

# **NPDES PERMIT NO. NM0023485**

## **FACT SHEET**

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

### **APPLICANT**

Town of Bernalillo  
P.O. Box 638  
Bernalillo, NM 87004

### **ISSUING OFFICE**

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### **PREPARED BY**

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### **DATE PREPARED**

June 1, 2026

### **PERMIT ACTION**

Proposed re-issuance of the current permit issued on July 30, 2021 with an effective date of September 1, 2021, and an expiration date of August 31, 2026.

### **RECEIVING WATER – BASIN**

Rio Grande River – Adjacent to Middle Rio Grande River Basin (Segment 20.6.4.106 NMAC)



**I. CHANGES FROM THE PREVIOUS PERMIT**

The changes from the current permit issued on July 30, 2021 with an effective date of September 1, 2021, and an expiration date of August 31, 2026, include:

- Monitoring for nitrate has been removed.
- Limitation for ammonia has been established with compliance schedule.
- Monitoring of PFAS has been established.
- Monitoring frequency for BOD<sub>5</sub>/TSS, E. coli bacteria and DO have been increased.
- Dilution series for WET testing have been changed.

**II. APPLICANT LOCATION and ACTIVITY**

As described in the application, the facility (Outfall: Latitude 35° 18' 20" North and Longitude 106° 33' 40" West) is located at 585 Calle Chaparral, Bernalillo, Sandoval County, New Mexico. The facility is located on State land but the discharge from Outfall 001 enters the Rio Grande from the east to Pueblo of Sandia surface waters. The Tribe has jurisdiction over the east half of the Rio Grande, with the west half Rio Grande controlled by New Mexico.

Under the SIC code 4952, the applicant operates Town of Bernalillo Wastewater Plant, which has a design flow of 1.2 MGD providing sanitary services for approximately 9,068-population, with no significant industrial user (SIU) currently. There was one SIU in the previous permit. The treatment work was designed in 2007 with a calculated 20-year design flow of 1.2 MGD. Various environmental and financial factor have reduced both the growth rate of the Town and the average user wastewater discharge. Over the last two years, the maximum daily flow rate was less than 1.0 MGD and the averaged flow rate was about 0.604 MGD. The previous permit established limits with the design flow rate of 0.8 MGD. For this permit term, EPA retains this permitted rate at 0.8 MGD. The plant is a mechanical treatment system providing secondary level of treatment. Effluent is UV-disinfected before discharged via a lift station to Rio Grande River. Sewage sludge is digested, de-watered and then hauled to Sandoval County Landfill. A map of the facility is attached.

**III. EFFLUENT CHARACTERISTICS**

Data submitted in Form 2A is as follows:

| Parameter  | Max                 | Avg   |
|--|---------------------|-------|
|  | (mg/l unless noted) |       |
| Biochemical Oxygen Demand, 5-day (BOD <sub>5</sub> ) | 29                  | 4.5   |
| E. coli (MPN/100 ml)                                 | 2419.6              | 99    |
| Flow (MGD)   | 0.765               | 0.599 |
| pH, minimum, standard units (s.u.)                   | 6.53                | N/A   |
| pH, maximum, standard units (s.u.)                   | 7.67                | N/A   |
| Temperature (winter), °C                             | 12.6                | 15.6  |
| Temperature (summer), °C                             | 29                  | 27.1  |
| Total Suspended Solids (TSS)                         | 10                  | 4.9   |
| Ammonia (as N)                                       | 34.0                | 4.2   |
| TRC  | NA                  | NA    |
| DO   | 9.00                | 5.42  |
| Nitrate + Nitrite Nitrogen                           | 4.2                 | 2.0   |
| Kjeldahl Nitrogen                                    | 35                  | 5     |

|                    |       |       |
|--------------------|-------|-------|
| Oil & Grease       | <10.3 | <10.3 |
| Phosphorus (Total) | 5.9   | 2.1   |
| TDS                | 890   | 883   |

Since September 1, 2021, there have been exceedances in DMR (available upon request) as follows:

| Parameter           | Date Report               | Exceedance, 30-day average, mg/L | Exceedance, daily max., mg/L |
|---------------------|---------------------------|----------------------------------|------------------------------|
| DO                  | Several events            |                                  | Below minimum level          |
| pH                  | 6/30/25                   | 1 exceedance                     | Below minimum level          |
| TSS                 | 6/30/22, 2/28/25, 3/31/25 | 2 exceedances                    | 2 exceedances                |
| E. coli bacteria    | Many event dates          | 1 exceedance                     | Many exceedances             |
| TSS percent removal | 1 event                   |                                  | Below minimum level          |

**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 and BOD<sub>5</sub>, and percent removal for each. Water quality-based effluent limitations are established in the proposed draft permit for E. coli bacteria, pH, TRC and DO.

