NPDES PERMIT NO. NM0024996 FACT SHEET

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

APPLICANT

Mora Mutual Water and Sewer Works Association P.O. Box 304 Mora, NM 87732

ISSUING OFFICE

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PREPARED BY

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DATE PREPARED

November 30, 2022

PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued August 04, 2017, with an effective date of October 1, 2017, and an expiration date of September 30, 2022.

RECEIVING WATER – BASIN

Mora River - Canadian 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
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
I&I	Inflow and Infiltration
ug/l	Micrograms per litter (one part per billion)
mg/l	Milligrams per liter (one part per million)
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
USGS	United States Geological Service
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 water quality standards and/or rules, regulations and/or management plans may mean the State of New Mexico and/or Tribal or both.

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued on August 04, 2017, with an effective date of October 1, 2017, and an expiration date of September 30, 2022, include

1. The E. coli mass loading limit has been added.

II. DISCHARGE LOCATION AND ACTIVITY

As described in the application, the Mora Mutual Water and Sewerage Association wastewater treatment facility is located approximately 1.5 miles east of the intersection of State Road 94 and NM State Road 518, Mora in Mora County, New Mexico. The wastewater system currently consists of a collection system with approximately 132 active service connections (including residential and commercial) and a lagoon treatment system.

Under the Standard Industrial Classification (SIC) Code 4952, the applicant currently operates a lagoon system treating domestic wastes. The facility has a design flow capacity of 0.052 million gallons per day (MGD), which serves about 500 people.

The facility waste treatment system consists of two lagoons, North and South, and a Moving Bed Biofilm Reactor (MBBR) system. The MBBR, which includes a multi tank and multi train design with each train treating 30,000 gallons per day (GPD) with a peaking factor of 60,000 GPD per train, currently is not operational.

The single outfall of the facility is located at Latitude - 35° 58' 0.73" North and Longitude – 105° 18' 8.24" West. The facility discharges to the Mora River in the Canadian River Basin in Water Quality Segment 20.6.4.307 of 20.6.4 NMAC *State of New Mexico Standards for Interstate and Intrastate Surface Water*.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received on September 07, 2022, are presented in Table 1 :

Parameter	Max	Avg
Flow, million gallons/day (MGD)	0.19MGD	0.05 MGD
pH, minimum, Standard Units	7.88	N/A
pH, maximum, Standard Units	8.21	N/A
Biochemical Oxygen Demand, (BOD)	27 mg/L	4.97mg/L
e. Coli	>2419 MPN/100ml	
BOD5	27 mg/L	
Total Suspended Solids (TSS)	42 mg/L	
Total Nitrogen	19 mg/L	
Total Phosphorous	6.1 mg/L	

Table 1: Pollutant data

A summary of the last 36 months of available pollutant data (i.e., January 2019 through January 2022) taken from DMRs indicates a number of exceedances of permit limits are in parentheses for flow (8), BOD₅ (7), pH (2), TSS (4), Total Phosphorous (20), and E. coli (3).

The Mora Wastewater System Preliminary Engineering Report (Martin/Martin, Inc. Project No.: NC20.0041, August 2020) (PER) indicates Mora wastewater collection system has been experiencing sanitary sewer inflow and infiltration (I&I) and backup issues. The I&I sanitary sewer inflow and infiltration results in excess flow into the wastewater collection system, which contributes to facility's exceedances of its permitted flow. The EPA required the facility to install a continuous effluent flow measurement device in the past permit term. Due to budget constrain, the facility has not installed the device. The requirement to install a continuous effluent flow measurement device remains in the draft permit.

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 technologybased 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 was expired on September 30, 2022. The application was received on September 07 and 09, 2022. The existing permit is administratively continued until this 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 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.

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Technology-based effluent limitations are established in the proposed draft permit for TSS, and BOD₅. Water quality-based effluent limitations are established in the proposed draft permit for E. coli bacteria, pH and TRC.

