

NPDES PERMIT NO. NM0020273
FACT SHEET

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

APPLICANT

City of Raton Wastewater Treatment/Reclamation Facility
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ISSUING OFFICE

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DATE PREPARED

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PERMIT ACTION

Proposed reissuance of the current NPDES permit issued on May 28, 2015, with an effective date of July 1, 2015, and an expiration date of June 30, 2020.

RECEIVING WATER – BASIN

Doggett Creek (20.6.4.318. NMAC), thence to Raton Creek (NM-2305.A_253), thence to Chicorica Creek, thence to Canadian River in the Canadian River Basin Grande 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 (one part per million)
ug/l	Micrograms per liter (one part per billion)
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
POTW	Publically owned treatment works
RP	Reasonable potential
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
UV	Ultraviolet light
USFWS	United States Fish & Wildlife Service
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

As used in this document, references to State shall mean State of New Mexico

I. CHANGES FROM THE PREVIOUS PERMIT

- Added the E. coli bacteria 30-day average loading limit of 4.3 billion cfu/day;
- Added a 30-day average concentration limit of 9.3 mg/L for TN;
- Added a 30-day average loading limit of 41.1 lbs/day for TN;
- Added a 30-day average loading limit of 13.3 lbs/day for TP;
- Established a 5-year schedule of compliance consistent with the most recent, Water Quality Control Commission-approved version of the New Mexico Environment Department, Surface Water Quality Bureau's "Nutrient Temporary Standards for City of Raton Wastewater Treatment Plant, NPDES No. NM0020273 to Doggett Creek."

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 420 East Hereford Avenue, Raton, Colfax County, New Mexico. Under the NAICS code 221320 and SIC code 4952, the applicant operates a sewage treatment plant or facility, hereafter referred to as a POTW. The facility has a design flow capacity of 0.9 MGD serving a residential population of 6885.

The Raton Wastewater Treatment Plant (WWTP) consists of the headworks including a screw pump/auger and grit removal, SBR basins and UV disinfection, as well as a reuse system to irrigate the city's golf course. A splitter box and retention basin are located on site for this purpose, and the effluent is chlorinated in the line on the way out to the golf course.

Influent enters the headworks through a 9" Parshall flume. Grit and solids removal take place after entry into the system, and the grit and rags from the influent are collected in a container that is later disposed in a landfill.

The flow then enters a splitter box where it is evenly divided between two basins of the SBR. These two units run in parallel. The water enters equalization chambers after leaving the splitter box. This gives the operator control of the wastewater levels in the reactor basins. In the first phase, the water fills the reactor chambers. The water entering the chambers mixes with the biomass that has settled from the last treatment phase. Once the chambers are full, in the second phase, air is added to the mixture through fine bubble diffusers to facilitate biological growth and waste reduction/treatment of the wastewater. In the third phase, the air is turned off and the treated wastewater can settle. In the decant phase, the now clarified effluent is discharged from this part of the plant. The total cycle run time is 289 minutes and this cycle runs 5 times per day.

The effluent is then sent through a UV treatment system. This is an enclosed UV system where the bulbs are fixed and are periodically cleaned, manually, with an internal scrubber, which is part of the unit. This system is housed below ground and has been enclosed within a building to protect it from the elements.

After disinfection by UV, the water proceeds to the outfall. It is measured by a 6" Parshall flume and totalizer meter. Waste sludge from the SBR basins is decanted during an idle phase, if needed, and directed to a holding basin on site. This was one of the former aeration basins from the old plant footprint. Sludge is then injected at an adjacent plot of land.