**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<sub>5</sub>, 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

The facility is a POTW/POTW-like that has technology-based limits established at 40 CFR 133.102 for Secondary Treatment Regulation. Pollutants with limits established in this Chapter are BOD<sub>5</sub>, TSS and pH. BOD<sub>5</sub> limits of 30 mg/l for the 30-day average and 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits; also 30 mg/l for the 30-day average and 45 mg/l for the 7-day average, average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). The limit for pH is 6-9 s.u. based on 40 CFR §133.102(c).

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. When determining mass limits for POTWs or similar, the plant’s design flow (0.8 MGD in this case) is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

$$\text{Loading in lbs/day} = \text{pollutant concentration in mg/l} * 8.345 \text{ (lbs)(l)/(mg)(MG)} * \text{design flow in MGD}$$

$$30\text{-day average BOD/TSS loading} = 30 \text{ mg/l} * 8.345 \text{ (lbs)(l)/(mg)(MG)} * 0.8 \text{ MGD} = 200 \text{ lbs/day}$$

$$7\text{-day average BOD/TSS loading} = 45 \text{ mg/l} * 8.345 \text{ (lbs)(l)/(mg)(MG)} * 0.8 \text{ MGD} = 300 \text{ lbs/day}$$

A summary of the technology-based limits for the facility at both outfalls is:

| Parameter                                 | 30-day Avg, lbs/day, unless noted | 7-day Max, lbs/day, unless noted | 30-day Avg, mg/l, unless noted | 7-day Max, mg/l, unless noted |
|---|-----------------------------------|----------------------------------|--------------------------------|-------------------------------|
| BOD <sub>5</sub>                          | 200                               | 300                              | 30                             | 45                            |
| BOD <sub>5</sub> , % removal <sup>1</sup> | ≥ 85                              | ---                              | ---                            | ---                           |
| TSS                                       | 200                               | 300                              | 30                             | 45                            |
| TSS, % removal <sup>1</sup>               | ≥ 85                              | ---                              | ---                            | ---                           |
| pH  | N/A                               | N/A                              | 6.0 to 9.0 s.u.                | 6.0 to 9.0 s.u.               |

<sup>1</sup> % removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration] \* 100.

### 3. Pretreatment Regulation

The facility has no significant industrial users (SIUs) in this permit term. A full pretreatment program is not required pursuant to 40 CFR 403.8.

## 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/Tribal 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. Sandia Water Quality Standards

The Pueblo of Sandia has been approved to have treatment in the same manner as a state as contained in 40 CFR 131.8. The general and specific stream standards for the Pueblo of Sandia Water Quality Standards (PSWQS) are provided in “Pueblo of Sandia Water Quality Standards”, revised July 19, 2023, approved and adopted by Tribal Council Resolution 2023-107 on August 23, 2023, and approved by EPA on August 14, 2024. This latest WQS was used in the previous permitting renewal. The designated uses of the Rio Grande, according to PSWQS, Section V.A.1, are warmwater and coolwater aquatic/fishery, primary contact ceremonial, primary and secondary contact recreational, agricultural and industrial water supply, domestic water supply and wildlife habitat. The critical low flow 4Q3 and harmonic mean (PSWQS, Section I.H) are the same as NMWQS.

### 4. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC approved on August 14, 2025). The receiving water is Rio Grande River (segment 20.6.4.106 NMAC of the Rio Grande River Basin). The stream designated uses are irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat and primary contact and public water supply.

