NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT FACT SHEET

April 26, 2022

Permittee Name:	**Navajo Tribal Utility Authority (NTUA)**
NPDES Permit No.:	**NN0020290**
Mailing Address:	P.O. Box 170, Fort Defiance, Arizona 86504
Permittee Contact:	David Shoultz, Principal Engineer 928-729-6277 davids@ntua.com
Facility Location:	NTUA Tuba City Wastewater Treatment Facility 5 miles southwest of intersection of SR 264 and US 160 Coconino County, Arizona 86045
Contact Person(s):	Wendell Murphy, Civil Engineer Engineering, Construction & Operations 928-729-4719 WendellM@NTUA.com

I. STATUS OF PERMIT

The Navajo Tribal Utility Authority ("NTUA," the "permittee") applied for the renewal of its National Pollutant Discharge Elimination System ("NPDES") permit to authorize the discharge of treated effluent from the Tuba City wastewater treatment facility ("WWTF") in Tuba City, Coconino County, Arizona, within the central portion of the Navajo Nation. The WWTF is owned and operated by the NTUA. The permittee applied for a permit renewal on December 9, 2020 and provided a complete application on March 16, 2021.

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 draft NPDES permit renewal and fact sheet pursuant to the Clean Water Act ("CWA") §402, which requires point source dischargers to control pollutants that are discharged to waters of the United States. The draft permit incorporates both federal standards and applicable tribal water quality requirements.

The permittee is currently covered under NPDES Permit No. NN0020290, which became effective on June 1, 2016, through midnight May 31, 2021. This fact sheet is based on information provided by the discharger through its permit application, effluent discharge data, and applicable laws and regulations. Pursuant to 40 CFR §122.21, EPA issued an administrative continuance of the permit on April 2, 2021, and the terms of the existing permit are administratively extended until the issuance of a new permit.

Pursuant to Section §402 of CWA, EPA is proposing issuance of the NPDES permit renewal to the permittee for the discharge of treated domestic wastewater to Moenkopi Wash, an eventual tributary to the

Little Colorado River. Moenkopi Wash and the Little Colorado River are waters of the United States and waters of the Navajo Nation.

This permittee is classified as a major discharger.

II. SIGNIFICANT CHANGES TO PREVIOUS PERMIT

Table 1 summarizes changes from the previous permit. Consistent with EPA's e-Reporting Rule, the permit requires Discharge Monitoring Reports (DMRs) to be submitted electronically. The permit also includes a new requirement to submit annual biosolids reports electronically using EPA's NPDES Electronic Reporting tool ("NeT"). Standard language for Best Management Practices (BMPs) and Asset Management Planning (AMP) have been added, including a reporting requirement to develop an Asset Management Plan. Standard language for Sanitary Sewer Overflows (SSOs) Combined Sewer Overflows (CSOs) and Bypass events has been included, and reporting is required via NeT. (The discharger will need to request to add the Program Service for "NeT-Sewer Overflow.") Language has been updated to clarify that the facility includes both the treatment system and the collection system.

Reporting for chronic toxicity has been changed to the current standard of Pass (0) or Fail (1), with a limit established for Pass (0), due to established toxicity. A requirement for Priority Pollutant Scanning is to be conducted concurrent with chronic toxicity (WET) testing. Reporting requirements for the five-day biochemical oxygen demand test (BOD_5) and total suspended solids (TSS) mass have been changed from kg/day to lb/day. The Navajo Nation is designated Clean Water Act authority for the water quality standards program, so the weekly TSS concentration limit has been changed to 80 mg/L, consistent with Navajo Nation Surface Water Quality Standards criteria. Effluent limits for arsenic and zinc were added due to a finding that these pollutants have reasonable potential to cause or contribute to an excursion above water quality standards. Monitoring for hardness is added to calculate hardness-dependent metals values. The frequency of Priority Pollutant Scanning has been increased to annually, to improve the accuracy of the reasonable potential analysis.

Table 1. Significant Changes from Previous Permit

Permit Condition	Previous Permit (2016 – 2021)	Re-issued permit	Reason for change
DMR submittal	Hardcopy accepted for a portion of the permit period	E-reporting (NetDMR) required	EPA e-reporting Rule
Biosolids report	Hardcopy accepted for a portion of the permit period	E-reporting (NeT) required	EPA e-reporting Rule
Best Management Practices ("BMPs")	None	Standard BMP language for small utilities	40 CFR §122.44(k)(4)
Asset Management Program ("AMP")	None	Standard asset management requirement for small utilities.	40 CFR §122.41(e)
BOD_5, TSS Units for mass effluent limits	Mass limits in kg/day	Mass limits in lb/day	Consistency with recent EPA Region 9 permits
TSS concentration limits	Monthly average: 90 mg/L Weekly average: 135 mg/L	Weekly limit: median 80 mg/L, determined from min 4 samples collected at least 7 days apart, not within 48 hours of local precipitation event. Monthly average: 80 mg/L	Consistency with Navajo Nation Surface Water Quality Standards TSS criteria

Arsenic and Selenium monitoring and effluent limits	Monitoring required as part of priority pollutant scan	Effluent limits, monitoring requirements added	Reasonable potential to exceed WQS
Hardness (as $CaCO_3$) monitoring	No effluent monitoring requirements	Annual effluent monitoring required	To calculate hardness-dependent metals criteria
Chronic WET testing requirements, limits, and triggers	Results reported in Chronic Toxicity Units (TUc); no limits	Results reported as TST Pass "0" or Fail "1" of the Test of Significant Toxicity ("TST") null hypothesis (H_o), Limits of Pass (0), and Percent Effect (PE) < 50	Testing requirements in accordance with the TST statistical approach (EPA 2010a); limits for established toxicity due to established toxicity.
Sanitary Sewer Overflow ("SSO") and Bypass	Reporting required; hardcopy accepted	Standard SSO language for small utilities added, including clarification that 24-hr reporting applies to SSOs, CSOs and Bypass events; reporting via NeT	Consistency with EPA Region 9 policy and recently issued permits
Definitions		Added facility definition	Clarifies that the facility includes the collection system
Priority Pollutant Scan	One time in Year 5	Annually, in the first quarter	To improve the analysis of reasonable potential