B. TECHNOLOGY BASED EFFLUENT LIMITATIONS

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 treating sanitary wastewater. POTW's have technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are BOD₅, TSS and pH. BOD₅ 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 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 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(b). ELG's for pH are between 6-9 Standard Units 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:

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

30-day average BOD₅/TSS loading = 30 mg/l * 8.345 lbs/gal * 0.052 MGD 30-day average BOD₅/TSS loading = 13.018 lbs

7-day average BOD₅/TSS loading = 45 mg/l * 8.345 lbs/gal * 0.052 MGD 7-day average BOD₅/TSS loading = 19.527 lbs

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

Final Effluent Limits - 0.052 MGD design flow.

EFFLUENT	DISCHARGE LIMITATIONS				
CHARACTERISTICS					
	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	13.018	19.527	30	45	
TSS	13.018	19.527	30	45	
BOD ₅ , % removal (*1)	≥85				
TSS, % removal (*1)	≥85				
pH	N/A	N/A	6.0 - 9.0 Standard Units		

Table 2: Technology-based Effluent Limits

FOOTNOTE:

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

C. WATER QUALITY BASED LIMITATIONS

i. 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.

ii. 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.

iii. Water Quality Standards

The discharge is located approximately 1 mile east of the Village of Mora on State Highway 3, on the north side of Mora River in Mora County, New Mexico. The WWTP effluent enters the Mora River Water Quality Segment 20.6.4.307 of the Canadian River Basin. The designated uses of the receiving stream are marginal coldwater aquatic life, warmwater aquatic life, irrigation, livestock watering, wildlife habitat, and primary contact. This segment of the Mora River is 303(d) listed as not supporting marginal coldwater aquatic life and primary contact. Probable causes for not supporting marginal coldwater aquatic life designated use include nutrient/eutrophication, biological indicators, and dissolved oxygen. Meanwhile, crop

production (dryland), dams/diversions, gravel or dirt roads, irrigated crop production, on-site treatment systems, paved roads, rangeland grazing, residences/buildings and waterfowl are probable causes for not supporting primary contact designated use.

iv. 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).

a. BACTERIA

Primary contact currently is one of the designated uses of the Mora River in segment number 20.6.4.307 of the Canadian River Basin. 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 2022-2024 State of New Mexico CWA 303(d) / 305(b) Integrated Report identifies the Segment is impaired due to E. coli. The State of New Mexico developed a Total Maximum Daily Load (TMDL) document for the Canadian River Watershed, which was approved by EPA on September 18, 2019. This document establishes TMDLs for 15 Assessment Units in the Canadian and Dry Cimarron watersheds. The EPA proposes in the draft permit the E. coli 30-day average mass loading limit of 0.248 billion (1.0 x 10^9) cfu/day, which was based on the WLA provided in the EPA approved E. coli TMDL developed for Mora River (USGS gage E. of Showmaker to Hwy 434). The E. coli monitoring frequency requirement in the previous permit be also continued in the draft permit.

b. Dissolved Oxygen

The State of New Mexico WQS criterion applicable to the marginal cold-water aquatic life designated use is at least 6 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., 6 mg/L). Primarily based on the Mora Mutual Wastewater Treatment Plant's design flow of 0.052 MGD (0.0023 m³/s) and the receiving water Summer critical flow of 0.1133 m³/s (2.1527 MGD), various BOD₅ factors including BOD₅ Secondary Treatment Standards were considered and simulated to achieve the DO criterion. A complete characterization of Mora River (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 Mora Mutual Wastewater Treatment Plant's design flow is 0.0023 m³/sec (0.052 MGD). The discharge location provided in the permit application is located at Latitude 35° 58'

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0.73" N (35.9668), and Longitude -105° 18' 8.24" W (-105.3022). Effluent E. Coli (249 CFU/100ml) was obtained from facility's DMR. DO (Avg: 2 mg/L) and effluent temperature (22.7 C) were assumed since no data available.