### 5. 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). Concentration limits are monitored at Outfalls 001. The most stringent limitations among State/Tribal WQS and effluent limitation guidelines are chosen as follows:

a. pH

| State Water Designated Use(s)                       | State WQS                         | Tribe Water Designated Use(s)  | Pueblo of Sandia (PS) WQS | Limitation Established |
|---|-----------------------------------|--------------------------------|---------------------------|------------------------|
| Primary contact and marginal warmwater aquatic life | 6.6 – 9.0 [20.6.4.900.D and H(6)] | Coolwater Aquatic Life/Fishery | 6.6 – 9.0 [Section IV.A]  | 6.6 – 9.0 s.u.         |

b. Bacteria

| State Water Designated Use(s) | State WQS  | Tribe Water Designated Use(s)  | PSWQS  | Limitation Established   |
|-------------------------------|--|--------------------------------|--|--|
| Primary contact               | 126 cfu (or MPN)/100 ml monthly; 410 cfu (or MPN)/100 ml daily maximum, [20.6.4.900.D] | Primary Contact Ceremonial Use | 47 cfu/100 ml monthly; 88 cfu/100 ml daily maximum, [Section IV.C] | 47 cfu (or MPN)/100 ml monthly; 88 cfu (or MPN)/100 ml daily maximum |

c. 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 reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant.

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs, but also to facilities that are similar to POTWs, but which do not meet the regulatory definition of “publicly owned treatment works” (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to “make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities,” per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

NMED provides a 4Q3 a critical flow of 333.0 cfs (at gage 08317400 Rio Grande below Cochiti Dam from 2020 to present); adjusted harmonic mean is 554.7 cfs. The ambient upstream data is obtained from SWQB Monitoring Station 32RGrand508.0 and 30RGrand517.3 from April 2014 to October 2014. Effluent metal-pollutants (due to discharge flow < 1.0 MGD) are evaluated against the MQL, PSWQS and NMWQS (for those with no established MQL). Pollutants with levels above the MQL and Tribal/State WQS are analyzed for RP. Ambient data are inputted into the RP if available. For RP calculation purpose, ML values are used for those results reported with less than the MLs or non-detect (ND). The calculated instream concentrations in Appendix A are compared to PSWQS applicable criteria. Attached Appendix A shows no RPs exist in terms of PSWQS and NMWQS. Due to nature of

the discharge EPA sees no concern for other toxic pollutants based on their test results. If there are no changes in treatment process, SIU nor the discharge flow is greater than 1.0 MGD (with permittee’s certification), the permittee may not need to test for parameters in Table C form 2A unless required in the permit.

There is no RP excursion for adjusted gross alpha in Appendix A. Monitoring requirement (reduced to semi-annually) for this pollutant is retained in this permit draft for TMDLs purpose mentioned below.

Arsenic is re-evaluated against the PSWQS for RP using data in Appendix A. To determine if a pollutant has a reasonable potential to exceed a water quality criterion the following calculation is performed with a steady-state mass balance model in the NMIP:

$$\text{Instream concentration} = ((FQ_a \times C_a) + (Q_e \times C_e \times 2.13)) \div (FQ_a + Q_e) = \text{ug/L}$$

Where:

$C_e$  is the average effluent concentration, 3.0 ug/l (dissolved)

$C_a$  is the geometric mean ambient concentration upstream of discharger, 2.1 ug/l (dissolved),

$Q_e$  is the effluent flow rate, 1.24 cfs (0.8 MGD)

$Q_a$  is the 4Q3 flow rate, 333.0 cfs (554.7 cfs applicable to fish consumption criterion)

F is the fraction of stream allowed for mixing, 1.0.

The criterion for arsenic is as below pursuant PSWQS Appendix B:

| Arsenic  | Fish Consumption (dissolved)  | Acute (dissolved)   | Chronic (dissolved)   |
|--|---|---|---|
| Criterion, ug/L  | 3.6, more stringent than NMWQS  | 340, same as NMWQS  | 150, same as NMWQS  |
| Effluent, ug/L (Average value from 18 data points per DMR) | 7.6 (totalled value)<br>3.0 (dissolved value used in the calculation) | 7.6 (totalled value)<br>3.0 (dissolved value used in the calculation) | 7.6 (totalled value)<br>3.0 (dissolved value used in the calculation) |
| Calculated Instream Concentration, ug/L                    | 2.1 using $Q_a = 554.7$ cfs   | RP level = effluent x 2.13 = 6.4                                      | 2.1 using $Q_a = 333$ cfs   |