The facility discharge is to Doggett Creek, thence to Raton Creek, thence to Chicorica Creek, thence to Canadian River. The Doggett Creek is an unclassified perennial water below the discharge point. The discharge is located at Latitude 36° 52' 13.91" N and Longitude 104° 25' 39.18" W, in Colfax County, New Mexico.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received January 7, 2020, is presented in Table 1 below:

TABLE 1

Parameter	Max	Avg
	(mg/l unless noted)	
Flow, MGD	0.5	0.35
Temperature, winter	9.5° C	8.7° C
Temperature, summer	24.6° C	23.5° C
pH, minimum, standard units (su)	6.72	---
pH, maximum, standard units (su)	7.61	---
BOD ₅	4.5	2.7
TSS	7.7	4.2
Ammonia (NH ₃)	11.8	6.8
TRC*1	---	---
DO	7.0	4.1
Total Kjeldahl Nitrogen (TKN)	2.3	2.8
Nitrate plus Nitrite Nitrogen	8.7	4.0
Fecal Coliform	806.1	20.2
Phosphorus	4.7	2.3
TDS	9.6	9.6

*1 Facility does not use chlorine for disinfection nor in the treatment process.

A summary of the last 36 months of available pollutant data (i.e., July 2017 through June 2020) taken from DMRs indicates 4 exceedances of permit limits for TP.

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.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The previous permit has an expiration date of June 30, 2020. The application was received on January 7, 2020. The permit is administratively continued until this draft permit is issued.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. 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, BOD₅ and percent removal for each. Water quality-based effluent limitations are established in the proposed draft permit for TN (ammonia), TP, E. coli, TRC and pH.

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 facility is a POTW's that has technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. BOD₅ 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). ELG's for pH are between 6.0-9.0 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 POTW's, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

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

$$\text{30-day average BOD}_5/\text{TSS loading} = 30 \text{ mg/l} * 8.345 \text{ lbs/gal} * 0.9 \text{ MGD}$$

$$\text{30-day average BOD}_5/\text{TSS loading} = 225 \text{ lbs}$$

$$\text{7-day average BOD}_5/\text{TSS loading} = 45 \text{ mg/l} * 8.345 \text{ lbs/gal} * 0.9 \text{ MGD}$$

$$\text{7-day average BOD}_5/\text{TSS loading} = 338 \text{ lbs}$$

A summary of the technology-based limits for the facility is shown in Table 2:

Final Effluent Limits – 0.9 MGD design flow.

TABLE 2

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	225	338	30	45
BOD ₅ , % removal	---	---	≥ 85% (*1)	---
TSS	225	338	30	45
TSS, % removal	---	---	≥ 85% (*1)	---
pH	N/A	N/A	6.0 – 9.0 standard units	

Footnotes:

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

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 applicable 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. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (amended 20.6.4 NMAC, approved by EPA on July 23, 2020). The facility discharges into Doggett Creek in Waterbody Segment No. 20.6.4.318 of the Canadian River Basin. The waterbody segment is classified as a perennial stream and has designated uses of warmwater aquatic life, livestock watering, wildlife habitat and primary contact.

4. Permit Action - Water Quality-Based Limits

The Clean Water Act 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. Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based).

In accordance with 20.6.4.318 NMAC, the permit must be developed to allow for the maintenance and attainment of acute numerical criteria at the point of discharge to the receiving stream for the maintenance and attainment of chronic numerical criteria at the edge of the mixing zone.

State WQS that are more stringent than effluent limitation guidelines are as follows:

a. BACTERIA

The State of New Mexico WQS criteria applicable to the primary contact designated use of the receiving stream are the monthly geometric mean of *E. coli* bacteria of 126 cfu/100 mL (or MPN/100 ml) and single sample of 410 cfu/100 mL (or MPN/100 mL). The results for *E. coli* may be reported as either colony forming units (CFU) or the most probable number (MPN) depending on the analytical method used. The *E. coli* limits (i.e. monthly geometric mean of 126 cfu/100 ml, and a single sample maximum of 410 cfu/100 ml) in the previous permit will be continued in the draft permit. The EPA, also, proposed in the draft permit the *E. coli* 30-day average loading limit of 4.3 billion (1.0×10^9) cfu/day, which is based on the WLA provided in the EPA approved *E. coli* TMDL developed for the Doggett Creek. The *E. coli* monitoring frequency requirement in the previous permit also retains in the draft permit.

b. Dissolved Oxygen (DO)

The State of New Mexico WQS criterion applicable to the warm-water aquatic life 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 surface water WQS for DO (i.e., 5 mg/L). Primarily based on the Raton Wastewater Treatment Plant's design flow and the critical flow of the receiving water, various BOD₅ factors including BOD₅ Secondary Treatment Standards were considered and simulated to achieve the DO criterion. A complete characterization of Doggett Creek (i.e., water quality and hydrodynamic data) was not available. Where data were not available, estimates and assumptions are made. The following is a summary of model inputs.

