# NPDES PERMIT NO. NM0024988
# FACT SHEET

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

APPLICANT

City of Santa Rosa
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ISSUING OFFICE

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DATE PREPARED

January 19, 2022

PERMIT ACTION

Proposed reissuance of the current permit issued September 30, 2016 with an effective date of October 1, 2016 and an expiration date of September 30, 2021.

RECEIVING WATER – BASIN

El Rito Creek in Segment No. 20.6.4.212 - Pecos 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 |
| ELG | Effluent limitation guidelines |
| EPA | United States Environmental Protection Agency |
| ESA | Endangered Species Act |
| FCB | Fecal coliform bacteria |
| F&WS | United States Fish and Wildlife Service |
| mg/L | Milligrams per liter |
| µg/L | Micrograms per liter |
| MGD | million gallons per day |
| 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 |
| NPDES | National Pollutant Discharge Elimination System |
| MQL | Minimum quantification level |
| O&G | Oil and grease |
| PCB | Polychlorinated Biphenyl |
| POTW | Publicly owned treatment works |
| RP | Reasonable potential |
| SIC | Standard industrial classification |
| s.u. | Standard units (for parameter pH) |
| SHPO | State Historic Preservation Officer (SHPO) |
| SWQB | Surface Water Quality Bureau |
| TDS | Total dissolved solids |
| THPO | Tribal Historic Preservation Officer (THPO) |
| TMDL | Total maximum daily load |
| TRC | Total residual chlorine |
| TSS | Total suspended solids |
| UAA | Use attainability analysis |
| USGS | United States Geological Service |
| WLA | Wasteload allocation |
| WET | Whole effluent toxicity |
| WQCC | New Mexico Water Quality Control Commission |
| WQMP | Water Quality Management Plan |
| WWTP | Wastewater treatment plant |

In this document, references to State WQS and/or rules shall mean either the State of New Mexico and/or any Tribe

## I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued September 30, 2016 with an effective date of October 1, 2016 and an expiration date of September 30, 2021.

- TRC measuring frequency has been changed to 5 times per week, when using chlorine, based on the NMIP *Table 8: Recommended Monitoring Frequencies for Municipal Wastewater Permits – Activated Sludge, Including Sequential Batch Reactors and Extended Aeration and Oxidation Systems* for activated sludge plants. Previous monitoring frequency was based on a discharging lagoon plant. Plant was updated in 2011.

## II. APPLICATION LOCATION and ACTIVITY

### LOCATION

The facility is located south of the City of Santa Rosa, on the south side of El Rito Creek, approximately 500 feet above the confluence with the Pecos River. The effluent from the treatment plant is discharged into El Rito Creek in Segment No. NMAC 20.6.4.212; thence to the Pecos River of the Pecos River Basin. The single outfall of the facility is located on El Rito Creek at:

Latitude 34° 55' 33.6" North, Longitude 104° 40' 55.2" West

### ACTIVITY

The existing City if Santa Rosa Wastewater Treatment Facility (WWTF) was constructed from 2011 to 2013 with a design flow of 0.667 MGD. An older pond based (aerated lagoons and settling ponds) treatment facility was removed in 2011. The WWTF currently receives an average daily flow of approximately 0.35 MGD. The WWTF is operated in a nitrification-denitrification (NDN) mode for the removal of nitrogen to meet effluent discharge requirements and provide beneficial use of reclaimed wastewater for parks and golf courses using the process, which is a form of conventional biological nutrient removal activated sludge process. The WWTF components include a headworks (mechanical fine screen and grit removal), primary life station, MRAS aeration basins, splitter boxes, secondary clarifiers, aerobic digesters, UV disinfection, a blower/pump building and concrete sludge drying beds. There is also an onsite stormwater pond that collects the site's stormwater flows and pumps them back into the headworks and through the treatment process. After the treatment process, the treated effluent is discharged into El Rito Creek, approximately 500 feet above the confluence with the Pecos River.