RP does not exist for any criterion because the calculated instream concentration is less than its respective criterion for fish consumption and chronic conditions, and the RP level is less than the acute criterion. Previous monitoring requirement for arsenic retained in this permit draft because data collected by PS shows downstream arsenic concentrations exceeds the PSWQS; PS has been concerned about.

d. TRC

The facility uses UV unit to disinfect the effluents. TRC of 11 µg/l (for wildlife habitat; 20.6.4.900.J NMAC and for Coolwater Aquatic Life/Fishery) is established in case chlorine based-product is contributed to the treatment process or disinfection of treatment equipment.

e. DO

Both the State of New Mexico and Pueblo of Sandia WQS criterion applicable to the marginal warm-water aquatic life and warmwater and coolwater aquatic/fishery, respectively, designated use is at least 5

mg/L for dissolved oxygen. As a part of the permitting process, EPA used the LA-QUAL water quality model, which is a steady-state one-dimensional model which assumes complete mixing within each modeled element, to develop permit parameters for the protection of the State of New Mexico and Pueblo of Sandia surface water WQS for DO (i.e., 5 mg/L). Primarily based on the City of Bernalillo Wastewater Treatment Plant’s design flow (0.8 MGD) and the critical flow of the receiving water (333 cfs), various BOD<sub>5</sub> factors including BOD<sub>5</sub> Secondary Treatment Standards were considered and simulated to achieve the DO criterion. A complete characterization of Rio Grande River (i.e., water quality and hydrodynamic data) was not available. Where data were not available, estimates and assumptions were made. The following is a summary of model inputs.

- The City of Bernalillo Wastewater Treatment Plant’s design flow is 0.035 m<sup>3</sup>/sec (0.8 MGD). The discharge location provided in the permit application is located at Latitude 35° 18' 20" N (35.3055), and Longitude 106° 33' 40" W (-106.5611). Other effluent parameters provided in the permittee’s application and applied in the model include Ammonia (Avg: 4.2 mg/L), DO (Avg: 5.42 mg/L), effluent temperature (27 C), Nitrite Nitrogen (Avg: 2.0 mg/L), and E. Coli (Avg: 99 CFU/100ml).
- NMED provided the following information. The critical low flow of Rio Grande River receiving stream is approximately 9.429 m<sup>3</sup>/sec (333 ft<sup>3</sup>/sec). Other parameters applied in the model include ambient temperature (18 C). Ammonia (Avg: 0.14 mg/L), DO (Avg: 5 mg/L), Nitrate plus Nitrite Nitrogen (Avg: 1 mg/L) and Ambient E. Coli of 18 CFU/100ml. The receiving stream was assumed to have an average depth of 6 feet (2 meters) and average width of 37 meters (121 ft) during critical flow since no data available.
- The EPA used New Mexico’s OpenEnviroMap to estimate the average elevation of the study area. The average elevation is approximately 1539.24 meter (5050feet). The studied Rio Grande River segment length is approximately 13.8 kilometers (6.8 miles).

The model results show no excursion of the receiving stream DO standard of 5 mg/L when the BOD<sub>5</sub> limits of 30 mg/l for monthly average and 45 mg/l for 7-day maxima were applied (see attached graph with 30/45 mg/L BOD<sub>5</sub>; other detail information is available upon request).

The model results are based on the assumptions and default values as explained and presented above. Should these conditions change, the model should be updated to provide a more accurate assessment of the water quality within the receiving water body.

f. Salinity/Mineral Quality (Total Dissolved Solids, Chlorides, and Sulfates)

There are criteria for TDS (500 mg/L and no more than 1/3 increase of the background concentration, which are more stringent than the NMWQS), chlorides and sulfates (250 mg/L and no more than 1/3 increase of the background concentration) applicable to the designated uses pursuant to PSWQS Section III.K and 20.6.4.106.B(2) NMAC. TDS is evaluated with the same method as for arsenic above using new available data for 4Q3, effluent and ambient concentrations. Ambient concentration (Ca) for TDS, measured at the same locations as for arsenic, was 209 mg/L on geometric mean from April to Oct. 2014 and some data points in April & July 2025.