- The Raton Wastewater Treatment Plant's design flow is 0.0474 m³/sec (0.9 MGD). The discharge location provided in the permit application is located at Latitude 36° 52' 13.91" N (36.870), and Longitude 104° 25' 39.18" W (104.427). Other effluent parameters provided in the permittee's application include summer temperature (24.6 °C), Ammonia (11.8 mg/L), DO (7 mg/L), Nitrate plus Nitrite Nitrogen (8.7 mg/L), Fecal Coliform (806), and Phosphorus (4.7 mg/L).
- NMED provided the following information. The critical low flow of Doggett Creek receiving stream is approximately 0.00078 m³/sec (0.02754 ft³/sec). The drainage area for Doggett Creek and average winter precipitation are approximately 2.543 square miles and 4.8302 inches, respectively.
- EPA used the EPA's Environmental Justice Screening and Mapping Tool (Version 2019) to estimate the average elevation, average width of Doggett Creek and Doggett Creek segment length from the facility outfall to the confluence with Raton Creek. The average elevation is approximately 1975.7 meter (6482 feet). The average width of Doggett Creek is approximately 5 m (16.4ft). And, the studied segment length of Doggett Creek is approximately 1873 meters (1.16 miles) from the facility outfall to the confluence with Raton Creek. The depth of Doggett Creek is estimated based on the description provided by the local WWTP Plant Manager as not being a 'swimming' area but rather a 'wading' area. The average depth is approximately 0.15m (6 inches). A complete characterization of the receiving water body was not available. EPA used default values to estimate the various unavailable hydrodynamic and water quality parameters. For instance, the ambient DO level of 5 mg/L was assumed since no ambient DO data was available for Doggett Creek.

The model results show no excursion of the receiving stream DO standard of 5 mg/L when the BOD₅ limits of 30 mg/l for monthly average and 45 mg/l for 7-day maxima were applied (see graph with 30/45 mg/L BOD₅ in Appendix 1; 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.

c. pH

The pH of 6.6 to 9.0 s.u., specified in 20.6.4.900 NMAC, is to protect the primary contact and warmwater aquatic life receiving stream designated uses. The pH limits (i.e., 6.6 to 9.0 su's for any single sample) and monitoring frequency of 5/week requirement in the previous permit will be continued in the draft permit.

d. Nutrients

Water quality standards regulations in 20.6.4 NMAC include a narrative criterion for distinguishing nutrient conditions that contribute to production of undesirable or nuisance aquatic life. The criterion states, "*Plant nutrients from other than natural causes shall not be present in concentrations that will produce undesirable aquatic life or result in a dominance of nuisance species in surface waters of the state*" (20.6.4.13.E NMAC). Addressing narrative nutrient criterion, NMED established numeric nutrient threshold values, which are based on reference conditions and applied to specific site classes in perennial, wadable streams. Facilities discharging to surface waters covered by the thresholds will likely need water quality-based effluent limits (WQBELs) for nutrients. The required WQBELs might not be economically or technologically achievable for many facilities in New Mexico.

In 2017, the New Mexico Water Quality Control Commission (Commission) approved the New Mexico water quality standards regulation creating a framework for adopting temporary standards. In promulgating this regulation, the Commission sought to address situations where WQBELs are not achievable by creating a clear path to compliance that is achievable and affordable in the near-term and encourages improvements to water quality. The EPA approved New Mexico's temporary standard provision at 20.6.4.10(F) NMAC consistent with and based upon 40 CFR 131.14.