At the head of the treatment plant, the influent gravity flows to the automatic bar screen and a grinder for large solid removal. A second channel is available with a manual bar screen. Following the bar screens are a set of three pumps that lift the sewage to the aeration basins. The pumps are triggered by floats that sense the water level. The solids removed from the screens are dried and after passing the paint filter test, disposed of at the City of Tucumcari landfill. The liquid waste is sent to one of two oxidation ditch extended air treatment units. Fine bubble diffusers at the bottom of the basins provide aeration. The basin is cycled through an aerated phase and an anoxic phase. Mixers are located approximately five feet from the bottom of the

basin. Following the oxidation ditches are two secondary clarifiers. Solids are wasted from the bottom of the clarifier to the aerobic digester. Return activated sludge is sent back to the head of the treatment plant. Decant from the secondary clarifier is sent to the ultraviolet disinfection system, consisting of dual parallel channels. Following disinfection is a effluent flow meter, Parshall flume with staff gauge, and an ultrasonic sensor that records the totalized flow.

## III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received September 30, 2021 is presented below:
POLLUTANT TABLE – 1

| Parameter | Max | Avg |
|---|---|---|
| | (mg/L unless noted) | |
| Flow, million gallons/day (MGD) | 0.667 | 0.35 |
| pH, minimum, standard units (su) | 6.6 | N/A |
| pH, maximum, standard units (su) | 7.6 | N/A |
| Biochemical Oxygen Demand, 5-day ($BOD_5$) | 13 | 1.693 |
| E. coli (# bacteria /100 mL) | 16,000 | 131.023 |
| Total Suspended Solids (TSS) (mg/L) | 33 | 4.8 |
| Temperature (Winter) (F) | N/A | N/A |
| Temperature (Summer) (F) | N/A | N/A |
| Ammonia | 12 | 0.035 |
| Nitrate/nitrite | 18 | 3.959 |
| Kjeldahl nitrogen | 17 | 1.085 |
| Phosphorous | 12 | 3.505 |

A summary of the last 24-months of available pollutant data: September 2019 through September 2021, taken from DMRs show exceedances of permit limits for *E coli*. See Pollutant Table 2.

POLLUTANT TABLE – 2

| Date | E. coli | |
|---|---|---|
| | 30 DAY AVG | Daily Max |
| | cfu/100 mL | cfu/100 mL |
| Limit | 126 | 410 |
| 02/29/2020 | 1,128 | 9,000 |
| 03/31/2020 | 1,799 | 16,000 |
| 07/31/2020 | 414 | 2,400 |
| 02/28/2021 | 169 | N/A |
| 03/31/2021 | 335 | 1,100 |
| 04/30/2021 | 2,148 | 16,000 |
| 06/30/2021 | 338 | 1,100 |

## 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 EPA administered 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.

The permit application was received on September 30, 2021. It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The existing NPDES permit was initially issued September 30, 2016 with an effective date of October 1, 2016 and an expiration date of September 30, 2021.

## V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

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

Regulations contained in 40 CFR §122.44 require that 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 $BOD_5$. Water quality-based effluent limitations are established in the proposed draft permit for *E. coli* bacteria, TRC, and pH. These limitations are consistent with the previous permit.

### B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

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, fecal coliform, 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.

The Santa Rosa facility is a POTW that has technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are BOD, TSS, and percent removal for each. BOD limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). ELGs for pH are between 6-9 s.u. and are found at 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, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

Loading in lbs/day = pollutant concentration in mg/L * 8.345 lbs/gal * design flow in MGD

30-day average $BOD_5$ = 30 mg/L * 8.345 lbs/gal * 0.35 MGD
30-day average $BOD_5$ = 87.6 lbs/day

7-day average $BOD_5$ = 45 mg/L * 8.345 lbs/gal * 0.35 MGD
7-day average $BOD_5$ = 131.4 lbs/day

30-day average TSS loading = 30 mg/L * 8.345 lbs/gal * 0.35 MGD
30-day average TSS loading = 87.6 lbs/day

7-day average TSS loading = 45 mg/L * 8.345 lbs/gal * 0.35 MGD
7-day average TSS loading = 131.4 lbs/day

The proposed permit calculated the mass loading for $BOD_5$ and TSS based on 0.35 MGD flow to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR 122.44(1)(i)(A). The new design flow of 0.67 MGD will not be used to calculate mass loading for BOD5 and TSS until the City of Santa Rosa consults with NMED to identify the monitoring data required for NMED to complete an antidegradation analysis. The facility needs to complete upstream and downstream sampling in order for NMED to progress with the antidegradation analysis.

