

NPDES PERMIT NO. NM0031194

FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

Navajo Tribal Utility Authority
N. Navajo Rt 12
P.O. Box 170
Ft Defiance, AZ 86504

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

PREPARED BY

Tung Nguyen
Environmental Engineer
NPDES Permitting Section (6WD-PE)
Water Division
VOICE: 214-665-7153
FAX: 214-665-2191
EMAIL: nguyen.tung@epa.gov

DATE PREPARED

September 1, 2023

PERMIT ACTION

Proposed re-issuance of the current permit issued on November 30, 2018, with an effective date of December 30, 2018, and an expiration date of December 29, 2023.

RECEIVING WATER – BASIN

Blanco Wash - San Juan River Basin

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
DO	Dissolved oxygen
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
lbs	Pounds
MG	Million gallons
MGD	Million gallons per day
ML	Method minimum level
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NOEC	No observable effect concentration
NPDES	National Pollutant Discharge Elimination System
SQL	Minimum quantification level
O&G	Oil and grease
PFAS	Per- and Polyfluoroalkyl Substances
POTW	Publicly owned treatment works
RP	Reasonable potential
SS	Settleable solids
SSM	Sufficiently Sensitive Method
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Waste Load allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

The changes from the current permit issued on November 30, 2018, with an effective date of December 30, 2018, and an expiration date of December 29, 2023, include:

- Mass limitation for TSS has been removed.
- Limits for copper have been added.
- Monitoring for hardness has been added.
- Monitoring frequency for TSS has been changed to “Daily” from “Weekly”.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility (Outfall 001: Latitude 36° 24' 39" North and Longitude 107° 47' 34" West) is located on County Road 7575, 3 miles east of Highway 550/County Road 7575, San Juan County, New Mexico.

Under the SIC code 4941, the applicant operates Cutter Lateral Water Treatment Plant (CLWTP), which potentially discharges an average flow of 0.12 MGD. The plant design flow of 3.0 MGD in 2020 (Phase 1). Currently, the plant is producing 10% of Phase 1 design flow. There were 4 discharge reports during 4th quarter of 2020 to 1st quarter of 2021; since then there has been no discharge.

The CLWTP treatment process includes coagulation, flocculation, and filtration processes with added granular activated carbon (GAC) absorption during startup and low flow influent flow rates. The decant flow stream to NPDES discharge is comprised of two flow streams - the backwash waste/off spec ponds and the solids drying beds decant flows. The decant from the backwash waste/off spec ponds and the sludge drying ponds is sent to the decant pump station, which then potentially pumps to the NPDES discharge point passing through a storm water detention pond to Outfall 001 or directly to the beginning of the plant. The discharge is to Blanco Wash, a tributary of Canon Largo, thence to San Juan River. Sludge is hauled to landfill. A map of the facility is attached.

Flow metering and sampling will occur prior to entering the storm detention pond. The storm water drained to the pond is not currently regulated in this permit because the facility is not required coverage under a Municipal Separate Storm Sewer System (MS4) or Multi-Sector general permit. The storm detention pond is not part of the water treatment process, and it is not regulated in this permit. The plant has been designed with the ability to recycle the backwash waste/off spec ponds and solids drying beds decant flows to the head of the plant. This permit does not regulate or authorize the water source the permittee uses to treat and supply drinking water to others.

III. EFFLUENT CHARACTERISTICS

Selected data submitted in Form 2C is as follows:

Parameter	Max	Avg
	(mg/l unless noted)	
Flow (MGD)	NA	NA
pH, minimum, standard units (s.u.)	6.83	NA
pH, maximum, standard units (s.u.)	7.99	NA
Temperature (winter), °C	11.6	10.2
Temperature (summer), °C	NA	NA

Nitrogen, nitrile as N (ug/L)	100	
Total Suspended Solids (TSS)	48	8
E. coli/Fecal coliform (MPN/100 ml)	NA	NA
Ammonia (as N)	NA	NA
Copper, total (ug/L)	2.8	2.8
Lead, total (ug/L)	2.7	2.7
Aluminum (ug/L)	33	23
Chromium, dissolved (ug/L)	6.0	
Antimony, dissolved (ug/L)	1.0	
Arsenic, dissolved (ug/L)	1.0	
Selenium, dissolved (ug/L)	1.0	
Thallium, dissolved (ug/L)	0.5	
Nitrogen, total (ug/L)	1000	
Phosphorus, total (ug/L)	10	
TKN (ug/L)	1000	
Methyl mercury (ug/L)	0.000048	
Zinc, dissolved (ug/L)	1.0	
Nickel, dissolved (ug/L)	1.3	

Since March 1, 2020, according to echo.epa.gov there were exceedances of the effluent limitations in DMR as follows:

Parameter	Date Report	Exceedance, daily max., lbs./day	Exceedance, daily max., ug/L	Note
TSS	9/30/2020	48	48	
TRC	9/30/2020		<20	
TRC	10/31/2020		<20	
TRC	11/30/2020		<20	
TRC	3/31/2021		<20	