| Pollutants | PSWQS;<br>Section III.K | NMWQS;<br>mg/L | Effluent<br>Concentration<br>(Ce), mg/L<br>(per DMRs) | Ambient<br>Conc.<br>(Ca),<br>mg/L | 1/3 increase<br>of ambient<br>conc. (Cs),<br>mg/L | Calculated<br>Instream<br>Conc.,<br>mg/L | RP Excursion    |
|------------|-------------------------|----------------|---|-----------------------------------|---|--|-----------------|
| TDS        | No more than            | 1,500          | 883 (averaged   | 209                               | 279   | 215                                      | No, due to ins. |

| Pollutants | PSWQS; Section III.K   | NMWQS; mg/L | Effluent Concentration (Ce), mg/L (per DMRs) | Ambient Conc. (Ca), mg/L | 1/3 increase of ambient conc. (Cs), mg/L | Calculated Instream Conc., mg/L | RP Excursion                               |
|------------|--|-------------|--|--------------------------|--|---------------------------------|--|
|            | 1/3 increase of background concentration nor 500 mg/L              |             | from 3 data points per application)          | (geometric mean)         |  |                                 | concentration < criteria per PSWQS/NMW QS. |
| Chlorides  | No more than 1/3 increase of background concentration nor 250 mg/L | 250         | Not required nor available                   | NA                       | NA                                       | NA                              | NA   |
| Sulfates   | No more than 1/3 increase of background concentration nor 250 mg/L | 500         | Not required nor available                   | NA                       | NA                                       | NA                              | NA   |

g. Oil & Grease, Ammonia, nitrate

O&G effluent data are reported with “ND” at 10.3 mg/L or less for ML, which is not a sufficient detection level compared to 10 mg/L on average as a guideline per PSWQS Section III.B. EPA retains monitoring requirement for O&G quarterly; data will be evaluated in the next permit renewal process.

Ammonia is re-evaluated using the same method as for arsenic with the same 4Q3. Ambient data for temperature and pH, measured at the same location as for arsenic, were 18 °C and 8.25 s.u. (Appendix A) from April to Oct. 2014. Ambient data for ammonia is not detected at 0.1 mg/L at the same location. The criterion for total ammonia is as below pursuant PSWQS Appendix A, Tables 1 and 3:

| Ammonia, total                          | Acute  | Chronic   |
|---|--|---|
| Criterion, mg/L                         | 2.6 using pH = 8.3, fish present. Same criterion as NMWQS  | 0.55 using pH = 8.3; 18°C, fish present. Between 0.99 and 0.87 for NMWQS. |
| Effluent, mg/L (average)                | 4.2 (14 data points per application)   | 4.2   |
| Calculated Instream Concentration, mg/L | Criterion must be met at end of pipe. RP level = effluent x 2.13 = 8.94                                  | 0.015   |
| Applicable Limit                        | Yes, because instream concentration is more than criterion (RP excursion)<br>Daily max. limit = 2.6 mg/L | No, because instream concentration is less than criterion                 |

The daily max. limit of 2.6 mg/L is established due to RP excursion pursuant to 40 CFR 122.44(d) The mass loading is calculated corresponding to the concentration limit using the same approach as for TSS above, 17.3 lbs./day. Because the effluent quality for ammonia (34 mg/L max. application) have not met the proposed limits, EPA provides compliance schedule pursuant to 40 CFR 122.47. Interim concentration limit for is set at the DMR level with corresponding mass limit because the compliance schedule exceeds one year.

Nitrate is evaluated using the same approach with harmonic mean flow (for human health criterion):

| Nitrate, total | Chronic |
|----------------|---------|
|----------------|---------|

|   |   |
|---|---|
| Criterion, mg/L                         | 10 for water consumption human health, PSWQS Appendix B   |
| Effluent, mg/L (average)                | 4.17 (per DMR)  |
| Ambient data                            | ND at 0.1 (nitrite + nitrate)                             |
| Calculated Instream Concentration, mg/L | 0.02 (see Appendix A)                                     |
| Applicable Limit                        | No, because instream concentration is less than criterion |