• NMED provided the following information. The Summer critical low flow of Mora River receiving stream is approximately 0.1133 m³/sec (2.1527 MGD). Other parameters applied in the model include ambient temperature (19.05 °C), DO (8.62 mg/L), salinity (0.19), and E. Coli of 1299 CFU/100ml. The receiving stream average depth of 1 foot (0.3 meters) at the critical flow conditions was assumed since no data available.

• EPA used the EPA GeoPlatform based web mapping application (WATERS GeoViewer 2.0) to estimate the average elevation of the study area and average width of Mora River. The average elevation at the outfall is approximately 2168 meter (7113 feet). The average width of Mora River at the critical flow conditions is approximately 5.8 meters. The studied Mora River segment length is approximately 90 kilometers (55.92 miles), which was obtained from the State of New Mexico's 2022-2024 303(d) list.

The model results show no excursion of the receiving stream DO standard of 6 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

Segment specific WQS for pH, 6.6 to 9.0 Standard Units, are more restrictive than the technology-based limits presented earlier. The pH limits in the previous remain in the draft permit.

d. NUTRIENTS

The WWTP discharges treated effluent to the Mora River Water Quality Segment 20.6.4.307 of the Canadian River Basin with designated uses of marginal coldwater aquatic life, warmwater aquatic life, irrigation, livestock watering, wildlife habitat, and primary contact. The 2022-2024 State of New Mexico CWA §303(d) / §305(b) Integrated Report identifies the Segment is impaired due to Nutrient/Eutrophication.

According to the approved New Mexico's Antidegradation Policy¹ and Implementation Procedures², the Segment is classified as Tier 1 for nutrients (i.e., phosphorus and nitrogen); therefore, any increase in pollutant load or other activity that would cause further degradation of water quality is not allowed. Each NPDES permit issued must contain requirements necessary to achieve water quality standards. Consistent with NM's Policy and Procedures, the level of water

¹ http://www.nmenv.state.nm.us/swqb/Planning/WQMP-CPP/

² Appendix A of the Continuing Planning Process - http://www.nmenv.state.nm.us/swqb/Planning/WQMP-CPP/

quality necessary to protect existing uses must be maintained and protected. Furthermore, where a surface water is impaired, there shall be no further degradation or lowering of the water quality with respect to the pollutant causing the impairment (e.g., nutrients).

To protect and maintain existing water quality and to prevent further degradation of water quality in Mora River in accordance with 40 CFR 131.12, Subsection A of 20.6.4.8 NMAC, and the New Mexico Continuing Planning Process – Antidegradation Policy and Implementation Procedures, EPA, in the previous permit, imposed the nutrient effluent limits listed in Table 3 along with a four-year compliance schedule. The Mora's DMR shows facility experienced numerous exceedances of TP, and TN effluent limits last permit terms. PER indicates that infiltration and inflow within the sanitary sewer system and existing lagoons treatment system are the reasons that the facility has not been able to comply with these limits.

Realizing not able to meet the discharge permit requirements with the current treatment process, the facility is considering subsurface effluent disposal a mean of discharging its effluent in the future. The facility currently has an active NMED groundwater discharge permit 640 (DP-640), renewed on April 14, 2021, with an expiration date of April 13, 2026. However, before the facility can dispose all their effluent by groundwater, it will need to proceed with the updating the engineering design(s) and analysis(es) for the conversion and apply for a DP-460 permit modification (based on the revised design). This may take several years.

Since the project has not been completed, the existing nutrient limits in Table 3 and compliance schedule remain in draft permit while waiting for the permittee to complete the project and then go for zero discharge. The permit has a standard reopener clause that would allow the permit to be changed if later additional requirements on new or revised TMDLs are established.