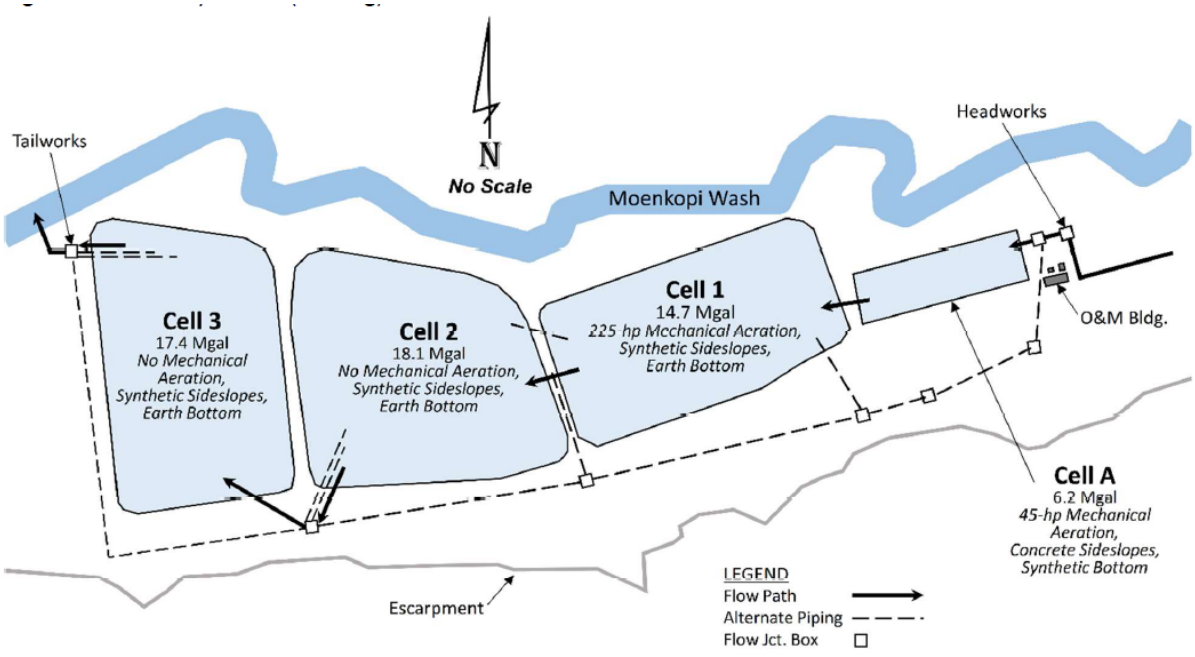
III. GENERAL DESCRIPTION OF FACILITY

The NTUA Tuba City wastewater treatment lagoons facility is located approximately five miles southwest of Tuba City, Arizona, within the western portion of the Navajo Nation. The facility serves a population of approximately 8,660 and has a design flow capacity of 1 million gallons per day (MGD). The facility receives domestic and commercial flow from businesses within Tuba City. Wastewater is transported to the wastewater treatment lagoon via a gravity collection system consisting of 33.03 miles of sewer line. In the past, the facility also received untreated wastewater from the Hopi Tribe's Moenkopi WWTP; this practice ended when a plug was installed in that line.

Figure 1 provides an overview of the facility lagoons, and Figures 2 and 3 illustrate the treatment processes. The Tuba City facility provides secondary treatment as an aerated pond system with a collection system, headworks, earthen basins, piping, and tail works. Influent enters the facility headworks through two bar screens (one 1.5-inch and one 0.5-inch), a grit removal chamber, and a Parshall flume with an ultrasonic flow meter. Wastewater is then directed to Cell A with three 25-hp aerators. From Cell A, wastewater then flows to Cell 1 with nine 25-hp aerators (Figure 2). Wastewater is then directed to Cells 2 and 3, which are facultative settling ponds operating in series. Final treatment consists of an effluent Parshall flume with ultrasonic flow meter, a chlorine contact chamber that utilizes a chlorine induction mixer, and a sulfur dioxide induction mixer for dechlorination (Figure 3). After dechlorination, effluent is sent to an outfall structure on the bank of Moenkopi Wash.

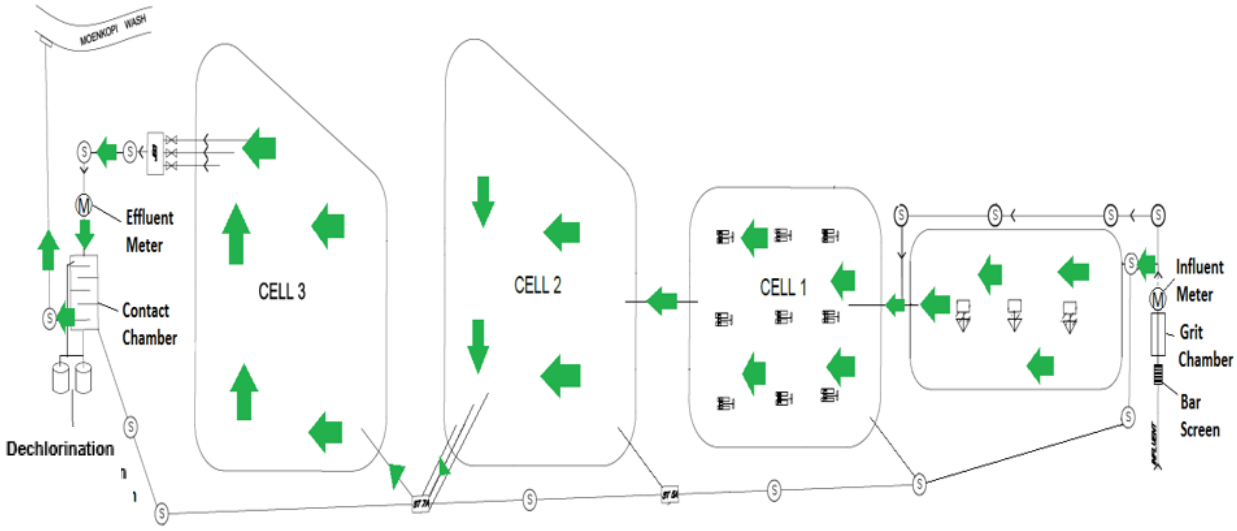
Figure 1: Tuba City WWTF Satellite View

Figure 2: Tuba City WWTF Site Map



Source: Wood Environment & Infrastructure Solutions, Inc. 2019

Figure 3: Tuba City WWTF Process Diagram



IV. DESCRIPTION OF RECEIVING WATER

The facility discharges domestic wastewater from Outfall 001 to Moenkopi Wash, which is an eventual tributary to the Little Colorado River. Both Moenkopi Wash and the Little Colorado River are designated waters of the United States and waters of the Navajo Nation. The coordinates for discharge Outfall No. 1 are: 36º 05' 33.433" north, longitude 111º 17' 39.173" west.

V. DESCRIPTION OF DISCHARGE

The aerated pond system discharges nearly-continuously from a single location, Outfall 001. Discharge flow rates during the previous permit period ranged from no flow (July 2018 and June 2019) to 0.845 MGD, with a monthly average of 0.362 MGD and a daily average of 0.548 MGD. The effluent was found to be clear and free of objectionable odor during a June 2018 inspection conducted by NNEPA. More detailed discussions of the inspection findings are followed in Section VI.B.4.

Recent Discharge Data (2016-2021)

Table 2 shows data related to discharge from Outfall 001 based on the permittee's priority pollutant scan results and discharge monitoring reports ("DMRs") from June 2016 (when the new activated sludge plant was brought online) to December 2021, applicant information, and the priority pollutant scan. Pollutants believed to be absent or never detected in the effluent are not included in Table 3. Additional information is available on Enforcement and Compliance History Online ("ECHO") at https://echo.epa.gov/detailed-facility-report?fid=NN0021555.