Previous monitoring requirement for total nitrate is removed in this permit draft unless the monitoring is warranted. This monitoring removals do not violate the Antidegradation because the current data were not available previously pursuant to 40 CFR 122.44(l)(2)(i).

h. Nutrients (total nitrogen and total phosphorus)

EPA has started to monitor nutrients (total nitrogen and total phosphorus) discharged from POTWs and others. Data would be used to determine applicable limits to protect local and downstream water quality. The proposed monitoring frequency for the nutrients is once/quarter.

i. PFAS

As explained at <https://www.epa.gov/pfas>, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects.<sup>1</sup> EPA is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses. Although not including numeric criteria for PFAS, the 2024 (current) NMQWS narrative criterion for toxic substances at 20.6.4.13(F)(1) NMAC states:

*“Except as provided in 20.6.4.16 NMAC, surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, duration, concentrations, or combinations that affect the propagation of fish or that are toxic to humans, livestock or other animals, fish or other aquatic organisms, wildlife using aquatic environments for habitation or aquatic organisms for food, or that will or can reasonably be expected to bioaccumulate in tissues of fish, shellfish and other aquatic organisms to levels that will impair the health of aquatic organisms or wildlife or result in unacceptable tastes, odors or health risks to human consumers of aquatic organisms.”*

The NMQWS includes a narrative criteria for monitoring of emerging contaminants at 20.6.4.14(F) NMAC that states: “Emerging Contaminants Monitoring: The department may require monitoring, analysis and reporting of emerging contaminants as a condition of a federal permit under Section 401 of the federal Clean Water Act.” Since PFAS chemicals are persistent in the environment and may lead to

<sup>1</sup> EPA, *EPA’s Per- and Polyfluoroalkyl Substances (PFAS) Action Plan*, EPA 823R18004, February 2019. Available at: [https://www.epa.gov/sites/production/files/2019-02/documents/pfas\\_action\\_plan\\_021319\\_508compliant\\_1.pdf](https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf)

adverse human health and environmental effects, the draft permit requires that the facilities conduct influent, effluent, and sludge sampling for PFAS according to the frequency outlined in the permit. The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

*“SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act— the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require;”*

EPA notes that there is currently not an analytical method approved in 40 CFR Part 136 for PFAS. As stated in 40 CFR § 122.44(i)(1)(iv)(B), in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. Therefore, the draft permit specifies that until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Method 1633. The Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with Method 1633, if appropriate.

EPA has included PFAS monitoring in the draft permit using analytical Method 1633. In January 2024, the EPA released final EPA Method 1633, a method to test for 40 PFAS in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue and final EPA Method 1621, which can broadly screen for the presence of chemical substances that contain carbon-fluorine bonds, including PFAS, in wastewater. More information on Method 1633 and status for approval under Part 136, is available at <https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas>.

There are currently no applicable Federal and/or State/Tribe surface water quality standards for PFAS. EPA proposes to monitor the PFAS pollutants in the influent, effluent and sewage sludge at three times per permit term based on the plant design flowrate to gather information on the presence or absence of PFAS in the discharge.

#### D. MONITORING FREQUENCY FOR LIMITED/MONITORED 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). EPA established monitoring frequencies based on Table 9 (page 34 of the NMIP) for design flow between 0.5 and 1.0 MGD.

| Parameter                            | Frequency  | Sample Type        |
|--------------------------------------|--|--------------------|
| Flow                                 | Daily  | Totalized Meter    |
| pH                                   | 5/week   | Instantaneous Grab |
| BOD <sub>5</sub> /TSS                | 1/Week (increased due to exceedances)              | 3-hr Composite     |
| % Removal                            | 1/month  | Calculation        |
| TRC*                                 | Daily  | Instantaneous Grab |
| E. coli Bacteria                     | 3/Week (increased due to exceedances)              | Grab               |
| DO                                   | 5/week (increased due to exceedances)              | Instantaneous Grab |
| Ammonia, total (as N)                | 1/month (interim limits)<br>3/month (final limits) | 3-hr Composite     |
| Nutrients, arsenic                   | Quarterly  | 3-hr Composite     |
| O&G, mercury, adjusted gross alpha** | Quarterly  | 3-hr Composite     |
| PCBs                                 | Once   | 3-hr Composite     |

\* Applicable when chlorine is used in the treatment process, including cleaning of treatment units.