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water”; more commonly known as the “swimmable, fishable” goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

V. DRAFT PERMIT RATIONALE AND CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS. Water quality-based effluent limitations are established in the proposed draft permit for copper, pH and TRC.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Regulations promulgated at 40 CFR §122.44(a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants, including BOD, TSS, *E. coli* bacteria, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

2. Effluent Limitation Guidelines

There is currently no ELG for drinking water treatment and supply. TSS limits (20 mg/l for the 30-day average and 30 mg/l for the daily maxima) is determined by case-by-case effluent limitations using BPJ under section 402(a)(1) of CWA. EPA proposed to retain the limits and to change the monitoring frequency to daily (when discharge occurs) due to nature of the potential discharge. Since these are technology-based requirements there is no compliance schedule provided to meet these limits. Compliance is required on the permit effective date. The projected discharge is well below this limitation.

Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day. However, decant, consisting of backwash waste/off specification water, is pumped to a storm water retention pond or directly to the beginning of the plant. There were 4 discharge reports on 3/31/2021 or prior in the previous permit term. EPA believes potential discharge of the decant from the pond to the receiving water is not regular. Thus, EPA proposes to remove the mass limitation for TSS because it's infeasible pursuant to 40 CFR §122.45(f)(1)(iii). The removal of mass limitation does not violate the Antidegradation regulation due to exceptions per 40 CFR 122.44(l)(2)(i)(B) for reasons below:

- Available information (flow, duration) of potential discharge from stormwater retention pond, which was not available in the previous permit application; and/or
- Technical mistake was made in issuing the previous permit.

3. Pretreatment Regulation

The facility is not subject to the full pretreatment program pursuant to 40 CFR 403.8.

4. Per- and Poly-Fluoroalkyl Substances (PFAS)

EPA memorandum, dated April 28, 2022, details how the EPA addresses PFAS discharges in EPA-issued NPDES permits. This drinking water treatment category is not listed in the memorandum; no monitoring requirement for PFAS is required.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on Federal or State/Tribe WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State/Tribe WQS and applicable State/Tribe water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State/Tribe narrative and numerical water quality standards are used in conjunction with EPA criterion and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC approved on April 26, 2022). The potential wastewater flows from the outfall to Blanco Wash, thence to Canon Largo, thence to San Juan River. Because there is currently no water stream at Blanco Wash, EPA applies the WQS as for intermittent stream defined under 20.6.4.98 NMAC. The stream designated uses are livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact. Since the 4Q3 is zero (for intermittent and ephemeral streams), applicable & most stringent criterion must be met at point of discharge.

4. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. pH

For marginal warmwater aquatic life, criteria for pH is between 6.6 and 9.0 s.u. pursuant to 20.6.4.900.H(6) NMAC.

b. Bacteria, DO

Not applicable for this water treatment

c. TRC

For wildlife habitat, criteria for TRC is 11 ug/l pursuant to 20.6.4.900.G NMAC. However, if a test result is less than the MQL specified in Part II.A of the permit it can be reported as zero for compliance purpose. The previous limit is retained since TRC may exist in the waste decant discharging to the receiving water .

d. Toxics

The CWA in Section 301(b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44(d) state that if a discharge poses the RP to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

Submitted data in Form 2C is used to analyze the RPs for applicable against NMWQS; other information is shown in the Appendix A (excel attached). There is no data for hardness, which is a factor for criteria for specific metals in the NMWQS. A conservative value, 20 mg/L, is used in the evaluation. EPA proposes monitoring of the hardness in the potential discharge; sampling of hardness takes place at Outfall 001 (after the storm water pond) when discharge occurs. EPA would use this hardness data for next RP analysis in case no hardness data of the receiving water is available. There is RP excursion for copper as shown in Attachment A. EPA newly establishes concentration limits for copper with a compliance schedule [per 40 CFR 122.47(a)] as stated in Part I of the permit. Monitoring of aluminum and manganese are continued for next evaluation.

All the reasonable potentiated parameters below were reported with data of “ND” (unless noted) at different ML. The tested method and results of the following pollutants were not in compliance with the SSM requirement pursuant to 40 CFR 122.21(e)(3). Summary of the tested methods are compared to the SSM requirement as follow:

Pollutants	Test Result (Method), ug/L	Applicable WQS, ug/L	Suggested Method with SSM Complied MDL, ug/L
Benzo(a)pyrene	<0.56 (EPA 625.1)	0.18	0.023 (EPA Method 610)
Hexachlorobenzene	<0.56 (EPA 625.1)	0.0029	0.05 (EPA Method 612)

Pollutants shown in Part I.A.2 of the draft permit, applicable to the State WQS that are not listed in Table C of Form 2A, will be tested, if the permit will be reapplied, during the permit term pursuant to 40 CFR 122.21(j)(4)(iv).

e. TDS

20.6.4.54 NMAC states, ‘For the tributaries of the Colorado river system, the state of New Mexico will cooperate with the Colorado River Basin states and the federal government to support and implement the salinity policy and program outlined in the most current “review, water quality standards for salinity, Colorado river system” or equivalent report by the Colorado river salinity control forum.’ The most updated version found is 2020 Review. DMRs show TDS was reported with the highest value of 290 mg/L, which is below 500 mg/L as fresh water. Thus, EPA retains the monitoring for TDS.