Table 2. Effluent Data for Outfall 001 from June 2016-December 2021

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)	0.648 (02/2017)	--	0.845 (11/2019)	Monthly
Ammonia (as N)	mg/L	-- (1)	--	-- (1)	18.4 (02/2017)	--	18.4 (02/2017)	Monthly
Ammonia Impact Ratio (AIR)	Ratio	1.0 (2)	--	1.0 (2)	**23.04** (02/2021)	--	**23.04** (02/2021)	Monthly
Biochemical Oxygen Demand 5-day (BOD_5)	mg/L	45	65	--	**117** (05/2019)	**117** (05/2019)	--	Monthly
	kg/day	169(3)	244(3)	--	**196** (05/2019)	**253** (04/2019)	--	
	% Removal	>65 % minimum (4)			lowest = 71 % (05/2019)			Monthly
Total Suspended Solids (TSS)	mg/L	90	135	--	103 (06/2017)	103 (06/2017)	--	Monthly
	kg/day	338(3)	507(3)	--	176 (10/2016)	**7,518** (5/2017)	--	
	% Removal	>65 % minimum (4)			**lowest = 24 %** (11/2020)			Monthly
Chlorine, total residual (TRC)	µg/L	--	--	11.0	--	--	**40**(5) (09/2020)	Monthly
TDS	mg/L	--	--	--	--	--	488	Quarterly
E. coli	CFU/ 100mL	126	--	575	**517** (12/2016)	--	517 (12/2016)	Monthly
pH	S.U.	6.5 to 9.0 (min-max)			7.4 (05/2017) – **11.4** (10/2020)			Monthly
Temperature	°C	-- (1)	--	-- (1)	4.0 to 24.3	--	4.0 to 24.3	Monthly
Antimony, total recoverable	µg/L	--	--	-- (1)	0.78	--	--	Once
Arsenic, total recoverable	µg/L	--	--	-- (1)	5.5	--	--	Once
Cadmium	µg/L	--	--	-- (1)	0.16	--	--	Once
Selenium, total recoverable	µg/L	--	--	-- (1)	2.6	--	--	Once
Whole Effluent Toxicity (WET), Chronic	Pass (0) or Fail (1)	--	--	Pass (0) (6)	--	--	**Fail**(1)	Monthly

FOOTNOTES:

(1) No effluent limits were set but monitoring and reporting were required.

(2) When monitoring for total Ammonia (as Nitrogen), pH and temperature 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 from the chronic criteria in the Navajo Nation Water Quality Standards standard (Attachment D in the permit). See Attachment E in the permit 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) Mass based limits based on 1 MGD flow.

(4) 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).

(5) TRC measurements were required monthly, along with an estimate of streamflow. High value reported with the Priority Pollutant Scan.

(6) See Section—Chronic WET Requirement—of the 2016 permit for details of the chronic WET test requirement. All chronic WET tests must be "Pass," and no test may be "Fail." "Pass" constitutes a rejection of the null hypothesis. Testing shall be conducted concurrent with testing for all other parameters.

BOD_5 concentrations averaged 40 mg/L monthly and 29 mg/L weekly, but reached values as high as 117 mg/L and exceeded BOD_5 concentration or mass limits 21 times, although it regularly achieved over 65% removal efficiencies in BOD_5. TSS concentrations ranged from a low of 1.12 mg/L to a high of 103 mg/L, averaging 52 mg/L. Mass values ranged from 18.1 kg/day to 7,518 kg/L. The highest mass value and the three highest concentrations exceeded limits. Except for one occasion, TSS removal was usually higher than 65% during the first four years of the permit period. Since October of 2020, removal efficiencies were lower than 65% for about half of the samples; the lowest value was 24%. TDS concentrations averaged 483 mg/L, with a range of 366-622 mg/L.

Temperatures ranged from a winter low of 4 degrees C to a high of 24 degrees C, which occurred frequently in the summer months. Nitrogen ammonia concentrations averaged 4.4 mg/L, with a high of 18.4 mg/L and a low of 0.04 mg/L. Ammonia criteria varies with temperature and pH. The ammonia impact ratio, or AIR averaged 5, with a high of 23. The lowest value was 0.08. Any value greater than 1 represents a violation of the limit, which occurred in 48 of the 65 samples. Sampling for pH shows 26 excursions above the limit of 9, and a high of 11.4. The minimum value of 7.45 and the average of all samples over the reporting period of 9.07 indicates that discharge pH is consistently high. Bacteria appear to be generally well-controlled in the discharge, although the geomean limit of 100 CFU/mL was exceeded on two occasions in late 2016, with values of 435 and 517 CFU/mL. Since then, sampling results for E. coli were usually well below 50 CFU/mL.

The WET test results demonstrated toxicity ("fail") on 23 occasions, with some monitoring dates reporting something other than Pass or Fail, including one reported date when required testing was not conducted, five dates reporting NODI Q (detected but not quantified) or NODI 8 ("other"), and three dates identifying an attached report.

The priority pollutant scan revealed detections of antimony, arsenic, cadmium, and selenium. While DMR data showed all residual chlorine values lower than 0.2 mg/L, the value taken during priority pollutant scan was 40 mg/L.

Additional information on compliance can be found in Section VI. B.4. below.

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," in Section VI.A., below) and the water quality standards applicable to the downstream receiving water (e.g., "water quality-based effluent limits," in Section VI.B., below). EPA established effluent limitations based on an analysis of the reasonable potential for the effluent to exceed the most stringent of applicable technology-based or water quality-based effluent limitations in the permit, as described Section VI.C. below.

A. Technology-Based Effluent Limitations (TBELs)

EPA developed technology-based treatment standards for municipal wastewater treatment plants in accordance with §301(b)(1)(B) of the CWA. The minimum levels of effluent quality attainable by secondary treatment for Biological Oxygen Demand (BOD_5), Total Suspended Solids (TSS), and pH, as defined in the implementing regulations at 40 CFR §133.105, are listed below. TBELs in this section are the equivalent to secondary treatment standards as defined by 40 CFR §122.45(f) for BOD_5 and TSS.

BOD_5

Concentration-based Limits

30-day average: 45 mg/L
7-day average: 65 mg/L
Removal Efficiency: 65% minimum

Mass-based Limits

30-day average – (45 mg/L)(1 MGD)(8.345 conversion factor) = 375 lbs/day
7-day average – (65 mg/L)(0.5 MGD)(8.345 conversion factor) = 542 lbs/day

TSS

Concentration-based Limits

30-day average – 90 mg/L
7-day average – 135 mg/L
Removal efficiency: 65% minimum

Mass-based Limits

30-day average – (90 mg/L)(1 MGD)(8.345 conversion factor) = 751 lbs/day
7-day average – (135 mg/L)(1 MGD)(8.345 conversion factor) = 1,126 lbs/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 applicant) (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)). In making this determination, the permitting authority uses procedures accounting for:

- Existing controls on point and non-point sources of pollution;
- Variability of the pollutant or pollutant parameter in the effluent;
- Sensitivity of species to toxicity testing (when evaluating whole effluent toxicity); and, where appropriate,
- 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, 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:

- Applicable standards, designated uses, and impairments of receiving water
- Dilution in the receiving water
- Type of industry
- History of compliance problems and toxic impacts

- Existing data on toxic pollutants for a Reasonable Potential Analysis

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

Navajo Nation Surface Water Quality Standards

In accordance with 40 CFR §122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on applicable water quality standards.

