/species/3911). There is no dense cover or overgrown orchards in the action area. Because the action area contains no suitable habitat for Yellow-billed Cuckoo, EPA has determined that the action will not affect this species.

In February 2020, USFWS proposed 72 units of critical habitat for the Western Yellow-billed Cuckoo in the arid southwest. (See page 11477 of the following Federal Register notice: https://www.govinfo.gov/content/pkg/FR-2020-02-27/pdf/2020-02642.pdf). The action area does not fall into any of the 72 identified units proposed to be designated as critical habitat by the USFWS. EPA has thus determined that its action will not affect final critical habitat for the Yellow-billed Cuckoo.

Reptile

Northern Mexican Gartersnake *(Thamnophis eques megalops)* is considered a riparian obligate (restricted to riparian areas when not engaged in dispersal behavior) and occurs chiefly in the following general habitat types: (1) Source-area wetlands [e.g., cienegas (mid-elevation wetlands with highly organic, reducing (basic, or alkaline) soils), stock tanks (small earthen impoundment), etc.]; (2) large river riparian woodlands and forests; and (3) streamside gallery forests (as defined by well-developed broadleaf deciduous riparian forests with limited, if any, herbaceous ground cover or dense grass)(https://ecos.fws.gov/ecp/species/7655). The Northern Mexican Gartersnake occurs only in or adjacent to the lower reaches of the Little Colorado River. The action area does not contain suitable wetland or riparian habitat for the Northern Mexican Gartersnake. There is final critical habitat for this species but not near or within the action area. Therefore, EPA has determined that the action will not affect the Northern Mexican Garter Snake nor its critical habitat.

Insect

Monarch Butterfly *(Danaus plexippus)* (https://ecos.fws.gov/ecp/species/9743) is a candidate species and not yet listed or proposed for listing, (Endangered and Threatened Wildlife and Plants; 12-Month Finding for the Monarch Butterfly, December 17, 2020). Candidate species do not have statutory protection under the ESA, although USFWS encourages cooperative conservation efforts for these species. No critical habitat has been designated for this species by the USFWS.

Flowering Plants

Fickeisen plains cactus *(Pediocactus peeblesianus fickeiseniae)* is a small cactus, approximately three inches tall and 1.5 inch in diameter. When it blooms, flowers are small and cream, yellow, or yellowish green. The spines are corky, with the central spine around 3/8-inch long, ashy white, and pointed up. Tubercles form a spiral pattern around the plant. After flowering and fruiting, the cactus will retract into the gravely soils. (https://ecos.fws.gov/ecp/species/5484).

It is adapted to cold and drought, with roots that can retract into the soil during the cold or dry seasons or during drought, and the plants may be buried by soil litter or gravel, and they may remain buried for extended periods. USFWS completed a review of the Fickeisen plains cactus in 2020 (USFWS 2020), noting that it occurs on the west side of the Navajo Nation, between the western border of the Nation and the area immediately surrounding U.S. Highway 89 to the east. Fickeisen plains cactus occurs from Bitter Springs in the north to Cameron in the south (Talkington 2019, in USFWS 2020). The 2019 Navajo Nation census data (Talkington 2019, in FWS 2020) observed an increase in abundance from 2013 to 2019. Habitat for the Fickeisen plains cactus is restricted to exposed layers of Kaibab limestone on the Colorado Plateau. Plants are found in shallow, well-draining, gravelly loam soils formed from alluvium, colluvium, or aeolian deposits derived from limestone of the Harrisburg Member of the Kaibab formation and Toroweap formation; Coconino Sandstone; and the Moenkopi Formation, occurring primarily on the margins of canyon rims, flat terraces, limestone benches, or on the toe of well-drained hills, usually on gentle slopes. There is final critical habitat for the Fickeisen plains cactus, but not within or near the action area of discharge from the Cameron Trading Post wastewater treatment plant. Discharge from the facility would not affect the Fickesen plans cactus. Accordingly, EPA has determined that the action will not affect the Fickeisen plains cactus nor its critical habitat.