	DISCHARGE LIMITATIONS				
EFFLUENT CHARACTERISTICS	lbs/day		mg/L		
POLLUTANT	30-Day Avg.	Daily Max	30-Day Avg.	Daily Max	
 Phosphorus, Total Summer (May 1 – September 30) Winter (October 1 – April 30) 	0.81 0.26	Report Report	Report Report	Report Report	
Nitrogen, Total ^{*1} Summer (May 1 – September 30) Winter (October 1 – April 30)	5.91 2.0	Report Report	Report Report	Report Report	

Table 3: Nutrient Effluent limits

FOOTNOTE:

^{*1} Total Nitrogen is defined as Total Kjeldahl Nitrogen plus Nitrate and Nitrite as defined in the TMDL

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 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.

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 section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for TRC.

ii. TRC

The facility's ultraviolet light disinfection system was undersized and incorrectly designed. It was removed. The EPA required the facility to install a serpentine chlorine contact chamber and dechlorination unit in the past permit term. Due to budget constrain, the facility has not installed the unit. The requirement to install a serpentine chlorine contact chamber and dechlorination unit remains the draft permit. Effluent from WWTP is currently disinfected with chlorine tablets and dechlorinated with tablets. The NMWQS for total residual chlorine (TRC) are 11 ug/l for chronic and 19 ug/l for acute conditions. In addition, wildlife habitat criterion for TRC is 11 ug/l pursuant to 20.6.4.900.G NMAC. The draft permit proposes to limit TRC as follows: "Prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR 136. If during the term of this permit, the minimum quantification level for TRC becomes less than 11 ug/l, then 11 ug/l shall become the effluent limitation. The maximum TRC shall be monitored by instantaneous grab sample on a daily basis."

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require that permits 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)). For consistency, the monitoring frequencies are the same as those used by EPA Region 6's Implementation Procedure for NM, considering the nature of the facility and its design flow. A frequency of 1/month is established for BOD₅, total nitrogen, total phosphorous and E. coli, and the pH and TRC daily monitoring frequency from the previous permit will be continued in the draft permit.

E. WHOLE EFFLUENT TOXICITY (WET) TESTING

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 facility conducted a 48-hour acute test using Daphnia pulex and Pimephales promelas. The submitted results show no reasonable potential to cause WET impacts

The WWTP discharge is to Mora River. The critical Summer (April- October) and Winter (November- March) low flows of Mora River in that segment, which were provided by MNED, are 4 cfs (2.1527 MGD) and 2 cfs (1.0763 MGD), respectively. The design flow of the facility is 0.052 MGD. For consistency with the WET monitoring and reporting requirement between November 1 and April 30, the Winter critical flow of 2 cfs (1.0763 MGD) was used to derive the critical dilution of the discharge to the receiving stream, which is approximately 4.61%.

Since the critical dilution is equal to or less than 10%, the procedures in the letter from Marcy Leavitt, NMED, to Claudia Hosch, EPA, December 16, 2005, NMED provided Narrative Toxics Implementation Guidance – Whole Effluent Toxicity, (NTIG-WET) provide that in lieu of the more expensive 7-day chronic test, a 48-hour acute test may be run using a 10:1 acute to chronic ratio; 46.1% rounded to the nearest whole number 46%. The WET testing requirements in the previous permit remain in the draft permit. The draft permit will not propose any WET limits. The facility shall conduct a 48-hour acute test using Daphnia pulex at a once per permit term and a 48-hour acute test using Pimephales promelas at a once per permit term frequency. The test series will be 19%, 26%, 35%, 46 % and 61%.

The permittee shall conduct separate whole effluent toxicity tests in accordance with Table 4:

	v	0 1			
EFFLUENT	DISCHARGE		MONITORING REQUIREMENTS		
CHARACTERISTICS	MONITORING				
WHOLE EFFLUENT					
TOXICITY TESTING	30-DAY	48-HR	MEASUREMENT		
(48-Hr. Static Non-Renewal)	AVG	MINIMUM	FREQUENCY	SAMPLE TYPE	
Daphnia pulex	Report	Report	1/5yrs *1	Grab	
Pimephales promelas	Report	Report	1/5yrs *1	Grab	
FOOTBLOTTE					

Table 4: Whole Effluent Toxicity Testing Requirements

FOOTNOTE:

*1 Monitoring and reporting requirements begin on the effective date of this permit, between November 1 and April 30.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The facility existing two lagoons were re-purposed for emergency overflow and for waste sludge storage. The North Lagoon functions as a high-water overflow during high flow events, and the South Lagoon's intended function is as storage for digested sludge. The South Lagoon currently is not being used as waste sludge is being disposed of directly from facility's aerobic digester into a septage hauler truck for subsequent transport and disposal.

B. WASTEWATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute or continue programs directed towards pollution prevention. The facility shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility.

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

D. OPERATION AND REPORTING

The applicant is required to always operate the treatment facility at maximum efficiency; to monitor the facility's discharge on a regular basis; and report the results quarterly. The EPA promulgated a final rule in 2015 to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. This final rule requires regulated entities to electronically report certain data required by the NPDES permit program instead of filing paper reports. The rule also requires that certain data be entered into EPA's national data system by NPDES Authorized States, Tribes, Territories, and Federal regulators. EPA regulations at 40 CFR 127.26(f) require that all NPDES permits issued on and after Monday, 21 December 2015 contain permit conditions requiring electronic reporting consistent with EPA electronic reporting regulations. These reports must contain the minimum set of NPDES program data identified in Appendix A, 40 CFR part 127.

After December 21, 2016, the permittees are required to submit discharge monitoring reports (DMRs), including majors and minor POTWs/POTWS-like, and Sewage Sludge/Biosolids Annual Program Report.

By 21st of December 2025 or an alternative deadline established under 40 CFR 127.24 (e) or (f), the following reports must be submitted electronically (unless EPA directs otherwise, or the

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permittee received a waiver from electronic reporting): Pretreatment Program Annual Reports, and Sewer Overflow/Bypass Event Reports and Anticipated Bypass Notices.

The permittee may seek a waiver from electronic reporting to continue submitting reports on paper. To obtain an electronic reporting waiver, a permittee must first submit an electronic reporting waiver request to EPA Region 6. The waiver request should contain the following details: Facility name; NPDES permit number; Facility address; Name, address and contact information for the owner, operator, or duly authorized facility representative; and Brief written statement regarding the basis for claiming a waiver.

The region will either approve or deny this electronic reporting waiver request within 120 days. Permanent waivers from electronic reporting are only available to facilities owned or operated by members of religious communities that choose not to use certain technologies. The duration of a temporary waiver may not exceed 5 years, which is the normal period for an NPDES permit term. If a permittee wishes to continue coverage under a waiver from electronic reporting, they must re-apply for a new temporary waiver before the expiration of their existing waiver, even if this NPDES permit is administratively continued. Approved electronic reporting waivers are not transferrable, whether permanent or temporary, are not transferrable and the facility will need to re-apply for a waiver upon any change in facility ownership.

Permittees with an approved and effective electronic reporting waiver must use the forms or formats provided by the region. The permittee must sign and certify all submissions in accordance with the requirements of Part III of this permit ("Signatory Requirements").

VII. 303(d) LIST

The receiving stream, Mora River in the WQ Segment 20.6.4.307 was listed in State 303d list for not fully supporting marginal coldwater aquatic life and not fully supporting primary contact. The probable causes of impairment are nutrient, eutrophication biological indicators, and dissolved oxygen. EPA approved TMDL limitations for total phosphorus and total nitrogen on July 22, 2015. A standard reopener clause is established in the permit that would allow additional conditions if the TMDL is revised, and/or new water quality standards are established and/or a new TMDL is developed.