EPA approved the 1999 Navajo Nation Surface Water Quality Standards ("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 (NNEPA 2015/EPA 2020). The criteria for TSS, pH, temperature, *E. coli* and cadmium did not change in the 2020 approval. NNSWQS do not include criteria for BOD_5 or TDS. Criteria for ammonia did change, as shown in Attachment D of the permit (Table 207.20 from the 2015 NNSWQS). This permit implements the ammonia criteria as an Ammonia Impact Ratio (AIR), calculated as the ratio of the measured ammonia to the ammonia limit, which is determined by measuring pH and temperature concurrently and looking up the associated criteria (see Attachment E in the permit, which is Table 207.20 from the 2015 NNSWQS).

The following beneficial uses are designated for Moenkopi Wash, tributary to the Little Colorado River, as listed in Table 206.1 in the 2015 NNSWQS (NNEPA 2015/EPA 2020):

- **PrHC** – Primary Human Contact (for perennial reaches)
- **ScHC** - Secondary Human Contact
- **AgWS** – Agriculture Water Supply
- **FC** – Fish Consumption (for perennial reaches)
- **A&W** - Aquatic & Wildlife
- **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) 575 MPN/100 mL (single sample maximum)
pH:	6.5-9.0 (2015 NNSWQS PrHC beneficial use)
Ammonia:	Based on Attachment D of the permit (Table 207.21 from the 2015 NNSWQS, which are the more protective criteria (limits expressed as AIR) (NNEPA 2015/EPA 2020)
AIR:	AIR (Ammonia Impact Ratio) $\leq$ 1. NNSWQS do not have AIR criteria, but the ammonia limit is expressed as an AIR of less than or equal to 1 (ammonia measurement/ ammonia criteria) meets the NNSWQS Ammonia criteria. Temperature and pH measurements taken concurrently.
TSS:	80 mg/L, median value from a minimum of four samples taken at least seven days apart. Samples collected within 48 hours of a local precipitation event shall not be used to determine the median value.

The waterbodies potentially affected by discharge from this facility are not identified as water-quality limited under CWA §303(d).

Antimony, arsenic, cadmium, and selenium detected in the Priority Pollutant Scan have water quality criteria in the NNSWQS (NNEPA 2015/EPA 2020). The most stringent criteria are identified below.

Antimony:	30 µg/L chronic, 88 µg/L acute (for Aquatic & Wildlife uses)
Arsenic:	30 µg/L (for Primary Human Contact uses)
Selenium:	2 µg/L chronic (for Aquatic & Wildlife uses); 20 µg/L (for Livestock Watering uses)
Cadmium:	8 µg/L chronic, (for Food Consumption uses)
Cadmium:	Acute: [e (1.0166 [ln (hardness)] - 3.924)][1.136672-[ln (hardness)](0.041838)] Chronic: [e (0.7409 [ln (hardness)] - 4.719)][1.101672-[ln (hardness)](0.041838)] (for Aquatic and Wildlife Uses)

2. Dilution in the Receiving Water

Discharge from Outfall 001 is to an unnamed wash, a tributary to Mitchell Butte Wash, which may occasionally have no natural flow. Accordingly, 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. The SIC code for this facility is 4952 (Sewerage Systems).

4. Compliance History and Toxic Impacts

Review of DMR data from June 2016 to December 2021 showed the facility had the following effluent violations over the 67 months (data were reported for 65 months; two months had no flow):

- Ammonia Impact Ratio (48 violations).
- pH maximum (26 violations);
- BOD_5 average monthly concentration (45 violations); BOD_5 average weekly concentration (6 violations); BOD_5 monthly average mass and weekly average mass (1 violation each).
- Chlorine (1 violation, reported in the priority pollutant scan).
- TSS average monthly concentration (3 violations); TSS average monthly mass (1 violation); TSS percent removal minimum (7 violations).
- *E. coli* monthly average (2 violations).

The magnitude and frequency of many of the violations are noteworthy. For example, the TSS weekly mass limit of 507 mg/L was 7,518 mg/L was exceeded by a factor of nearly 15. The average monthly concentration was double the limit. The Ammonia Impact Ratio (AIR) was exceeded on 48 occasions (76 percent of the samples) during the period analyzed, and the maximum exceedance was 23 times the limit. The pH limit was exceeded 26 times (37% of the samples. WET tests showed toxicity ("fail") on 23 occasions (35 percent of the samples). All but one sample since June 2020 have exceeded the limit.

The facility is under an Administration Order on Consent ("AOC") Docket No. CWA-309(a)-16-008, issued by the USEPA on September 26, 2016, for violations of the NPDES permit and Clean Water Act.

NNEPA conducted a compliance evaluation inspection on June 22, 2018, and made the following findings:

- 2 of 3 aerators working in Cell A and 8 of 9 aerators working in Cell 1.

- Cell 2 is baffled to prevent short-circuiting.
- On the three-level multi-draw exiting Cell 3, the lower two levels are stuck.
- The effluent sampling point has been relocated to a manhole so the PVC pipe with the cut out opening on the bank of Moenkopi Wash will no longer be utilized.

C. Rationale for Numeric Effluent Limits and Monitoring

Existing Data and Reasonable Potential Analysis

For pollutants with effluent data available, EPA conducted a reasonable potential ("RP") 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 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 (Section 3.3.2 Table 3-1, and Section 5.5.2 of EPA's TSD). 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, and the multiplier factor is obtained from Table 3-1 of the TSD.

Results are summarized in Table 3.

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 are summarized in Tables 4 and 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, TSS: Concentration and minimum removal limits for BOD_5 and TSS are the equivalent to secondary treatment standards as defined by 40 CFR §133.105(a) and (b). In addition, NNSWQS criteria of 80 mg/L for TSS, expressed as a median value based on a minimum of four samples taken at least seven days apart, not including any samples taken within 48 hours of a local precipitation event. TSS concentrations must be sampled weekly to determine compliance with the limit.

The mass-based technology-based permit limits for BOD_5 are retained from the previous permit. The technology-based TSS permit limit for the monthly concentration is retained from the previous permit, but the weekly limit has been modified based on NNSWQS criteria.

Table 3. Reasonable Potential Statistical Analysis

Pollutant Parameter [1]	Maximum Observed Concentration	*n*	RP Multiplier	Projected Maximum Effluent Concentration	Most Stringent Water Quality Criterion	Statistical Reasonable Potential? [3]
Biochemical Oxygen Demand 5-day (BOD_5)[2]	253 mg/L	65	2.3	582 mg/L	45 mg/L monthly average	**Yes**
Total Suspended Solids (TSS)	103 mg/L 7,518 kg/day	65	2.3	237 mg/L 17,291 kg/day	45 mg/L monthly average 507 kg/L weekly average	**Yes**
E. coli	517.2 MPN/ML	65	2.3	1,189 MPN/mL	126 CFU/100 mL (geometric mean, minimum four samples in 30 days)	**Yes**
Chlorine	40 µg/L	66	2.3	92	11 µg/L	**Yes**
Ammonia (as N)	18.4 mg/L	65	2.3	42.32 mg/L	0.3 to 4.9 (depending on temp and pH) [2]	**Yes**
AIR	23.04	65	2.3	53	1	**Yes**
pH	11.4 (highest)	65	2.3	26	6-9	**Yes**
Antimony, total recoverable [4]	0.78 µg/L	1	13.2	10.3 µg/L	30 µg/L	No
Arsenic, total recoverable [4]	5.5 µg/L	1	13.2	72.6 µg/L	30 µg/L	**Yes**
Cadmium, total recoverable [4]	< 0.16 µg/L	1	13.2	2.1 µg/L	8 µg/L	No
Selenium, total recoverable [4]	2.60 µg/l	1	13.2	34.3 µg/L	2.0 µg/L	**Yes**
Whole Effluent Toxicity	1 (Fail)	65	--	1 (Fail)	0 (Pass)	**Yes**

(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 D of the permit (Table 207.21 from the 2015 NNSWQS (NNEPA 2015/EPA 2020)). AIR is the ratio of measured ammonia value to ammonia criteria (see Attachment E of the permit). EPA's 1999 Ambient Water Quality Criteria for the Protection of Freshwater Aquatic Life recommends acute criteria for ammonia that are pH-dependent and chronic criteria for ammonia that are pH- and temperature-dependent.

