NPDES PERMIT NO. NM0020311
FACT SHEET

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

APPLICANT

City of Roswell Wastewater Treatment Facility
P.O. Box 1838
Roswell, New Mexico 88202-1838

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1201 Elm Street
Dallas, Texas 75207

PREPARED BY

Quang Nguyen
Environmental Engineer
NPDES Permitting & Water Quality Branch (6WQ-P)
Water Division
VOICE: 214-665-7238
FAX: 214-665-2191
EMAIL: Nguyen.Quang@epa.gov

DATE PREPARED

May 12, 2025

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued on November 20, 2019, with an effective date of January 1, 2020, and an expiration date of December 31, 2024.

RECEIVING WATER – BASIN

Outfall 001 to Rio Hondo thence to Pecos River in Segment No. 20.6.4.231 NMAC of the Pecos River Basin

Outfall 002 to Berrendo Creek thence to Rio Hondo thence to Pecos River in Segment No. 20.6.4.206 NMAC of the 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 once every three years
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
BPT	best practicable control technology currently available
BOD_5	five-day biochemical oxygen demand
BPJ	best professional judgment
CD	critical dilution
CFR	Code of Federal Regulations
cfs	cubic feet per second
cfu	colony forming units
CWA	Clean Water Act
DMR	discharge monitoring report
ELG	effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
GM	geometric mean
lbs	pounds
ug/L	micrograms per litter (one part per billion)
mg/L	milligrams per liter (one part per million)
MGD	million gallons per day
NAICS	North American Industry Classification System
ND	non-detect
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
PFAS	Per and Polyfluoroalkyl Substances
POTW	publicly owned treatment works
RP	Reasonable Potential
STORET	EPA Storage and Retrieval Database
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
WET	whole effluent toxicity
WLA	Waste Load Allocations
WQS	water quality standards
WWTP	wastewater treatment plant

In this document, references to State WQS and/or rules shall collectively mean the State of New Mexico WQS.

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued November 20, 2019, with an effective date of January 1, 2020, and an expiration date of December 31, 2024, and currently administratively continued under 5 U.S.C. 558(c) are:

- Established *E. coli* bacteria effluent limitations for Outfall 001.
- Added PFAS, Adjusted Gross Alpha, Natural Uranium and Gross Alpha monitoring requirements.
- Established DO limits for Outfalls 001, 002 and 101

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at 2306 East College Boulevard, Roswell, Chaves County, New Mexico, 88202. Under the Standard Industrial Classification (SIC) Code 4952, the applicant operates a municipal wastewater treatment facility equivalent to a POTW. The facility has a design flow capacity of 7.0 million gallons per day (MGD) serving a population of 47,109. The WWTP primarily consists of 4 lift stations, screens, a grit chamber, clarifiers, aeration basins, and a UV treatment system before being discharged to the Rio Hondo and/or Berrendo Creek in the Pecos River Basin. All sludge generated is composted using the static windrow method. Sludge in the drying bed is allowed to dry to a minimum of 50% solid before windrowing.

The WWTP discharges to the Rio Hondo and/or Berrendo Creek typically 1-3 months out of the year (December to March). For the remainder of the year, the treated effluent is used to irrigate approximately 1,117-acres of cropland and 200-acres of golf course turf. In addition, the WWTP uses the treated water to irrigate 23 acres of landscaping at the facility, as wash water on the fine screen bar screen and the gravity belt thickener. The facility does not maintain a retention pond for the re-use water. All disinfected water not used for facility purposes is pumped directly to the area farmers. The facility has two outfalls, 001 and 002, and an internal monitoring outfall location, 101 (which is a point identified after the last treatment unit but prior to the diversion of effluent to Outfalls 001 and 002). When discharging occurs, discharges from Outfall 001 flow into Rio Hondo thence to Pecos River in segment number 20.6.4.231 NMAC of the Pecos River Basin, and discharges from Outfall 002 flow into Berrendo Creek thence to Rio Hondo to Pecos River in segment number 20.6.4.206 NMAC of the Pecos River Basin. There has been no discharge from Outfall 002 into Berrendo Creek in the past five years. The effluent which would be discharged to Berendo Creek has been used for irrigation purposes. The outfalls are located at the following coordinates:

Outfall 001: Latitude 33^{o} 24' 37" N (33.410), Longitude 104^{o} 28' 45" W (104.479)
Outfall 002: Latitude 33^{o} 24' 50" N (33.414), Longitude 104^{o} 27' 40" W (104.461)

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA NPDES Permit renewal application Form 2A and addenda received on July 22, 2024, August 12, 2024, August 13, 2024, September 9, 2024, October 11, 2024, October 30, 2024, December 6, 2024, December 19, 2024, and December 23, 2024, is presented in Table 1 below:

Table 1: Facility Effluent Data

Parameter	Maximum	Average
Outfall 001-Flow (Nov -Feb)	---	3.4 MGD
Outfall 002-Flow (Nov-Feb)	---	0.0 MGD
Temperature, winter	19.9˚C	17 ˚C
Temperature, summer	26.8˚C	26.1˚C
pH, minimum	7.19 s.u.	n/a
pH, maximum	7.42 s.u.	n/a
BOD_5	4 mg/L	4 mg/L
Fecal coliform	18.2 CFU/100 ml	2.7 CFU/100 ml
E. coli	63 CFU/100	19 CFU/100 ml
TSS	6 mg/L	4 mg/L
Ammonia (as N)	7.8 mg/L	2.92 mg/L
DO	4.28 mg/L	2.7 mg/L
TKN	10.4 mg/L	3.8 mg/L
Nitrate plus nitrite nitrogen	10.8 mg/L	5 mg/L
Phosphorous	2.5 mg/L	1.38 mg/L
TDS	1599 mg/L	1290 mg/L

The facility, which is designated as a major POTW, must, at the minimum, sample and report all the priority pollutants identified in the NPDES Application Form 2A along with additional pollutants required per 20.6.4.900.J(2) NMAC. From that list, the pollutants in Table 2 were either tested above MQLs or were tested at levels above EPA MQL and reported as being non detect. When a pollutant was tested at a detection level that was greater than the EPA MQL then for screening purposes that pollutant was assumed to have a concentration at that detection level. For toxics that were tested at the minimum quantification level (MQL) and reported as less than the MQL, those pollutants are not shown.

Table 2

Parameter	Max	Avg
Hardness (as $CaCO_3$)	810 mg/L	801.96 mg/L
Copper, Total	3.8 ug/L	2.39 ug/L
Copper, Dissolved	0.023 mg/L	—
Zinc, Total	0.019 mg/L	0.0156 mg/L
Zinc, Dissolved	0.033 mg/L	—
Arsenic	1 ug/L	0.82 ug/L
Aluminum, Total	0.029 mg/L	—
Aluminum, Dissolved	5.8 ug/L	—
Mercury	0.00047 ug/L	—
Barium, Total	0.023 mg/L	0.022 mg/L
Barium, Dissolved	0.021 mg/L	—
Boron, Total	0.24 mg/L	—
Boron, Dissolved	0.27 mg/L	—
Manganese, Total	0.016 mg/L	—
Manganese, Dissolved	0.153 mg/L	—
Magnesium, Total	65 mg/L	—
Nickel, Dissolved	0.001 mg/L	—

Parameter	Max	Avg
Nickel, total recoverable	1.1 ug/L	---
Silver, Total	0.012 mg/L	—
Uranium, Total	2.5 ug/L	—
Uranium, Dissolved	2.2 ug/L	1.75 ug/L
Vanadium, Total	1.1 ug/L	—
Vanadium, Dissolved	0.002 mg/L	---
Cobalt, Total	0.34 ug/L	—
Selenium	2.5 ug/L	—
Calcium	220 mg/L	—
Phenols	0.67 ug/L	—
Antimony, Total	0.63 ug/L	—
Gross Alpha	7.12 pCi/L	---
Gross Beta,	0.12 pCi/L	—
Radium 226 + 228	0.944 pCi/L	—
1,4-Dichlorobenzene	0.21 ug/L	—
Strontium	2.15 mg/L	—
Strontium-90	0.628 pCi/L	—
2,2’ Oxybis[1-Chloropropane]	0.21 ug/L	—

A summary of the last 36 months of available pollutant data (January 2022 through January 2025) taken from DMRs indicates the facility, when discharge occurred from Outfall 001, experienced exceedances of permit limit (shown in parenthesis) for DO (3).

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 the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The previous permit will be expired on December 31, 2024. EPA received the complete NPDES application on December 23, 2024. The existing permit is currently administratively continued under 5 U.S.C. 558(c) 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.