Raton WWTP discharges into Doggett Creek in Waterbody Segment No. 20.6.4.318 NMAC of the Canadian River Basin. Doggett Creek is listed on the 2018-2020 Integrated List as impaired due to nutrients and E. coli bacteria. The Commission approved a discharger-specific temporary standard for the Raton WWTP on March 10, 2020 and EPA approved the Raton WWTP (#NM0020273) temporary standard on July 23, 2020. The demonstration justified that attainment of the underlying designated use and nutrient criterion is not feasible for the Raton WWTP due to widespread and substantial economic impacts that would be experienced as a result of installation of the treatment technology that is required to achieve the underlying standard.

The temporary standard identifies the Highest Attainable Condition (HAC) meant to reflect the facility's treatment capabilities the most effectual and affordable treatment technology has been installed and is optimized and operational. The HAC identified in the Raton WWTP nutrient temporary standard is a 30-day average concentration for Total Phosphorous of 1.6 mg/L and a 30-day average concentration for Total Nitrogen of 8.0 mg/L with the monitoring frequency requirement of 2 samples per month. The HAC should be achieved by the end of the 20-year temporary standard, if not sooner.

The temporary standard requires the Raton WWTP to make incremental and successive improvements to the treatment capabilities of the facility over time to gradually improve the quality of the effluent. The implementation requirements are captured in a compliance schedule in the permit, and interim concentration limits are calculated based on the 99th percentile of the monitoring dataset over the previous three years. However, the 99th percentile limit for Total Phosphorus was less restrictive than the current permit limit, so in compliance with anti-backsliding requirements, the current Total ePhosphorus monthly limit of 3 mg/L was retained. Considering New Mexico's new numeric nutrient thresholds and information from our consultation with NMED, EPA proposes interim 30-day average effluent limits of 3 mg/L and 10 mg/L for TP and TN, respectively, (beginning on the permit effective date and lasting through 1 year from the permit effective date) and 30-day average effluent limits of 3 mg/L and 9.3 mg/L for TP and TN, respectively, (the period beginning 1 year from the permit effective date and lasting through the expiration date of the permit) with the monitoring frequency requirement of 2 per month. Loading limitations were calculated by multiplying the concentration limits by the maximum 30-day average flow from the previous 3 years (0.53 MGD) and a conversion factor (8.34) to get a limit in pounds per day. This methodology is consistent with the previous permit limit calculations.

e. TOXICS

i. General Comments

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.

EPA regulations at 40 CFR 122.21 establish permit application requirements for applicants seeking coverage under individual permits. In accordance with these regulations, EPA has developed eight individual permit application forms that correspond to different categories of dischargers subject to permitting. On February 12, 2019, EPA finalized revisions to the application requirements at 40 CFR 122.21 in the final NPDES Applications and Program Updates Rule. The final rule became effective on June 12, 2019. On and after this date, applicants for EPA-issued NPDES permits are required to meet the new application requirements.

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 forms are 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.

The facility is designated as a minor and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for TRC described below.

ii. TRC

The facility uses an UV system to control bacteria. Chlorine usage may still occur at the facility for various purposes such as disinfection of process equipment and/or algae control. The TRC effluent limitation of 11 ug/L will be retained in the draft permit. TRC reporting shall be the instantaneous maximum grab sample shall be taken during periods of chlorine use and cannot be averaged for reporting purposes. Regulations at 40 CFR §136 define "instantaneous grab" as analyzed within 15 minutes of collection.

iii. Critical Conditions

Critical dilutions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allows a mixing zone for establishing pollutant limits in discharges. Both the NMWQS and NMIP establish 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. As mentioned above, the 4Q3 of Doggett Creek receiving stream which provided by NMED is 0.0275 ft³/sec.