\*\* [Adjusted Gross Alpha] (pCi/L) = [Gross Alpha] (pCi/L) - {[Uranium] µg/L} \* 0.67]. A conversion factor of 0.67 (pCi/L) µg is used to convert uranium concentrations (in µg/L) to uranium activity (in pCi/L) prior to subtraction. U-238 can be used in the absence of natural uranium. Composite sampling is more appropriate.

**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. An acute test at 4%, using an acute-to-chronic ratio of 10:1 will be the requirement for this permit based on a 4Q3 of 333 cfs (215 MGD) and effluent flow of 0.8 MGD for Outfall 001. There was no toxicity exhibited during the previous permit cycle at the critical dilution of 4%, therefore there is no Reasonable Potential for this outfall at the new critical dilution.

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. The additional effluent concentrations for the test are 1.7%, 2.3%, 3%, 4%, 5.3%. The permittee shall monitor discharge(s) as specified below for outfall 001:

| WET Testing (48-hr Acute Static Renewal NOEC) <sup>1</sup> | VALUE  | Frequency | Type           |
|--|--------|-----------|----------------|
| Daphnia pulex  | Report | Once/Year | 24hr Composite |
| Pimephales promelas  | Report | Once/Year | 24hr Composite |

<sup>1</sup> Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

**VI. TMDL REQUIREMENTS**

The receiving water segment 20.6.4.106 NMAC Rio Grande (non-pueblo Alameda Bridge to HWY 550 Bridge) has been listed in 303(d) List. The receiving water is not supporting designated uses of wildlife habitat, livestock watering, primary contact and marginal warmwater aquatic life. Causes are PCBs (including fish consumption), mercury (fish consumption), adjusted gross alpha and E. coli bacteria. Latest TMDL for E. coli was issued in 2010, which the limits were established based on this TMDL. EPA retains the previous limits for E. coli in this permit draft. TMDLs for other causes were estimated in 2023 but not available. Adjusted gross alpha monitoring is retained; EPA also establishes quarterly-

monitoring of mercury for TMDL purpose. Effluent PCBs level was not detected using EPA Method 1668A, whose MDL/ML is below the Tribe and State WQS; the monitoring is continued in this permit draft for TMDL purpose. If there are no changes in treatment process, SIU and the discharge flow is less than 1.0 MGD (with permittee's certification), the permittee may resubmit this test result for PCBs. Mercury test results have been reported with no detect with MQL of 0.005 ug/L, which is below PSWQS/NMWQS criteria. EPA retains monitoring of mercury quarterly for TMDL purpose. The permit has a standard reopener clause that would allow the permit to be changed if at a later date additional requirements on new or revised TMDLs 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 proposed permit are developed from the 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 assimilative capacity of the receiving water, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

## **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 February 26, 2026 for discharge flowpath, downstream in Bernalillo and Sandoval counties, NM obtained from <http://ecos.fws.gov/ipac>, there are four endangered (E)/threatened (T) species: Southwestern willow flycatcher (E), Rio Grande Silvery Minnow (E), Yellow-billed Cuckoo (T) and New Mexico meadow jumping mouse (E). These species were determined with "no effect" in the previous permit. A critical habitat for the Rio Grande Silvery Minnow has been established per 68 FR 8088 8135 dated 02/19/2003. The discharge flow path may cross this habitat. The discharge does not increase the loadings that could impact the water quality and on the endangered fish subsequently.

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. After review, EPA has no information determining that the reissuance of this permit will have "effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.
2. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.

3. The draft permit is consistent with the States WQS and does not increase pollutant loadings.
4. EPA determines that Items 1, thru 3 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 Pueblo of Sandia following regulations promulgated at 40 CFR §124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service 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 2A and 2S dated January 26, 2026

### **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 September 12, 2018.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2024-2026

Total Maximum Daily Load (TMDL) Report for the Middle Rio Grande Watershed, approved by EPA, June 30, 2010.

D. MISCELLANEOUS

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

Pueblo of Sandia Water Quality Standards, Effective August 18, 2024

NMED emails dated February 19, 2026

Permittee letter dated November 25, 2025

Pueblo of Sandia email dated May 28, 2026