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, pH, TRC, total nitrogen, total phosphorus and WET.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44(a) require technology-based effluent limitations to be placed in NPDES permits. The facility is a POTW. POTWs have technology based ELGs established at 40 CFR 133, Secondary Treatment Regulation. Pollutants with ELGs established in this Chapter are BOD_5, TSS and pH. BOD_5 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 standard units (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 or WWTPs, the plant's design flow is used to establish the mass load. Mass limits in Table 3 are determined by the following mathematical relationship:

Loading in lbs/day = pollutant concentration in mg/L * 8.34 lbs/gal * design flow in MGD

30-day average TSS loading = 30 mg/l * 8.34 lbs/gal * 7.0 MGD
30-day average TSS loading = 1751 lbs

7-day average TSS loading = 45 mg/l * 8.34 lbs/gal * 7.0 MGD
7-day average TSS loading = 2627 lbs

30-day average BOD_5 loading = 30 mg/l * 8.34 lbs/gal * 7.0 MGD
30-day average BOD_5 loading = 1751 lbs

7-day average BOD_5 loading = 45 mg/l * 8.34 lbs/gal * 7.0 MGD
7-day average BOD_5 loading = 2627 lbs

The proposed technology-based effluent limitations applicable to monitoring Outfalls 001, 002 and 101 are identified in Table 1 below. Again, Outfall 101 is a point after the last treatment unit but prior to the diversion of effluent to Outfalls 001 and 002. The permittee shall monitor the discharge from Outfalls 001, 002, and 101 during the period starting on the effective date of the permit and lasting through the expiration date of the permit, when discharging occurs.

Technology-Based Effluent Limits – 7.0 MGD design flow.

Table 4: Technology-Based Effluent Limits

Effluent Parameters	**30-Day Avg.**	**7-Day Avg.**	**30-Day Avg.**	**7-Day Avg.**
Flow	N/A	N/A	Measure MGD	Measure MGD
BOD_5 (lbs/day)	1751	2627	30 [*3]	45 [*3]
BOD_5, % removal, min [*1]	≥ 85%	---	---	---
TSS (lbs/day)	1751	2627	30	45
TSS, % removal, min [*1]	≥ 85%	---	---	---
pH	N/A	N/A	6.0 – 9.0 standard units [*2]	

Footnotes:

[*1] Percent removal is calculated using the following equation: [(average weekly influent concentration – average weekly effluent concentration) ÷ average weekly influent concentration] * 100. The facility is required to monitor BOD_5 and TSS influent once per week frequency for use in determining the removal percentage. The facility shall diligently maintain a log. The BOD_5 and TSS influent data is not required to be reported in NetDMR but must be kept at the facility and made available to EPA or its agents upon request.

[*2] The pH based on stream segment specific WQS are more stringent than pH technology-based limits of 6.0-9.0 standard units. See V.B.d.1. below.

[*3] The BOD_5 based on stream segment specific WQS are more stringent than BOD_5 technology-based limits. See V.B.d.5. below

B. WATER QUALITY BASED LIMITATIONS

a. 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 follow 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.

b. 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.

c. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC approved by EPA on April 10, 2025). When discharging occurs, discharge from Outfall 001 flows into Rio Hondo thence to Pecos River in segment number 20.6.4.231 NMAC of the Pecos River Basin. The designated uses for this segment include irrigation, livestock watering, wildlife habitat, primary contact and warmwater aquatic life. Discharge from Outfall 002, when discharging occurs, flows into Berrendo Creek thence to Rio Hondo to Pecos River in segment number 20.6.4.206 NMAC of the Pecos River Basin. The designated uses for this segment include irrigation, livestock watering, wildlife habitat, secondary contact and warmwater aquatic life.

d. 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:

1. pH

The State of New Mexico WQS criteria applicable to the warmwater aquatic life designated use require pH to be between 6.6 and 9.0 s.u. This is more restrictive than the mentioned technology-based limits. The pH limits of 6.6 to 9.0 s.u. in the previous permit will be continued in the draft permit.

2. Bacteria

When discharging occurs, discharge from Outfall 001 flows into Rio Hondo thence to Pecos River in segment number 20.6.4.231 NMAC of the Pecos River Basin. One of Rio Hondo's designated uses is primary contact. The NMWQS for *E. coli* designed to protect the primary contact use requires a 30-day average (geometric mean) limit of 126 cfu/100 mL or less and a single sample limit of 410 cfu/100 ml or less. The draft permit will establish limitations for *E. coli* bacteria of 126 cfu/100ml, 30-day average and 410 cfu/100 ml in any single sample, and these limitations only apply to Outfall 001. For Outfall 002, receiving water is Berrendo Creek, one of whose designated uses is secondary contact. For secondary contact, criteria for *E. coli* bacteria are a monthly geometric mean of 548 cfu/100 mL and a daily maximum of 2507 cfu/100 mL pursuant to 20.6.4.900 NMAC. These limits from the previous permit are maintained for Outfall 002 in the draft permit.

3. TP & TN

The facility is designated as a major POTW with a design flow rate of 7.0 MGD. To protect and maintain existing and downstream water quality and to prevent further degradation of water quality, the TP & TN monitoring requirements in the previous will be continued in the draft permit.

4. Adjusted Gross Alpha Value

The Pecos River in water quality standards segment 20.6.4.231 NMAC of the Pecos River Basin has the following designated uses: industrial water supply, irrigation, livestock watering, wildlife habitat, warm-water aquatic life, and primary contact. Meanwhile, the designated uses of Berrendo Creek in water quality standards segment 20.6.4.206 NMAC of the Pecos River Basin are irrigation, livestock watering, wildlife habitat, secondary contact and warmwater aquatic life.

To protect the livestock watering designated use, New Mexico water quality criterion for "adjusted gross alpha" is 15 pCi/L (see 20.6.4.900.J). The EPA proposed that "adjusted gross alpha" to be monitored once every 6 months by grab sampling to determine if effluent limits will be required in future permits.

The "adjusted gross value" is determined by the following mathematical relationship:

[Adjusted Gross Alpha] (pCi/L) = [Gross Alpha] (pCi/L) – {[Uranium] ug/L) * 0.67}

A conversion factor of 0.67 (pCi/L)/(μg/L) is used to convert uranium concentrations (in μg/L) to uranium activity (in pCi/L) prior to subtraction.

To determine the adjusted gross alpha value which will be used to evaluate directly against the water quality criterion, EPA proposes natural uranium and gross alpha to be monitored once every 6 months.

5. Dissolved Oxygen

The State of New Mexico WQS criterion applicable to the warmwater 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). The facility design flow, receiving water critical flow, and various BOD_5 factors including BOD_5 Secondary Treatment Standards were considered and simulated to achieve the receiving waterbody DO criterion. The following is a summary of model inputs.

• The City of Roswell Wastewater Treatment Plant's design flow is 7 MGD. The facility has two outfalls, 001 and 002. Outfall 001 is located at Latitude 33° 24' 37" North (33.410), and Longitude -104° 28' 45" West (-104.479). Meanwhile, Outfall 002 is located at Latitude 33° 24' 50" North (33.414), and Longitude -104° 27' 40" West (-104.461). When discharging occurs, discharges from Outfalls 001 and 002 flow into Rio Hondo and Berrendo Creek, respectively. This typically occurs 1-3 months out of the year (December – March). There has been no discharge into Berrendo Creek from Outfall 002 in the past five years or more. However, discharge from both outfalls is considered in the modeling. The permittee indicated that the discharge from Outfall 002, if discharging occurs, is approximately 3.4 MGD. Meanwhile, the discharge from Outfall 001, when discharging, has been approximately 3.4 MGD. Other effluent parameters provided in the permittee's NPDES application for Outfall 001, which were applied in the modeling, include *E. coli* (Avg: 19 MPN/100ml), and winter temperature (Avg: 17 ^{o}C). Effluent DO limit of 4.1mg/L was also applied. Effluent discharging from Outfall 002 was assumed to have similar profile.

• NMED provided the following information. The critical low flows of Rio Hondo and Berrendo Creek receiving streams are approximately 0.685 MGD (0.036 m^3/s) and 0.054 MGD (0.00284 m^3/s), respectively. For Rio Hondo, parameters applied in the model include Salinity (Avg: 3.8 ppt), temperature (Avg: 17.05 ^{o}C), and DO (Avg: 8.04 mg/L); and for Berrendo Creek, parameters applied in the model include Salinity (Avg: 5.39 ppt), temperature (Avg: 10.87 ^{o}C), and DO (Avg: 10.23 mg/L). A complete characterization of Rio Hondo and Berrendo Creek (i.e., water quality and hydrodynamic data) were not available. Assumptions were made when there was no data. The EPA used the State of New Mexico's OpenEnviroMap to estimate the average elevation of the study area. The average elevation is approximately 1067 meters (3500 feet). The average width and depth were assumed approximately 4.7 meters and 0.61 meters, respectively, and the studied segment length is approximately 12.5 kilometers for Rio Hondo. For Berrendo Creek, the average width and depth were assumed approximately 4.7 meters and 0.3 meters, respectively, and the studied segment length is approximately 5 kilometers.

The model results show an excursion of the receiving stream DO water quality standard of 5 mg/L when the TBEL BOD_5 limits of 30 mg/L (monthly average) and 45 mg/L (7-day average) were applied (see the graph in Appendix 1). Various BOD_5 and DO factors were considered and simulated to achieve the DO criterion. The modeling results indicate DO limit of 4.4 mg/L and along with the BOD_5 limits of 16 mg/L (monthly average) and 20 mg/L (7-day average), which ensure a minimum DO of

5.0 mg/L is reached, would be protective of the warmwater aquatic life designated use (see attached graph in Appendix 2). Therefore, EPA proposes the DO limit of 4.4 mg/L along with the continuation of previous permit BOD_5 limits of 16 mg/L (monthly average) and 20 mg/L (7-day average) in the draft permit.