Technology-Based Effluent Limits - 0.35 MGD design flow (*).

| EFFLUENT CHARACTERISTICS | DISCHARGE LIMITATIONS | | | |
|---|---|---|---|---|
| | lbs/Day | | mg/L (unless noted) | |
| Parameter | 30-Day Avg. | 7-Day Avg. | 30-Day Avg. | 7-Day Avg. |
| Flow | N/A | N/A | Measure MGD | Measure MGD |
| $BOD_5$ | 87.6 | 131.4 | 30 | 45 |

| | | | | |
|---|---|---|---|---|
| $BOD_5$, % removal, minimum | ≥ 85% (*1) | --- | --- | --- |
| TSS | 87.6 | 131.4 | 30 | 45 |
| TSS, % removal, minimum | ≥ 85% (*1) | --- | --- | --- |
| pH | N/A | N/A | 6.0 – 9.0 s.u. | |

(*) As required by the 2003 NMED's conditions certification, the proposed permit will retain the mass loading for $BOD_5$ and TSS based on 0.35 MGD

(*1) Percent removal is calculated using the following equation: ](average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration.] x 100%

## 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 WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with the PSWQS, State WQS and applicable State 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 narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

### 3. Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through August 7, 2013). The facility discharges into the El Rito Creek in Segment No. 20.6.4.212; thence to the Pecos River of the Pecos River Basin. The designated uses of El Rito Creek (Seg. No 20.6.4.212) are irrigation, coldwater aquatic life, livestock watering, wildlife habitat and primary contact. The designated uses of Pecos River (Seg No 20.6.4.211) are fish culture, irrigation, marginal warm water aquatic life, livestock watering, wildlife habitat, and primary contact.

### 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

To protect "Coldwater" designated use, the State of New Mexico stream segment specific WQS require pH to be between 6.6 and 8.8 s.u. NMWQS (20.6.4.212 NMAC and 20.6.4.900 NMAC). To protect "Marginal Warmwater" designated use the State of New Mexico stream segment specific WQS require pH to be between 6.6 and 9.0 s.u. NMWQS (20.6.4.211 NMAC and 20.6.4.900 NMAC). The "coldwater" water quality-based limit criteria for pH will be used in the permit since it is more stringent than the "Marginal Warmwater" and technology-based limit.

b. Bacteria

New Mexico stream segment specific WQS for primary contact require *E. coli* of 126 cfu/100 mL monthly geometric mean and 410 cfu/100 ml daily maximum, end-of-pipe.

The draft permit will maintain the *E. coli* bacteria limits of 126 cfu/100 mL monthly geometric average and 410 cfu/day daily maximum. Limitations for E. Coli have been assigned as part of an approved TMDL of the current 2020-2022 State of New Mexico 303(d) List of Assessed River/Stream reaches requiring Total Maximum Daily Loads. An effluent limit has been established for 126 cfu/100 mL and a WLA of $3.2 \times 10^9$ cfu/day.

c. Dissolved Oxygen

An evaluation of the permittee's impact on the receiving water dissolved oxygen was completed as part of the permitting process. A steady state model (LA-QUAL) was used to evaluate the biochemical oxygen demand of the discharge and associated constituents including ammonia. A complete characterization of the receiving water was not available. Certain parameters, including flow, were available and were utilized. However, the receiving water model also used default values to estimate the various unavailable hydrodynamic and water quality parameters. The discharge was modeled using data obtained from the application, permits limits and defaults were used for unavailable discharge characterization data.

The evaluation demonstrated that the discharge would not cause an excursion of the in-stream standard of 5 mg/L and 6 mg/L. As a result, no further DO requirements are established in the draft permit. The output file is attached.

d. Toxics

(i) General Comments

All applicable facilities are required to fill out appropriate sections of the Form 2A, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTW's), but also to facilities that are similar to POTW's , 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.

The amount of information required for minor facilities was limited to specific sections of these forms. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's", June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTW's of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

The facility is designated as a minor and does not need to fill out the expanded pollutant testing. There are no toxics that need to be placed in the draft permit except for TRC as described below

(ii) Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allow a mixing zone for establishing pollutant limits in discharges. The state establishes a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. Based on information from the SWQB of the NMED low flow from the previous permit cycle (4.3 cfs) will be used in the renewal to calculate the CD.