(3) See Section VI.C, below, for a discussion of the reasonable potential statistical analysis results and rationale for establishing numeric effluent limits and monitoring requirements in the permit.

(4) The applicable NNSWQS for hardness-dependent metals are based on a hardness value of 220 mg/L, except for cadmium, which includes hardness values in the criteria.

Table 4. 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
Biochemical Oxygen Demand (5-day) [3]	mg/L	45	65	--	Monthly	Composite
	lbs/day	375	542	--		
	%	≥ 65 percent removal efficiency				
Total Suspended Solids[3]	mg/L	80	135	--	Weekly	Composite
	lbs/day	751	1,126	--		
	% Removal	≥ 65 percent removal efficiency				
E. coli	CFU/100 ml	126[4]	--	575[5]	Monthly	Grab
Chlorine, total residual[6]	µg/L	--	--	11.0	Monthly	Grab
Solids, total dissolved [7]	mg/L	--[1]	--	--[1]	Quarterly	Grab
Arsenic, total recoverable	µg/L	--	--	30	Annually	Grab
Selenium, total recoverable	µg/L	--	--	2.0	Annually	Grab
Hardness, total (as $CaCO_3$)	µg/L	--[1]	--	--[1]	Annually	Grab
Ammonia, total[8]	mg/L	--[1,8]	--	--[1,8]	Monthly	Grab
AIR[8]	--	1.0[8]	--	--	Monthly	Grab
pH[8]	std. units	between 6.5 to 9.0			Monthly	Grab
Temperature[8]	deg °C	--[1,8]	--	--[1,8]	Monthly	Grab
Priority Pollutant Scan[9]	µg/L	--	--	--[1]	Annually, 1st Quarter	24-hr Composite[9]

'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 Biochemical Oxygen Demand (5-day) and total suspended solids shall not exceed 15 percent of the average monthly influent concentration collected at the same time. Suspended solids concentration expressed as a median value determined from a minimum of four samples collected at least 7 days apart shall not exceed 80 mg/L; a sample collected during or within 48 hours of a local precipitation event shall not be used to determine the median value.

(4) Geometric mean of samples collected during the calendar month.

(5) Single sample maximum.

(6) "TRC" = Total Residual Chlorine. Chlorination is required prior to discharge and the permittee shall at all times operate the plant to achieve the lowest possible residual chlorine while still complying with permit limits for *E. coli*. TRC shall also be measured along with an estimate of the natural flow of the stream. (When the only flow in the receiving water is the effluent, the "natural flow" should be reported as zero.)

(7) 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."

(8) Table 207.21 in the NNSWQS defines water quality standards for total ammonia (in mg-N/liter). 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 Attachments D and E in this permit).

(9) Priority Pollutants: During the first quarter of each year in the permit cycle, the permittee shall monitor for the full list of priority pollutants in the Code of Federal Register (CFR) at 40 CFR Part 423, Appendix A. See Attachment F for the current list. Priority Pollutant Scan to be conducted concurrently with Chronic Toxicity Testing (See Table 5). Volatile and semi-volatile compounds shall be grab samples. No limits are set at this time, other than for those parameters identified in this table. For constituents with results with values below the detection limits, with no reasonable potential to exceed criteria in the NNSWQS (NNEPA 2015/EPA 2020) and EPA's National Water Quality Criteria for priority pollutants, monitoring will no longer be required for the remainder of the permit cycle.

Table 5. Chronic Toxicity (WET) Effluent Limits and Monitoring Requirements -Outfall Number 001

Parameter	Maximum Allowable Discharge Limits			Monitoring Requirements	
	Concentration				
	Median Monthly[(1)]	Maximum Daily[(2)]	Units	Minimum Frequency	Sample Type
Chronic Toxicity *Pimphales promelas* growth, Method 1000.0 WCP6C[(3)]	Pass (0)	Pass (0) and PE <50	Pass (0) or Fail (1), and PE, in % effluent	Monthly	24-hr Composite

Notes:

(1) Median Monthly Effluent result: An exceedance occurs if the median of **Pass**–**Fail** results is positive **(1)**, using **no more than three** chronic toxicity tests initiated during the calendar month. Pass–Fail results are coded as **Pass (0)** (Test of Significant Toxicity ("TST") null hypothesis is rejected and the Instream Waste Concentration ("IWC") is declared not toxic) and **Fail (1)** (TST null hypothesis is not rejected and the IWC is declared toxic). For this discharge, the TST null hypothesis (H_o) at the required discharge-specific IWC is: **IWC mean response (100% effluent) ≤ 0.75 × Control mean response**. Rejection of the TST null hypothesis is determined by following the step-by-step instructions in *National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document*, Appendix B (EPA 833-R-10-004, 2010; TST Technical Document).

(2) Maximum Daily Effluent result: This is evaluated for each toxicity test conducted for determining the median monthly effluent result. An exceedance occurs if both of the following occur in the same toxicity test: The Pass–Fail result is coded as **Fail (1)** (TST null hypothesis is not rejected and the IWC is declared toxic) and the observed (estimated) **PE ≥ 50**. PE (also called "Percent (%) Effect" or "% Effect") is calculated as: **PE in % effluent = [(Control mean response − IWC mean response) ÷ Control mean response] × 100**. If more than one toxicity test is initiated during the calendar month, then those results shall be reported attached to the DMR form, except that the one toxicity test with a **Fail (1)** and the highest **PE** shall be reported on the DMR form.

(3) When the Priority Pollutant Scan monitoring is due, chronic toxicity monitoring shall be conducted concurrently with Priority Pollutant Scan.

Mass-based limits for both BOD_5 and TSS are calculated based on the technology-based standards and 1 MGD design flow (using a conversion factor of 8.345, as described above). Measured values should be reported using the measured flow volume during the discharge, which would likely be less than the flow limit. As noted in the compliance inspection report, the facility has exceeded mass limitations during the previous discharge by such a great amount that the facility is likely to require process changes to meet these limitations.