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.

6. 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.

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, "publicly owned treatment works" but also to facilities that are like POTWs, but which do not meet the regulatory definition of (like privately owned sanitary wastewater treatment facility, 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 City of Roswell WWTP is classified as a "major" discharger with a design flow of 7.0 MGD, and is required to complete Part D, "Expanded Effluent Testing Data" of form 2A. The facility has two outfalls, 001 and 002. When discharging occurs, discharges from Outfall 001 flow into Rio Hondo thence to Pecos River in segment number 20.6.4.231 NMAC of the Pecos River Basin. Discharges from Outfall 002, when discharging, flow into Berrendo Creek thence to Rio Hondo to Pecos River in segment number 20.6.4.206 NMAC of the Pecos River Basin. There has been no discharge from Outfall 002 into Berrendo Creek in the past five years or more. The EPA only conducted a screening analysis for Outfall 001 discharge using submitted data in the Section IV "Effluent Characteristics" to determine if RP to cause or contribute to the State WQS exceedances exists. If RP exist, appropriate permit limits needed to be protective of such designated uses will be established as required by 40 CFR 122.44(d)(1)(iii). The EPA conducted a RP screening analysis based on the NMIP as of March 15, 2012. The receiving stream ambient hardness value of 2400 mg/L was used in the screening for any hardness-dependent WQS. The results shown in Appendix 3 that there were no pollutants that demonstrated RP to violate WQS consistent with the designated uses for the receiving water.

7. TRC

The facility uses UV disinfection, so chlorine is not normally added to the effluent. However, chlorine may be used for maintenance, or other purposes in the future. These usages may cause chlorine to be

in the facility discharge. If chlorine may be used, there, however, will be a permit requirement that will limit its discharge during those times. The implementation to protect NMWQS from chlorine toxicity is to limit chlorine as "no measurable amount". Specifically, after de-chlorination and prior to final disposal, the effluent shall contain "NO MEASUREABLE" total residual chlorine at any time. "NO MEASUREABLE" will be defined as no detectable concentration of TRC as determined the minimum quantification level of TRC becomes less than 11 ug/L. The previous permit TRC limit of 11 µg/L when chlorine is used will be continued in the draft permit. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. The maximum dechlorinated TRC shall be monitored daily by grab sample when discharging occurs. Monitoring for TRC shall be at Outfalls 001 and 002 and not at Outfall 101.

8. Per- and Polyfluoroalkyl Substances (PFAS)

The EPA currently has no data indicating that PFAS is present in the City of Roswell WWTP discharge. There are no industrial users of the system expected to contribute PFAS into the collection system. The standard reopener language in the permit allows additional permit conditions if warranted by future changes in the listing of receiving waterbody segment (i.e., PFAS) and/or new TMDLs. As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects (EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan, EPA 823R18004, February 2019). The EPA is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

Although the New Mexico Water Quality Standards do not include numeric criteria for PFAS, the 2022 New Mexico Water Quality Standards narrative criterion supply guidance including:

20.6.4.7(E)(2) NMAC states: "**Emerging contaminants"** refer to water contaminants that may cause significant ecological or human health effects at low concentrations. Emerging contaminants are generally chemical compounds recognized as having deleterious effects at environmental concentrations whose negative impacts have not been fully quantified and may not have regulatory numeric criteria.

20.6.4.7(T)(2) NMAC states: **"Toxic pollutant"** means those pollutants, or combination of pollutants, including disease-causing agents, that after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will cause death, shortened life spans, disease, adverse behavioral changes, reproductive or physiological impairment or physical deformations in such organisms or their offspring.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the draft permit requires that the facilities conduct influent, effluent, and sludge sampling for PFAS according to the frequency outlined in the permit.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential

development of water quality-based effluent limits on a facility-specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

"SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—

(A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require;".

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

The EPA has included PFAS monitoring in the draft permit using analytical Method 1633 (see https://www.epa.gov/cwa-methods/cwa-analytical-methods-and-polyfluorinated-alkyl-substances-pfas for more information). Table 5 lists Region 6 recommended PFAS monitoring frequencies for different facility types.

Table 5: Region 6 Recommended Monitoring Frequencies

Facility Type [1,2]	**Measurement Frequency**
Minor (< 0.1 MGD)	Once/Term
Minor (0.1 < 1.0 MGD) [2,3]	3/Term
Major (if NOT in an applicable category) [2]	Once/6 Months
Major (if IS in an applicable category) [2]	Quarterly
Major (with required pretreatment OR discharge is > 5 MGD)	Quarterly

Footnotes:

1. These recommended frequencies are only for facilities where an applicable ELG for PFAS does not apply. These frequencies may be altered if an industry category is known or suspected to discharge PFAS or based on the permit writer's BPJ.
2. More information on PFAS is available at https://www.epa.gov/pfas.
3. PFAS samples must be collected and analyzed in three separate calendar years

9. 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). Sample frequency is based on the March 15, 2012, Procedures for Implementing

NPDES Permits in New Mexico (NMIP). Sample frequency is based on the March 2012, NMIP with design flows between 5 MGD and 10 MGD. Sample frequency and type for limited parameters are shown in Table 6.

Table 6: Limited Parameters Monitoring Frequency

Parameter	**Frequency**	**Sample Type**
Flow	Daily	Totalized Meter
BOD_5 (lbs/day)	5/Week	12-hour composites
TSS	5/Week	12-hour composites
E. Coli Bacteria	5/Week	Grab
pH	Daily	Instantaneous Grab
Total Dissolved Oxygen	5/Week	Instantaneous Grab
TRC	Daily	Instantaneous Grab
Nitrogen, total	1/Quarter	12-hour composites
Phosphorous, total	1/Quarter	12-hour composites

C. WHOLE EFFLUENT TOXICITY (WET) LIMITS

The State of New Mexico 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 chronic 7-day biomonitoring testing using *Ceriodaphnia dubia* and *Pimephales promelas*. The EPA conducted an analysis of the facility past WET data to determine reasonable potential. The results show reasonable potential (see Appendix 4) to exceed water quality standards for toxicity and a limit for toxicity is in effect.

The WWTP discharges to the Rio Hondo and Berrendo Creek. The EPA used critical low flows (4Q3) provided by NMED to calculate critical dilutions for both of the receiving streams using the following mathematical equation:

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

Where:
CD -- Critical dilution
Q_a -- Critical low flow (0.6855 MGD and 0.054 MGD)
Q_e -- Outfall discharge flow

For Rio Hondo,

$$CD = 3.4 / [3.4 + 0.6855]$$

= 0.70 = 70%

For Berrendo Creek,

CD = 3.4/ [3.4 + 0.054]
= 0.984 = 98.4%

Based on the nature of the discharge (i.e., POTW), the design flow/discharge rate (i.e., > 1.0 MGD), the classification of the receiving waters (i.e., perennial streams), and the critical dilutions (i.e., 70% and 98% for Rio Hondo and Berrendo Creek, respectively), when discharging, EPA, in accordance to the NMIP, proposes 7-day chronic WET tests using *Ceriodaphnia dubia* and *Pimephales promelas* at a once per three-month frequency in the draft 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 1 dilution series. The test series for Outfall 001 will be 0% (control), 30%, 39%, 53%, 70%, and 93%; and the test series for Outfall 002 will be 0% (control), 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 and Outfall 002. Discharges shall be limited and monitored by the permittee as specified in Tables 7 and 8, respectively below:

Table 7: Outfall 001

WHOLE EFFLUENT TOXICITY LIMITS (7-Day Chronic Static Renewal/ NOEC) (*1)(*2)	**VALUE**	**MEASUREMENT FREQUENCY**	**DMR REPORTING FREQUENCY**	**SAMPLE TYPE**
Ceriodaphnia dubia	70%	Once/Quarter	Monthly	24-Hr Composite
Pimephales promelas	70%	Once/Quarter	Monthly	24-Hr Composite

Footnotes:

*1 When discharging occurs.
*2 Compliance with the WET limitation is required on the effective date of this permit. See Part II of the permit, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

Table 8: Outfall 002

WHOLE EFFLUENT TOXICITY (7-Day Chronic Static Renewal/ NOEC) (*1)(*2)	**VALUE**	**MEASUREMENT FREQUENCY**	**DMR REPORTING FREQUENCY**	**SAMPLE TYPE**
Ceriodaphnia dubia	98%	Once/Quarter	Monthly	24-Hr Composite
Pimephales promelas	98%	Once/Quarter	Monthly	24-Hr Composite

Footnotes:

*1 When discharging occurs.
*2 Compliance with the WET limitation is required on the effective date of this permit. See Part II of the permit, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The permittee shall use only 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". Specific requirements in the permit apply because of the design flow of the facility, the type of waste discharged to the collection system and the sewage sludge disposal or reuse practice utilized by the treatment works. The permittee shall submit an annual Sludge Status report in accordance with NPDES Permit NM0020311, Part I and Part IV.

B. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs (or continue existing ones) directed towards optimizing the operating efficiency and extending the useful life of the facility.

C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has two (2) non-categorical Significant Industrial User's (SIU) and no Categorical Industrial User's (CIU). A list of facilities, their services process, process and non-process water flow rates and raw products are shown in Table 9.

Table 9.

Name/Address	Industrial Process	Discharge	Principal Products	Classification
Dean Baldwin Painting, Inc. 82 Earl Cummings Loop Roswell NM 88201	Aircraft stripping & painting	24,000 batch discharge/day	Aircraft stripping & painting	SIU – Metal Finisher 433.17
AmeriPride Linen and Apparel Services P.O. Box 1976 515 North Virginia Roswell, NM 88201	Industrial linen laundry	1,500 MGD	Linen and apparel cleaning	

The facility, also, receives waste from remedial activities. A list of RCRA remediation/ corrective action wastewater and other remedial activity wastewater listed in the Table 10 below.

Table 10

Site Location	Waste Origin	Pollutants	Waste Treatment
Superfund Site 1110 W. Hahn St. Roswell, NM 88203	Ground Water Plume(s) originating from one or more inactive dry cleaner facilities	TCE/PCE	The plume will be pumped, and groundwater will be treated. Treatment used is granulated carbon filter. The treated groundwater will be discharged to the POTW. Max discharge is 44,000 gpd.

The facility has operated an industrial pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the General Pretreatment Regulations (40 CFR 403) and the approved pretreatment program submitted by the permittee. The pretreatment program was originally approved on March 20, 1985, and last modified on June 1, 2018. Contributions to

the wastewater treatment plant will be limited according to the requirements detailed in Part II Section A of the proposed permit.

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 monthly. Reporting requirements and the requirement of using EPA-approved test procedures (methods) for the analysis and quantification of pollutants or pollutant parameters are contained in 40 CFR 122.41(l) and 40 CFR 122.21 (e), respectively. As required by 40 CFR 127.16, all Discharge Monitoring Reports (DMRs) shall be electronically reported. The monitoring results will be available to the public.

E. SUFFICIENTLY SENSITIVE ANALYTICAL METHODS

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 can 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.

VII. **303(d) LIST**

In New Mexico's 2024-2026 CWA §303(d) / 305(b) Integrated List, Rio Hondo (Perennial part Pecos R to North Spring R) in WQS Segment No. 20.6.4.231 NMAC is not listed as being impaired. Meanwhile, Berrendo Creek (Rio Hondo to Middle Berrendo Creek) in WQS Segment No. 20.6.4.206 NMAC, is listed not supporting for Warm water aquatic life. The probable cause is due to nutrients. No TMDLs has been developed for this segment yet. Once the TMDL(s) is developed and approved, 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.

The standard reopener language in the permit allows additional permit conditions if warranted by future changes and/or new TMDLs. No additional pollutants are listed for this waterbody.

VIII. **ANTI-DEGRADATION**

The NMAC, Section 20.6.4.8 "Anti-degradation Policy and Implementation Plan" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

IX. ANTI-BACKSLIDING

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. Besides maintaining the effluent limitation requirements of the previous permit for BOD_5, TSS and pH, the proposed permit includes more stringent effluent limitation for *E. coli* (Outfall 001) and Total Dissolved Oxygen (Outfalls 001, 002 and 101). All the changes represent permit requirements that are consistent with the WQS and with WQMP.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=35005, there are sixteen species in Chaves County are listed as either threatened or endangered: Piping Plover (*Charadrius melodus*) (T), Pecos Bluntnose Shiner (*Notropis simus pecosensis*)(T), Pecos Gambusia (*Gambusia nobilis*) (E), Koster's Springsnail (*Juturnia kosteri*) (E), Wright's Marsh Thistle (*Cirsium wrightii*) (T), Dunes sagebrush lizard (*Sceloporus arenicolus*) (E), Gypsum wild-buckwheat (*Eriogonum gypsophilum*) (T), Texas Hornshell (*Popenaias popeii*) (E), Southwestern willow flycatcher (*Empidonax traillii extimus*) (E), New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (E), Pecos assiminea snail (Assiminea pecos) (E), Roswell springsnail (*Pyrgulopsis roswellensis*) (E), Noel's Amphipod (*Gammarus desperatus*) (E), Yellow-billed Cuckoo (*Coccyzus americanus*) (T), Pecos sunflower (*Helianthus paradoxus*) (T), and Kuenzler hedgehog cactus (*Echinocereus fendleri var. kuenzleri*) (T). In the previous permit issued November 20, 2019, EPA made a "no effect" determination for federally listed species mentioned above except for Dunes sagebrush lizard (*Sceloporus arenicolus*) (E), Gypsum wild-buckwheat (*Eriogonum gypsophilum*) (T), Texas Hornshell (*Popenaias popeii*) (E), Southwestern willow flycatcher (*Empidonax traillii extimus*) (E), New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (E), and Yellow-billed Cuckoo (*Coccyzus americanus*) (T). Also, 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:

1. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.
2. The draft permit is consistent with the Tribe/States WQS and does not increase pollutant loadings.
3. The EPA, on February 14, 2023, submitted a Biological Evaluation (BE) and requested informal consultation with the FWS for the U.S. Environmental Protection Agency's approval of the New Mexico's Standards for Interstate and Intrastate Surface Waters, Title 20, Chapter 6, Part 4, as approved under the Clean Water Act (CWA) and the effects of chloride, iron, and ammonia on a number of the federally listed endangered species including Texas hornshell (*Popenaias popeii*). The FWS responded to EPA's BE, May 23, 2024, Consultation # 2022-

0035392, concurring with EPA its proposed action "may affect, but not likely to adversely affect" on a number of the federally listed endangered species including Texas hornshell (*Popenaias popeii*).

4. The Dunes sagebrush lizard (*Sceloporus arenicolus*) is a habitat specialist, relying on the narrowly distributed shinnery oak sand dunes and supportive matrix of shinnery oak flats. The dunes sagebrush lizard is a small, light brown spiny lizard (Degenhardt et al. 1996; Hibbitts and Hibbitts 2015). Females average 53.8 mm (2.12 in) in snout-to-vent length while males average 54.5 mm (2.15 in; Degenhardt et al. 1996). Dunes sagebrush lizards have a short lifespan of two to four years (Snell et al. 1997; Fitzgerald and Painter 2009). Lizards are active from April through October, with mating occurring from May to early July (Fitzgerald and Painter 2009; Hibbitts and Hibbitts 2015). The primary factors affecting the current and future conditions of the Dunes sagebrush lizard are habitat loss and fragmentation. The source of these stressors is primarily related to oil and gas extraction, associated infrastructure development, and frac sand mining (with frac sand used during hydraulic fracturing of oil and gas wells), which modify and degrade shinnery oak duneland and the surrounding shinnery oak supportive habitat to an extent that it is no longer suitable for dunes sagebrush lizard use. Additional sources of stressors include wind and solar development, transmission lines and other linear infrastructure, shinnery oak treatments, honey mesquite encroachment, grazing, and off-highway vehicle (OHV) use. The EPA determines that this permitting action will have no effect on the species. The permit does not authorize activities that may cause destruction or modification the dunes sagebrush lizard habitat, and issuance of the permit will have no effect on this species.
5. Gypsum wild-buckwheat (*Eriogonum gypsophilum*) (T). This plant is known from one locality in Eddy County, in southeastern New Mexico. They are threatened by off-road-vehicle use of the habitat, and trampling or grazing by cattle, as well as possible adverse effects of the raised water level resulting from establishment of reservoir and relocation of highways in the area. The permit does not authorize activities that may cause destruction of the Gypsum wild-buckwheat habitat, and issuance of the permit will have no effect on this species.
6. The southwestern willow flycatcher (*Empidonax traillii extimus*) is a small passerine bird, approximately 15 cm in length. It has a grayish green back and wings, whitish throat, light gray-olive breast, and pale yellowish belly. The southwestern willow flycatcher's breeding range includes southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern portions of Nevada and Utah, and extreme northwestern Mexico. Willow flycatchers are neotropical migrant songbirds that winter in southern Mexico, central America, and extreme northern south America. Migration routes of willow flycatchers in New Mexico approximate breeding habitat with migrants and breeders often located in the same habitat patches. In New Mexico, the southwestern willow flycatcher is known to summer in the Rio Grande, Gila, San Francisco, Zuni, Chama, and San Juan River basins. Southwestern willow flycatchers' nest in dense riparian vegetation approximately 4 to 7 m high, often with high percentage of canopy cover. Generally, in New Mexico nesting habitat consists of dense coyote willow patches with sparse overstory of cottonwood. However, willow flycatchers are known to nest in habitat which is also a mix of riparian species including tree willow, saltcedar, Russian olive, box elder, and other riparian vegetation. Threats to the southwestern willow flycatcher include habitat loss due to water diversion and flood plain channelization for agricultural and urban use and flood control, replacement of native riparian vegetation by exotics, and livestock grazing. Individual populations are threatened by small size, nest parasitism by brown-headed cowbirds and nest predation. At the site of the discharge, riparian and wetland species are not in dense stands suitable for nesting, but this area may provide forage. Riparian areas in the Southwest have been drastically affected by human activity since the mid-1800s although the development of irrigation ditches expanded wetland portions of the

Mora valley vega. Riparian ecosystems throughout the Southwest have been altered due to impoundments, overgrazing, mining, and conversion to agriculture. The loss of riparian habitat to common agricultural practices is one of the key reasons why the Southwestern willow flycatcher is listed as an endangered species. Based upon the data, the effluent discharge will have no effect the Southwestern willow flycatcher or its habitat.