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The critical dilution, CD, is calculated as:

$CD = Qe/(F \cdot Qa + Qe)$, where:

Qe = facility flow (0.67MGD)
Qa = critical low flow of the receiving waters (2.78 MGD [= 4.3 cfs])
F = fraction of stream allowed for mixing (1.0)

CD = 0.67 MGD/[(1.0)(2.78) + 0.67]
= 0.19
= 19%

(iii) TRC

The WQS for TRC is 11 µg/l for chronic conditions and 19 µg/l for acute. Since acute conditions do not allow dilution; the limit must be met at end-of-pipe, but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit. CD was calculated at 19 %. The in-stream TRC concentration after allowing for dilution is; 11 µg/l ÷ 0.19= 57.9 µg/l. Since this value is greater than the 19 µg/l end-of-pipe acute standard, the 19

µg/l is more stringent and will be more protective. The draft permit shall maintain the 19 µg/l limit contained in the present permit.

The facility has replaced chlorine use with UV treatment for bacteria control. 19 ug/l shall become the effluent limitation whenever chlorine is used as a bacteria control chemical. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

5. 303(d) List Impacts

The current 2020-2022 State of New Mexico Integrated Clean Water 303(d)/305(b) Report shows that the Pecos River from Sumner Reservoir to Santa Rosa Reservoir (Assessment Unit NM-2211.A_00) in Segment 20.6.4.211 NMAC is not supporting marginal warmwater aquatic life use due to nutrients. Fish culture uses were not assessed. The potential sources for impairment are unknown. Because the facility is only 500 feet above the above the Pecos River segment that is impaired for E.Coli, due to nutrients and/or eutrophication, monthly monitoring requirements for Nitrogen and Phosphorous are proposed in the draft permit.

El Rito Creek, Pecos River to headwaters (Assessment Unit NM-9000.A_050) in Segment 20.6.4.212 is fully supporting coldwater aquatic life, irrigation, livestock watering, and wildlife habitat uses. Primary contact was not supported due to E.Coli and cool water aquatic life was not supported due to total Ammonia. Probable causes were listed as municipal source discharges, waterfoul, land development, on-site treatment systems (septic), recreational pollution sources, impervious surface/parking lot runoff, road/bridge runoff, inappropriate waste disposal, rural (residential areas), streambank modifications/destabilization and unknown sources. The report states that additional ammonia sampling and full level 2 nutrient assessment is recommended prior to TMDL development. The NMIP states that the permitting authority may choose either a WET test or a chemical specific ammonia limit to address ammonia toxicity. Because WET testing has previously been required and is required in the proposed permit, no ammonia limitations will be proposed. A TMDL for the Upper Pecos headwater watershed (from Ft. Sumner Reservoir to Headwaters) was finalized in September 2013. A WLA allocation of WLA of $3.2 \times 10^9$ cfu/day was assigned and has been incorporated into the permit.

No additional limitations are required to address 303(d) concerns and if at a later time the segment is determined to be impaired, and/or a TMDL is done, or a TMDL is completed, the standard reopener clause will allow additional limitations to be placed in the permit.

D. MONITORING FREQUENCY FOR LIMITED 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).

The City of Santa Rosa was issued a Consent Agreement and Final Order (CAFO) by USEPA in 2012 because of a previous Administrative Order resulting from violations of $BOD_5$, E. coli and TSS at Outfall 001. Since the CAFO, the City of Santa Rosa has been in compliance with $BOD_5$ and TSS.

In the previous permit NMED requested a monitoring frequency of two (2) times a week for E. coli. Since the WWTP had seven exceedances of E. coli, this monitoring frequency will be continued in the proposed permit.

Technology based pollutants; $BOD_5$ and TSS, are proposed to be monitored three (3) times a month with a 3- hr. composite sample type for both $BOD_5$ and TSS, which is consistent with the NMIP. Flow shall be sampled continuously (daily) by totalizing meter consistent with the previous permit.