Determinations of Effluent Limitation for *E. coli*: Limits are carried over from the previous permit. Presence of pathogens in untreated and treated domestic wastewater indicates reasonable potential for *E. coli* bacteria levels in the effluent to cause or contribute to an excursion above the NNSWQS. In the permit, the monthly geometric mean of *E. coli* bacteria shall not exceed 126/100 ml as a monthly average and 575/100 ml as a single sample maximum. These limits are the NNSWQS for secondary human contact (p. 20) and are carried over from the previous permit. The monitoring frequency is once per month.

Total Dissolved Solids (TDS): Presence of solids in untreated and treated domestic wastewater indicates that reasonable potential for TDS level in the effluent to cause or contribute to an excursion above narrative water quality standards. While 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.

Total Residual Chlorine (TRC): Chlorination for disinfection purposes indicates that there is reasonable potential for TRC levels in the effluent to cause or contribute to an excursion above the NNSWQS. Therefore, a TRC limit of 11 µg/l has been established in the draft permit to protect the beneficial uses of the receiving waters. The monitoring frequency is once per month, consistent with the previous permit.

Total Ammonia Nitrogen (NH_3-N) 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. Presence of ammonia in untreated and treated domestic wastewater indicates reasonable potential for levels in the effluent to cause or contribute to an excursion above the WQS. 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. In accordance with the NNSWQS for protection of aquatic and wildlife habitat, the permit contains effluent limitations for AIR, which incorporates NNSWQS ammonia criteria. The criteria are temperature- and pH-dependent, as shown in Table 207.21 (p. 68) of the EPA approval of 2015 NNSWQS (included as Attachment D in the permit). Table 207.21 is chosen because it is the most protective. AIR is determined by the concurrent measurement of ammonia concentration, pH and temperature, and is calculated by dividing the ammonia concentration in the effluent by the applicable ammonia criteria found in Attachment D in the permit (NNEPA 2015/EPA 2020). The monitoring frequency is monthly, consistent with the previous permit.

The ammonia criteria are pH- and temperature-dependent. Accordingly, pH, temperature, and ammonia sampling must be taken concurrently. Attachment E in the permit is a sample log to help calculate and record the AIR values. The AIR effluent limitation value is 1.0, carried over from the previous permit.

The permittee also must simultaneously monitor and report ammonia effluent values in addition to the AIR value. AIR is more appropriate than a fixed effluent concentration to the water quality criteria because the criteria vary with temperature and pH. An AIR exceeding 1.0, by definition, indicates that the ammonia-N concentration exceeds the ammonia water quality criterion. Any AIR value more than 1 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 (p.20). The permit limit is carried over from the previous permit, and the monitoring frequency is once per month. Measurements for pH, ammonia and temperature are required to be taken concurrently.

Temperature: There are no numeric water quality standards for temperature; narrative standards have been incorporated into the permit. Effluent monitoring requirements for temperature have been incorporated in the draft permit to ensure that the applicable narrative standards are not exceeded and to calculate temperature-specific ammonia criteria, as described above. Measurements for temperature are required to be taken concurrently with ammonia and pH measurements. No temperature limits are set at this time, consistent with the previous permit.

Arsenic and Selenium: 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, the discharge demonstrates reasonable potential for arsenic and selenium in the effluent to cause or contribute to exceedances above the applicable water quality criteria; accordingly, the permit identifies effluent limits and annual monitoring for both arsenic and selenium.

Hardness (as $CaCO_3$): Effluent hardness data is needed to calculate hardness-dependent metals criteria, so this draft permit includes a requirement for annual monitoring for hardness.

Whole Effluent Toxicity (WET) Testing for Chronic Toxicity: 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..." To evaluate the secondary effects of discharged nutrients, a minimum standard for chronic toxicity (a value of 0, "pass" of the Test of Significant Toxicity (TST) null hypothesis (H_o) for the WET test) has been incorporated into the permit.

Because of past toxicity EPA finds that there is reasonable potential to exceed the narrative toxicity standard and is retaining the WET requirement from the previous permit. To ensure continued compliance with the narrative objective for toxicity, the draft permit includes monitoring requirements for chronic WET to be conducted monthly using a 24-hour composite sample of the treated effluent for Fathead minnow, *Pimephales promelas.* Testing shall be conducted concurrent with the priority pollutant scan. Testing for chronic WET must be completed in accordance with Part II, Section C of the permit. WET testing was required in the previous permit, but the previous permit incorporates changes to testing and reporting consistent with the EPA TST (EPA 2010a).

Priority Pollutant Scan. The requirement for a priority pollutant scan is carried over from the previous permit, but the frequency has been increased to annually, which will assist in confirming the likelihood of reasonable potential for continued exceedance of limits. Monitoring is scheduled for the 1st quarter of each year, and must be conducted concurrent with WET testing.

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.

E. Antidegradation Policy

EPA's antidegradation policy under CWA §303(d)(4) and 40 CFR §131.12 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 establishes limits for arsenic and selenium 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 §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 EPA-approved 2015 NNSWQS (NNEPA 2015/EPA 2020) 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 4 and 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 §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 annually during the first quarter of the permit term, concurrently with WET testing, to ensure that the discharge does not contain toxic pollutants in concentrations that may cause a violation of water quality standards. 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 §136, unless otherwise specified in the permit or by EPA. 40 CFR §131.36 provides a complete list of Priority Toxic Pollutants.

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 chronic and acute 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 §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 indicated 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 been established. This is because at least one chronic toxicity test result was Fail (1), indicating unacceptable toxicity is present in the effluent, or at least one 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, chronic toxicity WQBELs are required for the permitted discharge (40 CFR §122.44(d)(1)). As a result, monitoring and reporting for compliance with median monthly and maximum daily effluent limits 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: In-stream Waste Concentration (IWC) mean response (% effluent) ≤ 0.75 Control mean response. The TST's alternative hypothesis is (H_a): IWC mean response (% effluent) > 0.75 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 Point 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.

For this discharge, EPA has set median monthly and maximum daily effluent limits (40 CFR §122.45(d)) for chronic toxicity. These limits are set to restrict the discharge of toxic pollutants in toxic amounts and protect both applicable aquatic life water quality standards, including standards downstream of the discharge, and existing aquatic life beneficial uses in receiving waters (CWA §§ 101(a)(3), 301(b)(1)(C)). The median monthly WQBEL—no more than one of a maximum of three chronic toxicity tests with unacceptably high toxicity declared by the TST statistical approach—ensures a high probability of declaring such discharges toxic. The maximum daily WQBEL—one toxicity test rejecting the TST null hypothesis and an associated chronic biological endpoint PE < 50 (2x the TST's chronic toxicity Regulatory Management Decision (RMD) of 25 PE)—ensures the restriction of highly toxic discharges. Both effluent limits consider that, on occasion, quality toxicity laboratories conducting effluent toxicity tests can incorrectly declare a sample with acceptable toxicity "toxic" (≤ 5% of the time when the true toxicity of the discharge is < 10 PE).

For POTWs, it is not practicable (40 CFR §122.45(d)) for EPA to set an average (median) weekly effluent limit, in lieu of a maximum daily effluent limit. This is because discharges of unacceptable toxicity—true chronic toxicity ≥ 25 PE, the TST's chronic toxicity RMD—are not adequately restricted by two effluent limits (median weekly and median monthly) each using a median of up to three toxicity test results. Under such limits, a highly toxic discharge could occur with no restriction. Using two such median limits further decreases the probability that an effluent with unacceptable toxicity will be caught, resulting in a permitted

discharge which under-protects the aquatic life from unacceptable chronic toxicity. When the priority pollutant scan is due, WET testing must be conducted concurrently with the priority scan in order to facilitate identification of toxicity if needed.