7. New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*): The jumping mouse is a small, nocturnal, solitary mammal and an obligate riparian subspecies. Its historical distribution likely included riparian wetlands along streams in the Sangre de Cristo and San Juan Mountains from southern Colorado to central New Mexico, including the Jemez and Sacramento Mountains and the Rio Grande Valley from Española to Bosque del Apache National Wildlife Refuge, and into parts of the White Mountains in eastern Arizona. Ongoing and future habitat loss is expected to result in additional extirpations of more populations. Research indicates that the primary sources of past and future habitat losses are from grazing pressure (which removes the needed vegetation) and water management and use (which causes vegetation loss from mowing and drying of soils), lack of water due to drought (exacerbated by climate change), and wildfires (also exacerbated by climate change). Additional sources of habitat loss are likely to occur from scouring floods, loss of beaver ponds, highway reconstruction, coal-bed methane development, and unregulated recreation. The permit does not authorize activities that may cause destruction of the New Mexico Meadow Jumping Mouse habitat, and issuance of the permit will have no effect on this species.
8. 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.

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.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should not have an 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 or downstream Tribal water quality standards are promulgated or revised. In addition, if the State or downstream Tribes 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. CERTIFICATION

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the 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)

Facility submitted to EPA Application Forms 2A, 2S, and supplemental information via email on July 22, 2024, August 12, 2024, August 13, 2024, September 9, 2024, October 11, 2024, October 30, 2024, December 6, 2024, December 19, 2024, and December 23, 2024.

B. 40 CFR CITATIONS

§§ 122, 124, 125, 127, 131, 133, 136

C. STATE WATER QUALITY REFERENCES

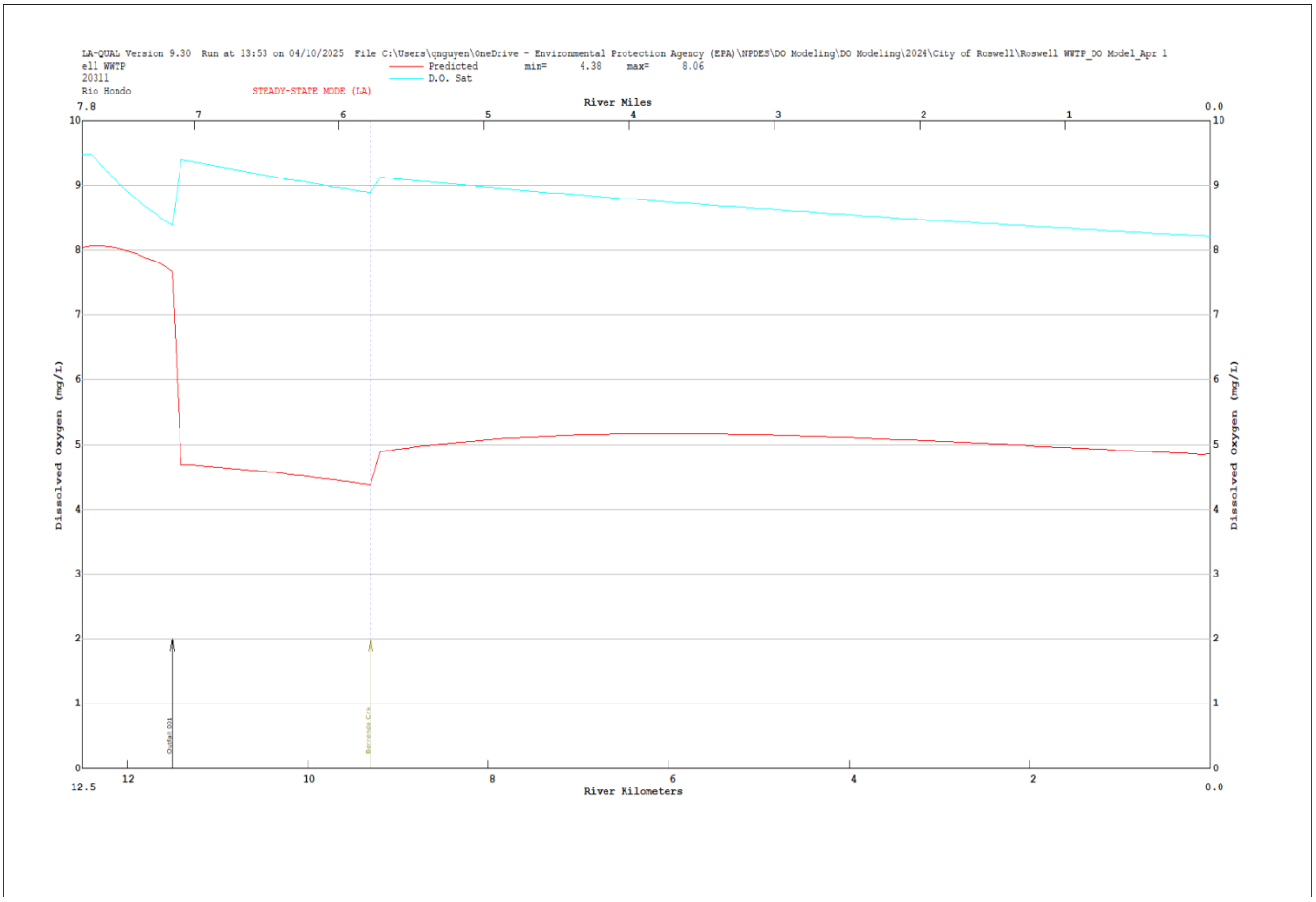
New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, approved by EPA on April 10, 2025.

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

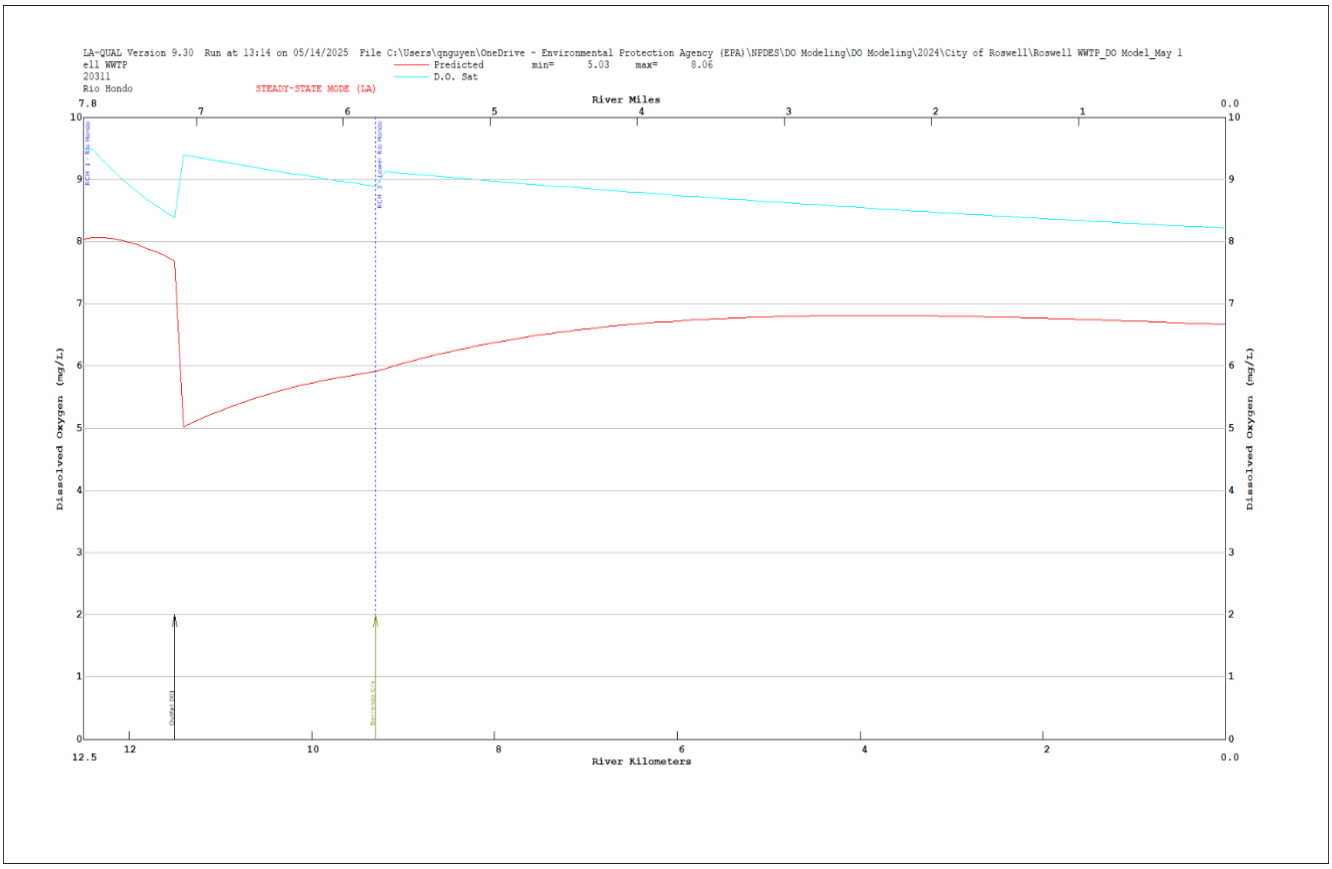
Statewide Water Quality Management Plan, December 17, 2002.