For permitting purposes of certain parameters such as WET, the critical dilution (CD) of the effluent to the receiving stream is determined. The CD is 98% and calculated as follows:

$$CD = Q_e / [Q_e + Q_a]$$

Where: $Q_a = 0.0275 \text{ ft}^3/\text{sec}$ (0.0178 MGD)
 $Q_e = 0.9 \text{ MGD}$

$$CD = 0.9 / [0.9 + 0.0178] \quad CD = 0.9806 \text{ or } 98.1\%$$

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 policy is contained in the NMIP. Monitoring frequency for flow, TRC, E. coli bacteria, BOD, TSS, and BOD/TSS percent removal from the previous permit will be continued in the draft permit. Flow is proposed to be monitored by totalizing meter. Sample type for BOD and TSS are 3-hour composite which is the same as the previous permit.

The pollutant pH, E. coli bacteria and TRC shall be monitored using grab samples, which is the same as the previous permit. Total nitrogen and total phosphorous shall be monitored 2 per month. Sample type for total nitrogen and total phosphorous is by 3-hour composite.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

The State has established narrative criteria, which in part state that:

“...surface waters of the state shall be free of toxic pollutants from other than natural causes in amounts, 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...” (NM WQS Section 20.6.4.13.F.)

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. The previous permit required the facility to conduct a chronic 7-day biomonitoring testing once per year using *Pimephales promelas* and *Ceriodaphnia dubia*. EPA conducted an analysis of the facility past WET data collected from 2016 to 2019 to determine reasonable potential. Appendix 2 of the Fact Sheet shows WET data and the RP test based on past WET DMR data. The results show reasonable potential exists to cause WET impacts for *Ceriodaphnia dubia*. Based on the WET Recommendation shown in Appendix 2 of the Fact Sheet, WET limits will be established for *Ceriodaphnia dubia* in the proposed permit. The WET test requirement in the previous permit will be continued in the draft permit. The permittee shall continue to conduct a 7-day biomonitoring test using *Daphnia pulex* and *Pimephales promelas* at a once per quarter frequency.

The critical condition is 98 %. The low-flow effluent concentration (critical low-flow dilution) is defined as 98% effluent. 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 31%, 41%, 55%, 74%, and 98%.

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 Doggett Creek in Waterbody Segment No. 20.6.4.318 of the Canadian River Basin. Discharges shall be limited and monitored by the permittee as specified in Table 4:

TABLE 4:

WHOLE EFFLUENT TOXICITY LIMIT (7-Day Chronic NOEC Freshwater) (*1)	NOEC	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Ceriodaphnia dubia</i>	98%	Once/Quarter	24-Hr Composite

WHOLE EFFLUENT TOXICITY TESTING (7-Day Chronic NOEC Freshwater) (*1)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<i>Pimephales promelas</i>	REPORT	Once/Quarter	24-Hr Composite

FOOTNOTE:

*1 WET limit for *C.dubia* and monitoring and reporting requirements for *P.promelas* begin 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

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 application form listed 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 §307(b) of the CWA and 40 CFR Part 403.

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.

VII. 303(d) LIST

Doggett Creek is listed on the 2018-2020 Integrated List as impaired due to nutrients and E. coli bacteria. Section 303(d) of the Federal Clean Water Act requires states to develop a TMDL management plan for water bodies determined to be water quality limited. NMED developed E. coli bacteria and nutrients TMDLs for Assessment Units in the Canadian River and Dry Cimarron Watershed, which was approved by EPA on September 18, 2019. The Doggett Creek is one of the Assessment Units in the Canadian River Watershed. The EPA incorporated

wasteload allocation into the draft permit as an E. coli 30-day average loading limit of 4.3 billion (1.0×10^9) cfu/day, which is based on the approved TMDL.

The E. coli loading limit shall be calculated as follows:

$$[\text{Flow in MGD} \times \text{cfu}/100 \text{ mL in effluent} \times 3.79 \times 10^7] / 1.0 \times 10^9$$

The standard reopener language in the permit allows additional permit conditions if warranted by new or revised TMDLs.