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 §503 are incorporated into the permit. The permit requires development of a sludge management plan and determination of lagoon capacity within 180 days of the permit effective date. The permit also includes, for dischargers who are required to submit biosolids annual reports, including major POTWs that prepare sewage sludge and other facilities designated as "Class 1 sludge management facilities," electronic reporting requirements. Those permittees shall submit biosolids annual reports using EPA's NPDES Electronic Reporting Tool ("NeT") by February 19th of the following year. Annual reports when no biosolids are removed may consist of a statement that no biosolids are removed. 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 the NeT e-reporting system (https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws for more information).

The permittee is required to develop a sludge management plan to ascertain the sludge levels in the lagoons within 180 days of the permit effective date. The permittee must develop and implement a plan to control the high BOD_5 and TSS concentrations and reduce the AIR. The sludge management plan should be submitted to EPA at R9NPDES@epa.gov and should include the permit number in the subject line.

B. Pretreatment

No nondomestic facilities discharge pollutants that pass through or interfere with the operations of this POTW or are otherwise subject to pretreatment standards. Accordingly, EPA has not incorporated any pretreatment requirements into 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 that exceeds 90 percent of the annual dry-weather design capacity of the waste treatment and/or disposal facilities. Planning for solids removal as described in Section IX.A., above, should also be undertaken to ensure that capacity is not exceeded. In addition, the sludge management plan required by Section IX.A. should determine an accurate facility flow capacity to update the current estimate.

D. Development and Implementation of Best Management Practices

The permittee shall 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 (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.

The permittee shall develop and implement BMPs necessary to control the high BOD_5 and TSS concentrations and reduce the AIR.

E. 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. This includes identifying lagoon sludge capacity and developing a plan for sludge removal (Section IX.A). 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.

In November 2021, EPA conducted an EJSCREEN analysis of the community in a 10-mile radius of the vicinity of the outfall. Of the 11 environmental indicators screened through EJSCREEN, the evaluation suggests the community has elevated risks for the PM2.5, ozone, NATA (National-Scale Air Toxics Assessment) air toxics cancer risk, NATA respiratory hazard index, and lead paint indicators. The 10-mile radius covers the community of Tuba City and outlying areas. Many of the indicators have lower risks than the general population, but 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 Tuba City. 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, 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 draft permit and will consider any additional information that is provided 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 issuance of an NPDES permit by EPA is a Federal action, so consideration of the potential effects of the permitted discharge on any federally listed species is required. The NPDES permit authorizes the discharged of treated domestic from the NTUA Tuba City Wastewater Treatment Facility in Coconino County wastewater to the Moenkopi Wash, which is tributary to the Little Colorado River.

The Information for Planning and Conservation ("IPaC") website for the U.S. Fish and Wildlife Service ("USFWS") Arizona office (see https://ecos.fws.gov/ipac/gettingStarted/map) generated an Official Species list on June 22, 2021, which identifies threatened and endangered species and critical habitat that may occur in the vicinity of the Tuba City facility and Moenkopi Wash action area. The action area is a square of about 50 square miles around the discharge Outfall 001 and is defined as the wastewater treatment facility and discharge outfall to Moenkopi Wash, and Moenkopi Wash itself, which is a tributary to the Little Colorado River. Streamflow in Moenkopi Wash is intermittent and does not reach the Little Colorado River, so the action area does not include the Little Colorado River. If, in the rare instance that the effluent were 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.

The listed species are provided in Table 7 below. This report provides an up-to-date listing of all proposed (P), candidate (C), threatened (T) and endangered (E) species that occur in the action area. There are no designated critical habitats for each of the above species within the 50 square miles surrounding the facility discharge outfall.

Table 7. Listed species, designated under the U.S. Endangered Species Act

Type	Common Name	Scientific Name	Status	Critical Habitat
Fishes	Roundtail chub	*Gila robusta*	C	No
Reptiles	Northern Mexican gartersnake	*Thamnophis eques megalops*	T	No*
Birds	California condor	*Gymnogyps californianus*	E, plus non-essential experimental population	N/A*
	Yellow-billed cuckoo	*Coccyzus americanus*	T	No*
Insects	Monarch butterfly	*Danaus plexippus*	C	No*
Flowering Plants	Fickeisen Plains cactus	*Pediocactus peeblesianus fickeiseniae*	E	No*
	Navajo cedge	*Carex specuicola*	T	No*
	Welsh's milkweed	*Asclepias welshii*	T	No*

*These species have designated critical habitat outside of the Action Area.

Fish

Roundtail chub (*Gila robusta*) are found in cool to warm waters (32-90 degrees Fahrenheit) of rivers and streams, and often occupy the deepest pools and eddies of large streams. Information was gathered from the 2013 Candidate Assessment accessed online on July 28, 2021 (https://ecos.fws.gov/docs/candidate/assessments/2013/r2/E02Z_V01.pdf). Roundtail chub are often associated with cover features such as boulders, vegetation, and undercut banks, but they are less likely to use cover than other related species. Spawning occurs from February through June in pool, run, and riffle habitats with slow to moderate water velocities. Roundtail chub are omnivores, consuming foods proportional to their availability, including aquatic and terrestrial invertebrates, aquatic plants, detritus, algae, fish and other vertebrates. Roundtail chub are found in only two tributaries of the Little Colorado River (Chevelon and East Clear Creeks, both of which enter the Little Colorado about 80 miles south of Tuba City, near Winslow, Arizona; the tributaries have no connection to Moenkopi Wash). The action area does not reach the Little Colorado River and is dry for part of the year. This lack of suitable habitat led EPA to determine that the action will not affect roundtail chub.

Reptiles

The 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 (https://ecos.fws.gov/ecp/species/7655): (1) Source-area wetlands. For example: cienegas (mid-elevation wetlands with highly organic, alkaline soils), or stock tanks (small earthen impoundments); (2) large river riparian woodlands and forests; and (3) streamside gallery forests (defined by well-developed broadleaf deciduous riparian forests with limited or no herbaceous ground cover or dense grass). The northern Mexican gartersnake occurs only in or adjacent to the lower reaches of the Little Colorado River. The action area does not reach the Little Colorado River and contains no suitable wetland or riparian habitat for the northern Mexican gartersnake. EPA has determined that the action will not affect the northern Mexican gartersnake.

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 project 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). The action area does not contain suitable sites for roosting or foraging. California condors may occasionally be seen overhead in the action area, possibly from a release site for the non-essential experimental population. This site was established in 1996 near Vermillion Cliffs, about 70 mi to the northeast of the action area (USFWS 2013). Stressors affecting California condors include consumption of lead shot or micro-trash, predators, powerlines, starvation, falls, and other isolated incidents (USFWS 2013). Lagoons and effluent discharge from the facility would not affect availability of carrion or otherwise contribute to stressors affecting California condors. This permit will not result in any violation of 50 CFR § 17.84(j), which includes special rules for the non-essential experimental populations of California condors, including the site near Vermillion Cliffs. EPA has determined that the action will have no effect on California condors.