Conclusion

Considering the information available, EPA concludes that reissuance of this permit will not affect any of the above listed species. There are no designated critical habitats for the listed species within the action area according to the IPaC report. A copy of the draft fact sheet and permit will be forwarded to the Arizona Field Office of the USFWS for review and comment prior to and during the 30-day public review period. If, in the future, EPA obtains information or is provided information that indicates that there could be adverse impacts to federally listed species, EPA will contact the appropriate agency or agencies and initiate consultation, to ensure that such impacts are minimized or mitigated. In addition, re-opener clauses have been included should new information become available to indicate that the requirements of the permit need to be changed.

C. Migratory Bird Treaty Act and Bald Eagle Protection Act

The Migratory Bird Treaty Act ("MBT") (16 USC 703-712) protects migratory birds. Bald Eagle nests would be protected under the Bald Eagle Protection Act (Eagle Act) (16 USC 668 et seq.), which are not expected to be found near the facility.

D. Impact to Coastal Zones

The Coastal Zone Management Act ("CZMA") requires that Federal activities and licenses, including Federally permitted activities, must be consistent with an approved state Coastal Management Plan (CZMA §307(c)(1) through (3)). CZMA §307(c) and implementing regulations at 40 CFR §930 prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State (or Territory) Coastal Zone Management program, and the State (or Territory) or its designated agency concurs with the certification.

This permit does not affect land or water use in the coastal zone.

E. Impact to Essential Fish Habitat

The 1996 amendments to the Magnuson-Stevens Fishery Management and Conservation Act ("MSA") set forth new mandates for the National Marine Fisheries Service, regional fishery management councils and other federal agencies to identify and protect important marine and anadromous fish species and habitat. The MSA requires Federal agencies to determination whether Federal actions may adversely impact Essential Fish Habitat ("EFH").

The permit contains technology-based effluent limits and numerical and narrative water quality-based effluent limits as necessary for the protection of applicable aquatic life uses. The permit does not directly discharge to areas of essential fish habitat. Accordingly, EPA determined that the permit will not adversely affect EFH.

F. Impact to National Historic Properties

The National Historic Preservation Act ("NHPA") Section 106 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 has determined 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.

G. Water Quality Certification Requirements (40 CFR § 124.53 and § 124.54)

EPA can only issue the permit after the certifying Tribe has granted certification under 40 CFR § 124.55 or waived its right to certify. For this permit, the permittee is required to seek water quality certification (including paying applicable fees) that this permit will meet applicable water quality standards obtained water quality certification from the Navajo Nation EPA that this Permit will meet applicable water quality standards. Certification under section 401 of the CWA must be in writing and may include conditions necessary to assure compliance with referenced applicable provisions of Sections 208(e), 301, 302, 303, 306, and 307 of the CWA and appropriate requirements of Navajo Nation law. EPA cannot issue the permit until the NNEPA has granted certification under 40 CFR § 124.53 or waived its right to certify. NNEPA issued certification under CWA section 401 on September 27, 2022.

XI. STANDARD CONDITIONS

A. Reopener Provision

In accordance with 40 CFR Parts 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; or new permit conditions for species pursuant to ESA requirements.

B. Standard Provisions

The permit requires the permittee to comply with EPA Region 9 Standard Federal NPDES Permit Conditions.

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 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 and fact sheet was posted on the EPA website from August 26 to September 28, 2022, for a minimum of 30 days to allow 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 issued. Comments may be submitted until the close of the public comment period to Tran.Linh@epa.gov. There were no comments received during the comment period.

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

A public hearing may be requested in writing by any interested party during the public comment period. 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 and additional information relating to this proposal may be directed to:

Linh Tran
(415) 972-3511
U.S. EPA Region 9
Tran.Linh@epa.gov

XIV. REFERENCES

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USFWS. 2013. Pacific Southwest Region. California Condor (Gymnogyps californianus) 5-Year Review: Summary and Evaluation. June 2013 https://ecos.fws.gov/docs/five_year_review/doc4163.pdf