Water quality-based pollutant monitoring frequency for *E. coli* shall be sampled two (2) times per week using grab samples. When TRC is used as a bacteria control chemical for the effluent, TRC shall be measured five (5) times per week by instantaneous grab (field measurement). The pollutant pH shall be monitored five (5) times per week by instantaneous grab (field measurement) sample consistent with the NMIP. Regulations at 40 CFR Part 136 define instantaneous grab as being analyzed within 15-minutes of collection.

E. WHOLE EFFLUENT TOXICITY LIMITATION REQUIREMENTS

OUTFALL 001 (FOR PIMEPHALES PROMELAS ONLY)

In Section V.C.4.c.ii above; "Critical Conditions", it was shown that the critical dilution, CD, for the facility is 19%. Based on the nature of the discharge (POTW), the design flow (more than 0.1 MGD but less than 1.0 MGD), the nature of the receiving water (perennial), and the critical dilution (19%) the NMIP directs the WET test to be a 7-day chronic test using *Pimephales promelas* at a once year frequency consistent with the NMIP. Based on the WET Recommendation, no WET limits will be established in the proposed permit.

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 shall be, 8% 11%, 14%, 19% and 25%. The low-flow effluent concentration (critical low-flow dilution) is defined as 19% effluent. During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to El Rito Creek of the treatment system aeration basin. The aeration basin receives process area wastewater, process area stormwater, and treated sanitary wastewater. Discharges shall be limited and monitored by the permittee as specified below:

| EFFLUENT CHARACTERISTIC | DISCHARGE MONITORING | |
|---|---|---|
| | 30-DAY AVG MINIMUM | 7-DAY MINIMUM |
| Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/ | | |
| *Pimephales promelas* | REPORT | REPORT |

| EFFLUENT CHARACTERISTIC | MONITORING REQUIREMENTS | |
|---|---|---|
| | FREQUENCY | TYPE |

| | | |
|---|---|---|
| Whole Effluent Toxicity Testing (7 Day Static Renewal) 1/ | | |
| *Pimephales promelas* | 1/ year | 24-Hr. Composite |

FOOTNOTES

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

## OUTFALL 001 (FOR CERIODAPHNIA DUBIA ONLY)

In Section V.C.4.c.ii above; "Critical Conditions", it was shown that the critical dilution, CD, for the facility is 19%, because the discharge is to a perennial. Based on the nature of the discharge; POTW, the design flow (more than 0.1 MGD but less than 1.0 MGD), the nature of the receiving water (perennial), and the critical dilution (19%), the NMIP directs the WET test to be a 7 day chronic test using *Ceriodaphnia dubia* at a once per 6 months frequency for the life of the permit. A WET limit was established in the previous permit due to failures at the sub-lethal endpoint for the test species *Ceriodaphnia dubia*. The proposed permit maintains the previously established limits.

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 shall be 8%, 11%, 14%, 19% and 25%. The low-flow effluent concentration (critical low-flow dilution) is defined as 19% effluent. During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to El Rito Creek of the treatment system aeration basin. The aeration basin receives process area wastewater, process area stormwater, and treated sanitary wastewater. Discharges shall be limited and monitored by the permittee as specified below:

| EFFLUENT CHARACTERISTIC | DISCHARGE LIMITATIONS | |
|---|---|---|
| | 30-DAY AVG MINIMUM | 7-DAY MINIMUM |
| Whole Effluent Toxicity (PCS 22414) (7-Day NOEC) 1/ | 19% | 19% |
| *Ceriodaphnia dubia* | REPORT | REPORT |

| EFFLUENT CHARACTERISTIC | MONITORING REQUIREMENTS | |
|---|---|---|
| | FREQUENCY | TYPE |
| Whole Effluent Toxicity (7-Day NOEC) 1/ | | |
| *Ceriodaphnia dubia* | 1/6 months | 24-Hr. Composite |

FOOTNOTES

1/ Monitoring reporting requirements and compliance with Whole Effluent Toxicity limitations is required on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

## VI. FACILITY OPERATIONAL PRACTICES

### A. SEWAGE SLUDGE PRACTICES

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge". EPA may at a later date issue a sludge-only permit. Until such future issuance of a sludge-only permit, sludge management and disposal at the facility will be subject to Part 503 sewage sludge requirements. Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a sludge-only permit has been issued. Part IV of the draft permit contains sewage sludge permit requirements.