VIII. 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 limitation and monitoring requirements set for the in the proposed permit are developed from the State water quality standards and are protective of the 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 waters, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

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 discharge limitation requirements in the previous permit for BOD₅, TSS, Total Phosphorous and Total Nitrogen limits and pH. In addition, the proposed permit is slightly more restrictive than the previous permit since the E. coli mass loading limit has been established in the draft permit. All of the changes represent permit requirements that are consistent with the State WQS and WQMP.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=35039, six species in Mora County are listed as endangered (E) or threatened (T). They are the Jemez Mountains salamander (E) (*Plethodon neomexicanus*), the Yellow-billed Cuckoo (T) (*Coccyzus americanus*), the Southwestern willow flycatcher (E) (*Empidonax traillii extimus*), the Mexican spotted owl (T) (*Strix occidentalis lucida*), New Mexico meadow jumping mouse (E) (*Zapus hudsonius luteus*), and Canada Lynx (T) (*Lynx Canadensis*). All species except for Jemez Mountains salamander (*Plethodon neomexicanus*) were listed in the previous permit with determination of "no effect". According to the report, there are no critical habitats downstream of the facility for all the species.

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 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:

- In the previous permit issued August 04, 2017, EPA made a "no effect" determination for federally listed species mentioned above except for Jemez Mountains salamander. The EPA has received no additional information since then which would lead to a revision of that "no effect" determination. The EPA determines that this reissuance 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 the listed species and designated critical habitat.
- 2) The Jemez Mountains salamander (*Plethodon neomexicanus*) is uniformly dark brown above, with occasional fine gold to brassy coloring with stippling dorsally (on the back and sides) and is sooty gray ventrally (underside). The salamander is slender and elongate, and it possesses foot webbing and a reduced fifth toe. The Jemez Mountains salamander is restricted to the Jemez Mountains in northern New Mexico, in Los Alamos, Rio Arriba, and Sandoval Counties, around the rim of the collapsed caldera (large volcanic crater), with some occurrences on topographic features (e.g., resurgent domes)

on the interior of the caldera. The majority of salamander habitat is located on federally managed lands, including the U.S. Forest Service (USFS), the National Park Service (Bandelier National Monument), Valles Caldera National Preserve, and Los Alamos National Laboratory, with some habitat located on tribal land and private lands. Wildland fires have significantly degraded important features of salamander habitat, including removal of tree canopy and shading, increases of soil temperature, decreases of soil moisture, increased pH, loss or reduction of soil organic matter, reduced soil porosity, and short-term creation of hydrophobic (water-repelling) soils. These and other effects limit the amount of available aboveground habitat, and the timing and duration when salamanders can be active above ground, which negatively impacts salamander behavior (e.g., maintenance of water balance, foraging, and mating) and physiology (e.g., increased dehydration, heart rate and oxygen consumption, and increased energy demands). The permit does not authorize activities that may cause destruction of the Jemez Mountains salamander habitat, and issuance of the permit will have no effect on this species.

- 3) No additions have been made to the critical habitat designation in the area of the discharge since prior issuance of the permit.
- 4) The EPA has not received any additional information since the previous permit issuance which would lead to revision of its determinations.
- 5) The draft permit is no less stringent from the previous permit. It is consistent with the States WQS and does not allow facility to increase pollutant loadings.
- 6) The EPA determines that items 2 thru 5 results 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.

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 <u>no effect</u> 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 because 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 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.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. EVIRONMENTAL JUSTICE

Executive Order 13985, Advancing Racial Equity and Supporting for Underserved Communities through the Federal Government signed on January 20, 2021, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit http://www.epa.gov/ejscreen.

As part of the Permit development process, EPA conducted a screening analysis to determine whether this Permit action could affect overburdened communities. The EPA used EJScreen 2.0 a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify Permits for which enhanced outreach may be warranted.

The study area was chosen at the proposed Outfall 001, 5-miles downstream path of the discharge and a 3-mile buffer around the path. The population of the study area is 982 persons aged 5 and above. Only one EJ Index score for the state percentile of the facility was above the 80 percentiles (80%ile), for Lead Paint which is indicative of old homes in the community. Some EJ Indexes didn't even showed results (e.g., Wastewater Discharge), this may be because of lack of data in the study area. Furthermore, the ACS summary report indicates that 83% of the population in Mora are of Hispanic descent and 64% of the population speak Spanish at home. (see Appendix 2)

These results indicate that the percentage of Spanish speaking individuals is high, and public participation may be affected, therefore, EPA will translate the Public Notice to Spanish to help and impulse public participation in this permitting action. If more participation is justified, EPA can translate other documents to Spanish, as needed.