State of New Mexico 303(d) / §305(b) List for Assessed Stream and River Reaches, 2024-2026, approved by EPA on May 17, 2024.

APPENDIX 1


LA-QUAL Version 9.30 Run at 13:53 on 04/10/2025 File C:\Users\qnguyen\OneDrive - Environmental Protection Agency (EPA)\NPDES\DO Modeling\DO Modeling\2024\City of Roswell\Roswell WWTP_DO Model_Apr 1
ell WWTP
20311
Rio Hondo
STEADY-STATE MODE (LA)
Predicted min= 4.38 max= 8.06
D.O. Sat
River Miles
7.8
7
6
5
4
3
2
1
0.0
Dissolved Oxygen (mg/L)
River Kilometers
12.5
12
10
8
6
4
2
0.0

APPENDIX 2


LA-QUAL Version 9.30 Run at 13:14 on 05/14/2025 File C:\Users\qnguyen\OneDrive - Environmental Protection Agency (EPA)\NPDES\DO Modeling\DO Modeling\2024\City of Roswell\Roswell WWTP_DO Model_May 1
ell WWTP
20311
Rio Hondo
STEADY-STATE MODE (LA)
Predicted min= 5.03 max= 8.06
D.O. Sat
River Miles
River Kilometers
Dissolved Oxygen (mg/L)
Dissolved Oxygen (mg/L)

APPENDIX 3

		CALCULATIONS OF NEW MEXICO WATER QUALITY-BASED EFFLUENT LIMITATIONS			
NMAC 20.6.4.	NMWQS as of 2023 (EPA Approved January 19, 2023)				
Calculations Specifications:		Excel	Revised as of February 2023		
Prepared By:	Quang Nguyen		7-Apr-25	3:18 PM	
STEP 1:	REFERENCE IMPLEMENTATION PROCEDURES		APPENDIX	A	
	INPUT FACILITY AND RECEIVING STREAM DATA		of FACT SHEET		
	LIST SOURCE OF DATA INPUT				
IMPLEMENTATION PROCEDURES					
The State of New Mexico Standards for Interstate and Intrastate Surface Waters are implemented in this spread sheet					
by using procedures established in the current "Procedures for Implementing NPDES Permits in New Mexico"					
FACILTY			DATA INPUT		
Permittee			City of Roswell		
NPDES Permit No.			NM0020311		
Outfall No.(s)			1		
Plant Effluent Flow (MGD)			3.4	For industrial and federal facility, use the highest monthly average flow	
Plant Effluent Flow (cfs)			5.27	for the past 24 months. For POTWs, use the design flow.	
RECEIVING STREAM			DATA INPUT		
Receiving Stream Name			Rio Hondo-Pecos River		
Basin Name			Pecos River Basin		
Waterbody Segment Code No.			20.6.4.231		
Is a publicly owned lake or reservoir (enter "1" if it's a lake, "0" if not)			0		
Are acute aquatic life criteria considered (1= yes, 0= no)			1		
Are chronic aquatic life criteria considered (1= yes, 0=no)			1		
Are domestic water supply criteria considered (1= yes, 0=no)			0		
Are irrigation water supply criteria considered (1= yes, 0=no)			1		
Livestock watering and wildlife habitat criteria applied to all streams			1		
USGS Flow Station			USGS		
WQ Monitoring Station No.			SJR		
Receiving Stream TSS (mg/l)			16	For intermittent stream, enter effluent TSS	
Receiving Stream Hardness (mg/l as CaCOs)		RANGE: 0 - 400	2400	For intermittent stream, enter effluent Hardness (If no data, 20 mg/l is used)	
Receiving Stream Critical Low Flow (4Q3) (cfs)			1.0607	Enter "0" for intermittent stream and lake.	
Receiving Stream Harmonic Mean Flow (cfs)			3.0075	Enter harmonic mean or modified harmonic mean flow data or 0.001 if no data is available	
Avg. Receiving Water Temperature (C)			17.05		
pH (Avg), Receiving Stream			7.15		
Fraction of stream allowed for mixing (F)			1	Enter 1, if stream morphology data is not available or for intermittent streams.	
Fraction of Critical Low Flow			1.0607		

STEP 2: INPUT AMBIENT AND EFFLUENT DATA

CALCULATE IN-STREAM WASTE CONCENTRATIONS

DATA INPUT

Input pollutant geometric mean concentration as micro-gram per liter (ug/l or ppb)

unless other unit is specified for the parameter.

Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, input "1/2 DL" for calculation.

Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, no data is inputted.

If a less than MQL vakue is reported, input either the reported value or "0" for calculation.

The following formular is used to calculate the Instream Waste Concentration (Cd)

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Cd = [(F*Qa*Ca) + (Qe*2.13*Ce)] / (F*Qa + Qe)

Where:

Cd = Instream Waste Concentration

F = Fraction of stream allowed for mixing (see "Procedures for Implementing NPDES Permits in New Mexico")

Ce = Reported concentration in effluent

Ca = Ambient stream concentration upstream of discharge

Qe = Plant effluent flow

Qa = Critical low flow of stream at discharge point expressed as the 4Q3 or harmonic mean flow for human health criteria

The following formular convert metals reported in total form to dissolved form if criteria are in dissolved form

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Kp = Kpo * (TSS**a)

Kp = Linear partition coefficient; Kpo and a can be found in table below

C/Ct = 1/ (1 + Kp*TSS* 10^-6)

TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)

Total Metal Criteria (Ct) = Cr / (C/Ct)

C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value

		Stream Linear Partition Coefficient					Lake Linear Partition Coefficient				
Total Metals	Total Value	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Stream	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Lake
Arsenic	1	480000	-0.73	63421.08243	0.49634262	0.49634262	480000	-0.73	63421.08243	0.49634262	0.4963426
Chromium III		3360000	-0.93	254980.9257	0.19686222	0	2170000	-0.27	1026472.547	0.05739355	0
Copper	3.8	1040000	-0.74	133654.7975	0.318625906	1.21077844	2850000	-0.9	235037.3466	0.210057664	0.7982191
Lead		2800000	-0.8	304692.6972	0.170210357	0	2040000	-0.53	469295.7018	0.117526335	0
Nickel	1.1	490000	-0.57	100889.8996	0.382520585	0.42077264	2210000	-0.76	268695.9292	0.188710049	0.2075811
Silver	12	2390000	-1.03	137453.0303	0.312573407	3.75088089	2390000	-1.03	137453.0303	0.312573407	3.7508809
Zinc	19	1250000	-0.7	179484.118	0.258281413	4.90734685	3340000	-0.68	506926.3642	0.109759582	2.0854321

The following formular is used to calculate hardness dependent criteria

(Please refer to State Water Quality Standards for details)

		Dissolved WQC (ug/l)	
Aluminum (T)	Acute	e(1.3695[ln(hardness)]+1.8308)	265647.4387	If Stream pH < 6.5, enter 750 in cell O114
	Chronic	e(1.3695[ln(hardness)]+0.9161)	106428.1395	If Stream pH < 6.5, enter 87 in cell P114
Cadmium (D)	Acute	e(0.8968[ln(hardness)]-3.5699)*CF1	24.54858656	CF1 = 1.136672 - 0.041838*ln(hardness)
	Chronic	e(0.7647[ln(hardness)]-4.2180)*CF2	4.394162414	CF2 = 1.101672 - 0.041838*ln(hardness)