### B. WASTEWATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

### C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has no non-categorical Significant Industrial User's (SIU) and no Categorical Industrial User's (CIU). The EPA has tentatively determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been required. The facility is required to report to EPA, in terms of character and volume of pollutants any significant indirect dischargers into the POTW subject to pretreatment standards under Section307(b) of the CWA and 40 CFR Part 403. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403. The following pollutants may not be introduced into the treatment facility: Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21; Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharge; Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference; Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW; Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits; Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through; Pollutants which result in the presence of toxic gases, vapors, or

fumes within the POTW in a quantity that may cause acute worker health and safety problems; and any trucked or hauled pollutants, except at discharge points designated by the POTW.

D. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

Electronic Reporting Rule

Monitoring results shall be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. All DMRs shall be electronically reported effective December 21, 2016 per 40 CFR 127.16. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. Until you are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and copies to NMED as required (See Part III.D.IV of the permit). Reports shall be submitted quarterly.

Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

VIII. ANTIDEGRADATION

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of its WQS. The limitations and monitoring requirements set forth in the proposed draft are developed from the appropriate State WQS and are protective of those designated uses. Furthermore, the policy's set forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The proposed permit renewal retains the mass loading for BOD and TSS based on 0.35 MGD flow, as requested by NMED's conditions of certification in the previous permit. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water.

IX. 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)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains the mass loading requirements of the 2011 permit for $BOD_5$ and TSS, based on 0.35 MGD flow, as required in NMED's conditions of certification. All of the changes represent permit requirements that are consistent with the States WQS and WQMP.

## X. ENDANGERED SPECIES CONSIDERATIONS

Five species in the area of the treatment plant are listed Endangered or Threatened, according to the U.S. Fish & Wildlife Service's (USFWS) website, https://ecos.fws.gov/ipac/location/MRZQ3BHANRGRVJDAPCC4XPJU3I/resources. Endangered species listed are the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) and the New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*). Threatened species listed are the Pecos Sunflower (*Helianthus paradoxus*), and the Piping Plover (*Charadrius melodus*). The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in Guadalupe County; however, the USFWS, removed the American bald eagle in the lower 48 states from the Federal List of Endangered and Threatened Wildlife Federal Register, July 9, 2007, (Volume 72, Number 130). EPA determined the permitting action had no effect on the Pecos Sunflower, Bald Eagle, and Southwestern Willow Flycatcher when EPA reissued the permit in 2001. In addition, there is no designated critical habitat in the location for any of the listed species.

EPA requested U.S. Fish and Wildlife Service (FWS) to concur on the "no effect" determination for the bald eagle and southwestern willow flycatcher, and FWS concurred in the letter (Cons. # 2-22-01-I-194) dated March 7, 2001. After review, EPA has determined that the reissuance of this permit will not change the environmental baseline established by the previous permit, and therefore, EPA concludes that 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 determined a "No effect" during previous permit.
2. Except for the bald eagle which was delisted in 2007 from the US FWS list of threatened and endangered species, no additional changes have been made to the critical habitat designation in the area of the discharge since prior issuance of the permit.
3. EPA has received no additional information since the previous permit which would lead to revision of its determinations.
4. EPA determines that Items 1, 2, and 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.

## XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

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

## XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of either States WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the State's Water Quality Standards are either revised or promulgated. Should either State adopt a new WQS, and/or develop or amend a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR 122.44(d). Modification of the permit is subject to the provisions of 40 CFR 124.5.

## XIII. VARIANCE REQUESTS

No variance requests have been received.

## XIV. CERTIFICATION

The permit is in the process of certification by the State of New Mexico 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.

## XV. FINAL DETERMINATION

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

## XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

### A. APPLICATION(s)

EPA Application Form 2A received September 30, 2021

### B. 40 CFR CITATIONS

Citations to 40 CFR as of January 19, 2022.
Sections 122, 124, 125, 133, 136

### C. STATE WATER QUALITY REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through October 2, 2020.

Procedures for Implementing NPDES Permits in New Mexico, March.

State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List, 2020 – 2022.

D. MISCELLANEOUS REFERNCES

September 25, 2013 TMDL for the Pecos Headwater Watershed document