XV. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgating at 40 CFR §124.53. EPA will send a draft permit and a draft public notice to the District Engineer, Corps of Engineers, Regional Director of the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service prior to the publication of that notice.

XVI. FINAL DETERMINATION

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

XVII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Forms 2A and 2S received on September 07, 2022, and September 09, 2022, respectively.

B. 40 CFR CITATIONS

Citations to 40 CFR Sections 122, 124, 125, 133, 136

C. MISCELLANEOUS

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

State of New Mexico CWA §303(d) / §305(b) Integrated Report, 2022 -2024.

USEPA-Approved Total Maximum Daily Load (TMDL) for the Mora River (USGS Gage East of Shoemaker to Hwy 434), July 22, 2015.

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

The Mora Wastewater System Preliminary Engineering Report (Martin/Martin, Inc. Project No.: NC20.0041), August 2020.

Appendix 1



APPENDIX 2

SEPA United States Environmental Protection

EJScreen Report (Version 2.1)



3 miles Ring around the Corridor, NEW MEXICO, EPA Region 6

Approximate Population: 742

Input Area (sq. miles): 57.82

Mora WWTP

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	26	0
EJ Index for Ozone	16	98
EJ Index for Diesel Particulate Matter*	5	0
EJ Index for Air Toxics Cancer Risk*	0	3
EJ Index for Air Toxics Respiratory HI*	0	2
EJ Index for Traffic Proximity	N/A	N/A
EJ Index for Lead Paint	90	89
EJ Index for Superfund Proximity	39	38
EJ Index for RMP Facility Proximity	37	10
EJ Index for Hazardous Waste Proximity	15	4
EJ Index for Underground Storage Tanks	45	59
EJ Index for Wastewater Discharge	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 93th percentile nationwide, this means that only 3 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

October 12, 2022

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APPENDIX 2 (cont'd)

SEPA United States Environmental Protection Agency

EJScreen Report (Version 2.1)

3 miles Ring around the Corridor, NEW MEXICO, EPA Region 6

Approximate Population: 742

Input Area (sq. miles): 57.82

Mora WWTP

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA	
Pollution and Sources						
Particulate Matter 2.5 (µg/m³)	4.51	5.54	15	8.67	0	
Ozone (ppb)	53.6	56	9	42.5	91	
Diesel Particulate Matter* (µg/m³)	0.0146	0.198	3	0.294	<50th	
Air Toxics Cancer Risk [*] (lifetime risk per million)	10	20	0	28	<50th	
Air Toxics Respiratory HI*	0.1	0.23	0	0.36	<50th	
Traffic Proximity (daily traffic count/distance to road)	N/A	510	N/A	760	N/A	
Lead Paint (% Pre-1960 Housing)	0.41	0.18	81	0.27	67	
Superfund Proximity (site count/km distance)	0.015	0.14	23	0.13	10	
RMP Facility Proximity (facility count/km distance)	0.027	0.24	21	0.77	2	
Hazardous Waste Proximity (facility count/km distance)	0.016	0.81	10	2.2	1	
Underground Storage Tanks (count/km²)	0.013	3.3	26	3.9	22	
Wastewater Discharge (toxicity-weighted concentration/m distance)	N/A	3.5	N/A	12	N/A	
Socioeconomic Indicators						
Demographic Index	72%	51%	82	35%	91	
People of Color	88%	63%	82	40%	87	
Low Income	57%	39%	76	30%	86	
Unemployment Rate	0%	7%	0	5%	0	
Limited English Speaking Households	4%	5%	64	5%	73	
Less Than High School Education	7%	14%	36	12%	44	
Under Age 5	0%	6%	0	6%	0	
Over Age 64	20%	17%	61	16%	69	

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics/data-update.