VIII. ANTIDegradation

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of NMWQS. 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 design flow rate of the facility has not changed since the last permit issued. The proposed draft permit does not authorize a new or increased discharge. Therefore, the need for an Antidegradation Tier 2 Review was determined not necessary (was not conducted) by the State of New Mexico Environment Department. The draft permit is consistent with the NM WQMP. The City of Raton Wastewater Treatment/Reclamation Facility renewal application is for a permit to discharge into an impaired waterbody.

IX. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet anti-backsliding 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 previous permit for BOD₅ and TSS. The pollutant pH is identical with the previous permit. EPA, also, added the E. coli bacteria 30-day average loading limit based on WLA established in the EPA approved E. coli TMDL developed for the Doggett Creek.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, <https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=35039>, seven species in Colfax County are listed as endangered (E) or threatened (T). They are the Yellow-billed Cuckoo (T) (*Coccyzus americanus*), the Southwestern willow flycatcher (E) (*Empidonax traillii extimus*), the Mexican spotted owl (T) (*Strix occidentalis lucida*), Piping Plover (*Charadrius*

melodus) (T), Black-footed ferret (*Mustela nigripes*) (E), New Mexico meadow jumping mouse (E) (*Zapus hudsonius luteus*), and Canada Lynx (T) (*Lynx Canadensis*).

The following listed species were not in the previous permit include the Yellow-billed Cuckoo and Canada Lynx. 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 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:

The Yellow-billed cuckoo (*Coccyzus americanus*) is a Neotropical migrant bird that winters in South America and breeds in North America. The yellow-billed cuckoo has been listed as endangered. The primary cause of loss and degradation of yellow-billed cuckoo is the loss and degradation of riparian breeding habitat, which is believed to have caused the declines in the distribution and abundance of the species. Conversion to agriculture and other land uses, urbanization, dams and river flow management, stream channelization and bank stabilization, and livestock grazing are the causes of riparian habitat losses. The permit does not authorize activities that may cause destruction of the yellow-billed cuckoo habitat, and issuance of the permit will have no effect on this species.

Canada Lynx (*Lynx canadensis*): The lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest. In Canada and Alaska, lynx inhabit the classic boreal forest ecosystem known as the taiga. The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal/hardwood forest ecotone in the eastern United States. Forests with boreal features extend south into the contiguous United States along the North Cascade and Rocky Mountain Ranges in the west, the western Great Lakes Region, and northern Maine. Within these general forest types, lynx is most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. In all regions within the range of lynx in the contiguous U.S., timber harvest, recreation and their related activities are the predominant land use affecting lynx habitat. The permit does not authorize activities that may cause destruction of the lynx habitat, and issuance of the permit will have no effect on this species.

The proposed permit does not authorize constructions and land development, nor will cause release of toxic pesticides or spread of disease. Based on the information available to EPA, that the reissuance of this permit will have no effect on these federally listed threatened or endangered species.

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 State Water Quality Standards are promulgated or revised. In addition, if the State amends 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.

XIII. VARIANCE REQUESTS

The New Mexico Water Quality Control Commission (WQCC) adopted the amendments to the Standards for Interstate and Intrastate Surface Waters 20.6.4 NMAC on March 10, 2020 and became effective as state law on May 22, 2020. MNED subsequently submitted to EPA the revisions to state's water quality standards on May 22, 2020 for review and approval, and it was approved by EPA on July 23, 2020.

XIV. CERTIFICATION

The permit is in the process of certification by the State agency following regulations promulgated at 40 CFR124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers and to the Regional Director of the U.S. Fish and Wildlife 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 January 7, 2020.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2018 -2020.

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

EPA-Approved Total Maximum Daily Load (TMDL) for the Canadian River Watershed, September 18, 2019

Draft Nutrient Temporary Standards for: City of Raton Wastewater Treatment Plant NPDES Permit No. NM0020273 to Doggett Creek, October 1, 2019.

D. MISCELLANEOUS

Technical Support Document: EPA Review of Nutrient Temporary Standard for The City of Raton Wastewater Treatment Plant NPDES Permit No. NM0020273 to Doggett Creek, July 23, 2020.

US EPA Technical Support Document for Water Quality-Based Toxics Control, March 1991

Appendix 1