D. MONITORING FREQUENCY FOR CONDITIONED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1).

Parameter	Frequency*	Sample Type
Flow	Daily	Estimate***
pH	Daily	Instantaneous Grab
TSS	Daily (changed from weekly due to infrequent/potential discharge)	Grab
TRC	Daily	Instantaneous Grab
TDS	Daily	Grab
Metals	Daily	Grab
Hardness**	Daily	Grab
Pollutant in Form 2C and others	Once/term	Grab

* When discharge at Outfall 001 occurs. Frequency is changed to “Daily” due to nature of potential discharge.

** Sampling takes place at Outfall 001 located after stormwater retention pond.

*** Professional estimate flow at Outfall 001 when discharge occurs.

E. WHOLE EFFLUENT TOXICITY

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP. Table 11 (page 42) of the NMIP outlines the type of WET testing for different types of discharges. Because of the immediate receiving water, an intermittent stream (4Q3 = 0), the CD is 100%. WET testing species for this facility were previously: *Ceriodaphnia dubia* (Cd) and *Pimephales promelas* (Pp); the required WET tests passed in previous permit term. EPA retains the WET testing in this permit draft.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations must be 32%, 42%, 56%, 75% and 100%. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% effluent. The permittee shall monitor discharge(s) as specified below:

WHOLE EFFLUENT TOXICITY TESTING (7-Day Chronic Static Renewal/ NOEC) *	VALUE	MEASUREMENT FREQUENCY**	SAMPLE TYPE
<i>Ceriodaphnia dubia</i>	Report	Once/Term	Grab
<i>Pimephales promelas</i>	Report	Once/Term	Grab

* Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements and additional WET monitoring and reporting conditions. Grab samples are allowed per method, if needed.

** This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any. See Part II of the permit for WET testing requirements.

VI. TMDL REQUIREMENTS

There Blanco wash is currently not listed in the 303(d) List. No additional requirement is necessary now.

The permit has a standard reopener clause that would allow the permit to be changed if at a later date additional requirements on new/revised TMDLs or temporary standards are completed.

VII. ANTIDegradation

The NMAC, Section 20.6.4.8 “Antidegradation Policy and Implementation Plan” sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the draft permit are developed from the Tribe/State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the receiving water, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2. There is no increase in permitted design flow for this permit issuance.

VIII. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet Antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR 122.44(l)(2)(i)(B), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance.

IX. ENDANGERED SPECIES CONSIDERATIONS

According to a report updated on August 7, 2023 for discharge flowpath in San Juan County, NM obtained from <http://ecos.fws.gov/ipac>, there are seven endangered (E)/threatened (T) species: Southwestern willow flycatcher (E, bird), Yellow-billed Cuckoo (T, bird), Colorado pikeminnow (E, fish), Razorback sucker (E, fish), Mancos milkvetch (E, plant), Knowlton's cactus (E, plant) and Mesa Verde Cactus (T, plant). These species were determined with “will not significantly affect the quality of the human environment” according to the Decision Record and Environment Assessment provided by the Bureau of Reclamation & Bureau of Land Management (U.S. Department of the Interior). They all were previously listed and determined with “no effect” in the previous permit. According to the report, there are no designated critical habitats for all the species downstream from the discharging facility.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. The scope of the Federal Action is limited to the effects of authorizing the discharge and does not include the permittee's decision to cease discharging. After review, EPA has determined that the reissuance of this permit will have "no effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.
2. The draft permit is consistent with the States WQS and does not increase pollutant loadings.
3. EPA determines that Items 1 and 2 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

X. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no new construction activities are planned in the reissuance.

XI. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if NMWQS are promulgated or revised. In addition, if the State develops a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XII. VARIANCE REQUESTS

None

XIII. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer of COE, to the Regional Director of FWS and to the National Marine Fisheries Service prior to the publication of that notice.

XIV. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XV. ADMINISTRATIVE RECORD

The following information was used to develop the draft permit:

A. APPLICATION(s)

EPA Application Forms 2C dated June 26, 2023; additional Information dated July 21, 2023.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 133, 136, 434

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, effective July 24, 2020 and February 8, 2023

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2022-2024

D. MISCELLANEOUS

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico – NMIP, March 15, 2012

2020 Review Water Quality Standards for Salinity Colorado River System, October 2020

Permittee email dated September 8, 2023