Mexican spotted owls (*Strix occidentalis lucida*) may occur in Arizona, Colorado, New Mexico, Texas, and Utah, although populations in or near the project area have not been documented (https://ecos.fws.gov/ecp/species/8196). Spotted owls occur in old-growth or mature, complex forest structures components (uneven aged stands, high canopy closure, multi-storied levels, high tree density). 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 in (30.5 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 areas of downed logs and snags (standing dead trees). Owl foraging habitat includes a wide variety of forest conditions, canyon bottoms, cliff faces, tops of canyon rims, and riparian areas. They feed primarily on small mammals, although they will also prey on birds, bats, reptiles, and arthropods. Actions that fragment the forest or remove old-growth forests adversely affect the species. (USFWS ECOS, accessed 2/1/2021, https://ecos.fws.gov/ecp/species/8196). These types of habitats are not found in the vicinity of the action area, and the project does not include any activities that would affect the species; accordingly, EPA has determined that the action will not affect the Mexican spotted owl.

The Yellow-billed cuckoo (*Coccyzus americanus*) is a highly mobile and migratory bird species, traveling between its wintering grounds in Central and South America and its breeding grounds in the continental U.S. and Mexico each spring and fall, often using river corridors as travel routes. Habitat conditions through most of the western yellow-billed cuckoo's range are often 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). Yellow-billed cuckoos are also vulnerable to collisions with tall buildings, cell towers, radio antennas, wind turbines, and other structures. (USFWS ECOS https://ecos.fws.gov/ecp/species/3911, accessed 2/1/2021). These habitat conditions and hazards are not found in the vicinity of the project area. Additionally, the discharge will not affect food availability or forage or nesting habitat for the yellow-billed cuckoo. Therefore, EPA has determined that its action will not affect the yellow-billed cuckoo.

In February 2020, USFWS proposed 72 units as critical habitat for the western yellow-billed cuckoo in the arid southwest (p. 11477 of the following Federal Register notice: (https://www.govinfo.gov/content/pkg/FR-2020-02-27/pdf/2020-02642.pdf). According to the official Species List, USFWS has since finalized this proposed critical habitat designation, but 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 proposed critical habitat for the yellow-billed cuckoo.

Insects

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 listed as endangered. It is a small cactus, approximately three inches tall and 1.5 inches 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. (Summary from https://ecos.fws.gov/ecp/species/5484, accessed August 6, 2021.) 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 (78 FR 60607, accessed August 18, 2021 at https://www.govinfo.gov/content/pkg/FR-2013-10-01/pdf/2013-23124.pdf).

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. Tuba City is farther east of Highway 89, where the Fickeisen plains cactus is not known to occur.

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. Threats to the population include grazing by cattle, domestic sheep, and feral horses and, to a lesser extent, illegal collection, disease or predation (USFWS 2020), and nonnative, invasive species (78 FR 60607, accessed August 18, 2021 at https://www.govinfo.gov/content/pkg/FR-2013-10-01/pdf/2013-23124.pdf). 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. They are often associated with other desert scrub species (78 FR 60607, accessed August 18, 2021 at https://www.govinfo.gov/content/pkg/FR-2013-10-01/pdf/2013-23124.pdf).

The USFWS listed critical habitat for the Fickeisen plains cactus, including some areas within the 50-mile radius action area, but not within or near the area of discharge of treated wastewater from the Tuba City wastewater treatment lagoons. Discharge to the lagoons or releases from the lagoons would not affect the Fickesen plans cactus. Accordingly, EPA has determined that the action will not affect critical habitat for the Fickeisen plains cactus.

Navajo sedge *(Carex specuicola)* occurs in hanging gardens associated with moist seeps alongside sheer cliffs (https://ecos.fws.gov/ecp/species/8579), none of which occur within the more arid vicinity of Tuba City. Therefore, EPA has determined that the action will not affect the Navajo Sedge.

Welsh's milkweed *(Asclepias welshii)* is a rhizomatous, herbaceous perennial, 10 to 40 inches tall, with large oval leaves and cream-colored flowers that are rose-tinged in the center. One of the eight known populations (as of 2015) occurs in the vicinity of Tuba City, potentially within the action area (https://ecos.fws.gov/ecp/species/8400, accessed August 6, 2021, and USFWS 2015). The 2015 Five-Year Review noted no information to determine whether any of the populations were at viable levels. The species is clonal, with extensive and deep root systems, so it was not possible to determine whether surveys were for individual plants.

The Tuba City population was discovered after the initial listing. It has never been fully surveyed or censused, but observations made nearly a decade apart resulted in estimates of 200 or more plants. The populations are distributed across large dune fields with multiple, highly spaced stands of stems (Hazelton 2013a and Roth 2013, in USFWS 2015). Off-highway vehicles (OHVs) are a threat to the populations; OHV use is allowed near the Tuba City population, but does not appear to occur due to the difficulty of access

(USFWS 2015). Insect predation may also threaten the species. Navajo National also lists Welsh's milkweed as an endangered species under Group 3 on their endangered species list. The Tuba City population is protected as "Area 1"—which is recommended for no development with few exceptions (Hazelton 2014 in USFWS 2015).

The species is known to occur within unconsolidated, aeolian sand dunes in southern Utah and northern Arizona (Kneller 2003; Welsh et al. 2008, in USFWS 2015). It grows only on active sand dunes ranging from 4700 to 6200 ft in elevation, associated with plant communities dominated by pinyon pine, Utah juniper, sagebrush, and ponderosa pine (Palmer 2001, in USFWS 2015). It is considered a pioneer species, thriving in disturbed conditions with little or no competing vegetation; as sand dunes stablize and other plant species move in, Welsh's milkweed may decline or spread via rhizomes into unoccupied, more active dunes (Palmer 2001, in USFWS 2015). These habitats are not found in the vicinity of the Tuba City facility and would not be affected by discharge or drainage of the lagoons. Accordingly, EPA has determined that the action will not affect the Welsh's milkweed.

Conclusion

Considering the information available, EPA concludes that the reissuance of this permit will not affect any of the above listed species. There is no designated critical habitat for any of the listed species within the action area. 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) §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 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 §401 on January 21, 2022 (see Permit Attachment G).

H. Government-to Government Consultation

In accordance with EPA's Policy on Consultation and Coordination with Indian Tribes (https://www.epa.gov/sites/default/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf) , which states that consultation could be appropriate when actions and decisions may affect tribal interests, EPA offered the Navajo Nation the opportunity to consult on EPA's potential reissuance of the permit. The offer letter, dated September 1, 2021, was addressed to the Honorable President Jonathan Nez of the Navajo Nation. EPA did not receive a response to this offer and concluded, consistent with the consultation offer, that the Navajo Nation did not wish to consult on this permit.

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; 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 for the public comment period of March 10-April 11, 2022. No comments were received.

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. No public hearing related to this permit was requested during the comment period, and EPA did not schedule a hearing.

XIII. CONTACT INFORMATION

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

Janet Parrish	415-972-3456
U.S. EPA Region 9	parrish.janet@epa.gov

XIV. REFERENCES

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