									Dissolved						
									WQC (ug/l)						
Chromium III (D)			Acute			0.316 e(0.819[ln(hardness)]+3.7256)			7692.856146						
			Chronic			0.860 e(0.819[ln(hardness)]+0.6848)			1000.682533						
Copper (D)			Acute			0.960 e(0.9422[ln(hardness)]-1.700)			268.4142977						
			Chronic			0.960 e(0.8545[ln(hardness)]-1.702)			135.3606811						
Lead (D)			Acute			e(1.273[ln(hardness)]-1.46)*CF3			1530.058424		CF3 = 1.46203 - 0.145712*ln(hardness)				
			Chronic			e(1.273[ln(hardness)]-4.705)*CF4			59.62418016		CF4 = 1.46203 - 0.145712*ln(hardness)				
Manganese (D)			Acute			e(0.3331[ln(hardness)]+6.4676)			8605.80212						
			Chronic			e(0.3331[ln(hardness)]+5.8743)			4754.714446						
Nickel (D)			Acute			0.998 e(0.846[ln(hardness)]+2.255)			6888.478519						
			Chronic			0.997 e(0.846[ln(hardness)]+0.0584)			765.097295						
Silver (D)			Acute			0.85 e(1.72[ln(hardness)]-6.59)			760.9946888						
Zinc (D)			Acute			0.978 e(0.9094[ln(hardness)]+0.9095)			2879.345561						
			Chronic			0.986 e(0.90947[ln(hardness)]+0.6235)			2182.027614						
						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
POLLUTANTS				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
				Conc.	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Radioactivity, Nutrients, and Chlorine																
Aluminum, total		7429-90-5	2.5	290	29	61.77	100.00962	100.00962	144.693796	1E+100	1E+100	1E+100	265647.4387	106428.14	1E+100	N/A
Aluminum, dissolved		7429-90-5			5.8	12.354	10.2841044	10.2841044	7.86536756	1E+100	5000	1E+100	1E+100	1E+100	1E+100	N/A
Barium, dissolved		7440-39-3	100	18	21	44.73	40.2514256	40.2514256	35.0180731	2000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Boron, dissolved		7440-42-8	100	250	270	575.1	520.629946	520.629946	456.980006	1E+100	750	5000	1E+100	1E+100	1E+100	N/A
Cobalt, dissolved		7440-48-4	50			0	0	0	0	1E+100	50	1000	1E+100	1E+100	1E+100	N/A
Uranium, dissolved		7440-61-1	0.1	11	2.2	4.686	5.74390194	5.74390194	6.98009302	30	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Vanadium, dissolved		7440-62-2	50	2	2	4.26	3.88134014	3.88134014	3.43886439	1E+100	100	100	1E+100	1E+100	1E+100	N/A
Ra-226 and Ra-228 (pCi/l)				0.35	0.944	2.01072	1.73246867	1.73246867	1.40732339	5	1E+100	30	1E+100	1E+100	1E+100	N/A
Strontium (pCi/l)					0.628	1.33764	1.11352027	1.11352027	0.85162945	8	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Tritium (pCi/l)						0	0	0	0	20000	1E+100	20000	1E+100	1E+100	1E+100	N/A
Gross Alpha (pCi/l)				7.4	7.12	15.1656	13.8644845	13.8644845	12.3440908	15	1E+100	15	1E+100	1E+100	1E+100	N/A
Asbestos (fibers/l)						0	0	0	0	7000000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Total Residual Chlorine		7782-50-5	33			0	0	0	0	1E+100	1E+100	11	19	11	1E+100	N/A
Ammonia as N, total (mg/l)					7.8	16.614	13.8303474	13.8303474	10.5775633	1E+100	1E+100	1E+100	Criterion	Criterion	1E+100	N/A
Nitrate as N (mg/l)						0	0	0	0	10	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Nitrite + Nitrate (mg/l)				4.2	10.8	23.004	19.8534159	19.8534159	16.1718611	1E+100	1E+100	132	1E+100	1E+100	1E+100	N/A
METALS AND CYANIDE																
Antimony, dissolved (P)		7440-36-0	60			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	640	N/A
Arsenic, dissolved (P)		7440-38-2	0.5		0.49634262	1.057209781	0.88007575	0.88007575	0.67308916	10	100	200	340	150	9	N/A
Beryllium, dissolved		7440-41-7	0.5			0	0	0	0	4	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Cadmium, dissolved		7440-43-9	1			0	0	0	0	5	10	50	24.54858656	4.3941624	1E+100	N/A
Chromium (III), dissolved		16065-83-1	10		0	0	0	0	0	1E+100	1E+100	1E+100	7692.856146	1000.6825	1E+100	N/A
Chromium (VI), dissolved		18540-29-9	10			0	0	0	0	1E+100	1E+100	1E+100	16	11	1E+100	N/A
Chromium, dissolved		7440-47-3				0	0	0	0	100	100	1000	1E+100	1E+100	1E+100	N/A
Copper, dissolved		7440-50-8	0.5		1.210778442	2.578958081	2.14685723	2.14685723	1.64193405	1300	200	500	268.4142977	135.36068	1E+100	N/A
Lead, dissolved		7439-92-1	0.5		0	0	0	0	0	15	5000	100	1530.058424	59.62418	1E+100	N/A
Manganese, dissolved		7439-96-5				0	0	0	0	1E+100	1E+100	1E+100	8605.80212	4754.7144	1E+100	N/A

					Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS			Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Mercury, dissolved	7439-97-6	0.005			0	0	0	0	1E+100	1E+100	1E+100	1.4	0.77	1E+100	N/A
Mercury, total	7439-97-6	0.005		0.00047	0.0010011	0.00083337	0.00083337	0.00063737	2	1E+100	0.77	1E+100	1E+100	1E+100	N/A
Molybdenum, dissolved	7439-98-7				0	0	0	0	1E+100	1000	1E+100	1E+100	1E+100	1E+100	N/A
Molybdenum, total recoverable	7439-98-7				0	0	0	0	1E+100	1E+100	1E+100	7920	1895	1E+100	N/A
Nickel, dissolved (P)	7440-02-0	0.5		0.420772644	0.896245731	0.746081	0.746081	0.57060888	700	1E+100	1E+100	6888.478519	765.0973	4600	N/A
Selenium, dissolved (P)	7782-49-2	5			0	0	0	0	50	130	50	1E+100	1E+100	4200	N/A
Selenium, dis (SO4 >500 mg/l)		5			0	0	0	0	50	250	50	1E+100	1E+100	4200	N/A
Selenium, total recoverable	7782-49-2	5			0	0	0	0	1E+100	1E+100	5	20	5	1E+100	N/A
Silver, dissolved	7440-22-4	0.5		3.750880889	7.989376293	6.65076738	6.65076738	5.08656153	1E+100	1E+100	1E+100	760.9946888	1E+100	1E+100	N/A
Thalllium, dissolved (P)	7440-28-0	0.5			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	0.47	N/A
Zinc, dissolved	7440-66-6	20		4.907346854	10.4526488	8.701322	8.701322	6.65484255	10500	2000	25000	2879.345561	2182.0276	26000	N/A
Cyanide, total recoverable	57-12-5	10			0	0	0	0	200	1E+100	5.2	22	5.2	140	N/A
Dioxin	1746-01-6	0.00001			0	0	0	0	3.00E-05	1E+100	1E+100	1E+100	1E+100	5.1E-08	N/A
VOLATILE COMPOUNDS															
Acrolein	107-02-8	50			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	400	N/A
Acrylonitrile	107-13-0	20			0	0	0	0	0.65	1E+100	1E+100	1E+100	1E+100	70	N/A
Benzene	71-43-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	160	N/A
Bromoform	75-25-2	10			0	0	0	0	44	1E+100	1E+100	1E+100	1E+100	1200	N/A
Carbon Tetrachloride	56-23-5	2			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	50	N/A
Chlorobenzene	108-90-7	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	800	N/A
Clorodibromomethane	124-48-1	10			0	0	0	0	4.2	1E+100	1E+100	1E+100	1E+100	210	N/A
Chloroform	67-66-3	50			0	0	0	0	57	1E+100	1E+100	1E+100	1E+100	2000	N/A
Dichlorobromomethane	75-27-4	10			0	0	0	0	5.6	1E+100	1E+100	1E+100	1E+100	270	N/A
1,2-Dichloroethane	107-06-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	6500	N/A
1,1-Dichloroethylene	75-35-4	10			0	0	0	0	7	1E+100	1E+100	1E+100	1E+100	20000	N/A
1,2-Dichloropropane	78-87-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	310	N/A
1,3-Dichloropropylene	542-75-6	10			0	0	0	0	3.5	1E+100	1E+100	1E+100	1E+100	120	N/A
Ethylbenzene	100-41-4	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	130	N/A
Methyl Bromide	74-83-9	50			0	0	0	0	49	1E+100	1E+100	1E+100	1E+100	10000	N/A
Methylene Chloride	75-09-2	20			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	10000	N/A
1,2,4,5-Tetrachlorobenzene	95-94-3				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.03	N/A
1,1,2,2-Tetrachloroethane	79-34-5	10			0	0	0	0	1.8	1E+100	1E+100	1E+100	1E+100	30	N/A
Tetrachloroethylene	127-18-4	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	290	N/A
Tolune	108-88-3	10			0	0	0	0	1000	1E+100	1E+100	1E+100	1E+100	520	N/A
1,2-trans-Dichloroethylene	156-60-5	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	4000	N/A
1,1,1-Trichloroethane	71-55-6				0	0	0	0	200	1E+100	1E+100	1E+100	1E+100	200000	N/A
1,1,2-Trichloroethane	79-00-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	89	N/A
Trichloroethylene	79-01-6	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	70	N/A
Vinyl Chloride	75-01-4	10			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	16	N/A
ACID COMPOUNDS															
2-Chlorophenol	95-57-8	10			0	0	0	0	175	1E+100	1E+100	1E+100	1E+100	800	N/A
2,4-Dichlorophenol	120-83-2	10			0	0	0	0	105	1E+100	1E+100	1E+100	1E+100	60	N/A
2,4-Dimethylphenol	105-67-9	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	3000	N/A
3-Methyl-4-chlorophenol	59-50-7				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	2000	N/A
2-Methyl-4,6-dinitrophenol	534-52-1	50			0	0	0	0	14	1E+100	1E+100	1E+100	1E+100	30	N/A

					Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS			Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
2,4-Dinitrophenol	51-28-5	50			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	300	N/A
Pentachlorophenol	87-86-5	50			0	0	0	0	1	1E+100	1E+100	19	15	30	N/A
Phenol	108-95-2	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	860000	N/A
2,4,5-Trichlorophenol	95-95-4				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	600	N/A
2,4,6-Trichlorophenol	88-06-2	10			0	0	0	0	32	1E+100	1E+100	1E+100	1E+100	28	N/A
2-(2,4,5Trichlorophenoxy)propionic acid (Silvex)					0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	400	N/A
BASE/NEUTRAL															
Acenaphthene	83-32-9	10			0	0	0	0	2100	1E+100	1E+100	1E+100	1E+100	90	N/A
Anthracene	120-12-7	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	400	N/A
Benzidine	92-87-5	50			0	0	0	0	0.0015	1E+100	1E+100	1E+100	1E+100	0.11	N/A
Benzo(a)anthracene	56-55-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.013	N/A
Benzo(a)pyrene	50-32-8	5			0	0	0	0	0.2	1E+100	1E+100	1E+100	1E+100	0.0013	N/A
3,4-Benzofluoranthene	205-99-2	10			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.0013	N/A
Benzo(k)fluoranthene	207-08-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.13	N/A
Bis(2-chloroethyl)Ether	111-44-4	10			0	0	0	0	0.3	1E+100	1E+100	1E+100	1E+100	22	N/A
Bis(2-chloro-1-methylethyl) ethe	108-60-1	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	4000	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	10			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	3.7	N/A
Bis(chloromethyl) ether	542-88-1				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.17	N/A
Butyl Benzyl Phthalate	85-68-7	10			0	0	0	0	7000	1E+100	1E+100	1E+100	1E+100	1	N/A
2-Chloronapthalene	91-58-7	10			0	0	0	0	2800	1E+100	1E+100	1E+100	1E+100	1000	N/A
Chrysene	218-01-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	1.3	N/A
2,4-Dichlorophenoxyacetic acid	94-75-7				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	12000	N/A
Dibenzo(a,h)anthracene	53-70-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.0013	N/A
1,2-Dichlorobenzene	95-50-1	10			0	0	0	0	600	1E+100	1E+100	1E+100	1E+100	3000	N/A
1,3-Dichlorobenzene	541-73-1	10			0	0	0	0	469	1E+100	1E+100	1E+100	1E+100	10	N/A
1,4-Dichlorobenzene	106-46-7	10		0.21	0.4473	0.37235551	0.37235551	0.28478055	75	1E+100	1E+100	1E+100	1E+100	900	N/A
3,3'-Dichlorobenzidine	91-94-1	5			0	0	0	0	0.78	1E+100	1E+100	1E+100	1E+100	1.5	N/A
Diethyl Phthalate	84-66-2	10			0	0	0	0	28000	1E+100	1E+100	1E+100	1E+100	600	N/A
Dimethyl Phthalate	131-11-3	10			0	0	0	0	350000	1E+100	1E+100	1E+100	1E+100	2000	N/A
Di-n-Butyl Phthalate	84-74-2	10			0	0	0	0	3500	1E+100	1E+100	1E+100	1E+100	30	N/A
2,4-Dinitrotoluene	121-14-2	10			0	0	0	0	1.1	1E+100	1E+100	1E+100	1E+100	17	N/A
1,2-Diphenylhydrazine	122-66-7	20			0	0	0	0	0.44	1E+100	1E+100	1E+100	1E+100	2	N/A
Fluoranthene	206-44-0	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	20	N/A
Fluorene	86-73-7	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	70	N/A
Hexachlorobenzene	118-74-1	5			0	0	0	0	1	1E+100	1E+100	1E+100	1E+100	0.00079	N/A
Hexachlorobutadiene	87-68-3	10			0	0	0	0	4.5	1E+100	1E+100	1E+100	1E+100	0.1	N/A
Hexachlorocyclohexane (HCH)-T	608-73-1				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.1	N/A
Hexachlorocyclopentadiene	77-47-4	10			0	0	0	0	50	1E+100	1E+100	1E+100	1E+100	4	N/A
Hexachloroethane	67-72-1	20			0	0	0	0	25	1E+100	1E+100	1E+100	1E+100	1	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.013	N/A
Isophorone	78-59-1	10			0	0	0	0	368	1E+100	1E+100	1E+100	1E+100	18000	N/A
Nitrobenzene	98-95-3	10			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	600	N/A
Nitrosamines	Various				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	12.4	N/A
Nitrosodibutylamine	924-16-3				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	2.2	N/A
Nitrosodiethylamine	55-18-5				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	12.4	N/A
n-Nitrosodimethylamine	62-75-9	50			0	0	0	0	0.0069	1E+100	1E+100	1E+100	1E+100	30	N/A
n-Nitrosodi-n-Propylamine	621-64-7	20			0	0	0	0	0.05	1E+100	1E+100	1E+100	1E+100	5.1	N/A
n-Nitrosodiphenylamine	86-30-6	20			0	0	0	0	71	1E+100	1E+100	1E+100	1E+100	60	N/A
N-Nitrosopyrrolidine	930-55-2				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	340	N/A
Nonylphenol	84852-15-3				0	0	0	0	1E+100	1E+100	1E+100	28	6.6	1E+100	N/A
Pentachlorobenzene	608-93-5				0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.1	N/A
Pyrene	129-00-0	10			0	0	0	0	1050	1E+100	1E+100	1E+100	1E+100	4000	N/A
1,2,4-Trichlorobenzene	120-82-1	10			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	0.76	N/A

					Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS	CAS No.	MQL	Conc Ca (ug/l)	Conc. Ce (ug/l)	Aquatic 2.13*Ce	Supply Cd,dom (ug/l)	Cd (ug/l)	Health Cd,hh (ug/l)	Criteria ug/l	Criteria ug/l	Criteria ug/l	Criteria ug/l	Criteria ug/l	Criteria ug/l	
PESTICIDES AND PCBS															
Aldrin	309-00-2	0.01			0	0	0	0	0.021	1E+100	1E+100	3	1E+100	0.0000077	N/A
Alpha-BHC	319-84-6	0.05			0	0	0	0	0.056	1E+100	1E+100	1E+100	1E+100	0.0039	N/A
Beta-BHC	319-85-7	0.05			0	0	0	0	0.091	1E+100	1E+100	1E+100	1E+100	0.14	N/A
gamma-BHC (Lindane)	58-89-9	0.05			0	0	0	0	0.2	1E+100	1E+100	0.95	1E+100	4.4	N/A
Chlordane	57-74-9	0.2			0	0	0	0	2	1E+100	1E+100	2.4	0.0043	0.0032	N/A
Dichlorodiphenyldichloroethane (DDD)					0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.0012	N/A
Dichlorodiphenyldichloroethylene (DDE)					0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.00018	N/A
Dichlorodiphenyltrichloroethane (DDT)					0	0	0	0	1E+100	1E+100	1E+100	1E+100	1E+100	0.0003	N/A
4,4'-DDT and derivatives	50-29-3	0.02			0	0	0	0	1	1E+100	0.001	1.1	0.001	1E+100	N/A
Dieldrin	60-57-1	0.02			0	0	0	0	0.022	1E+100	1E+100	0.24	0.056	0.000012	N/A
Diazinon	333-41-5				0	0	0	0	1E+100	1E+100	1E+100	0.17	0.17	1E+100	N/A
Alpha-Endosulfan	959-98-8	0.01			0	0	0	0	62	1E+100	1E+100	0.22	0.056	30	N/A
Beta-Endosulfan	33213-65-9	0.02			0	0	0	0	62	1E+100	1E+100	0.22	0.056	40	N/A
Endosulfan sulfate	1031-7-8	0.1			0	0	0	0	62	1E+100	1E+100	1E+100	1E+100	40	N/A
Endrin	72-20-8	0.02			0	0	0	0	2	1E+100	1E+100	0.086	0.036	0.03	N/A
Endrin Aldehyde	7421-93-4	0.1			0	0	0	0	10.5	1E+100	1E+100	1E+100	1E+100	1	N/A
Heptachlor	76-44-8	0.01			0	0	0	0	0.4	1E+100	1E+100	0.52	0.0038	0.000059	N/A
Heptachlor Epoixde	1024-57-3	0.01			0	0	0	0	0.2	1E+100	1E+100	0.52	0.0038	0.00032	N/A
PCBs	336-36-3	0.2			0	0	0	0	0.5	1E+100	0.014	2	0.014	0.00064	N/A
Toxaphene	8001-35-2	0.3			0	0	0	0	3	1E+100	1E+100	0.73	0.0002	0.0071	N/A

STEP 3: SCAN POTENTIAL INSTREAM WASTE CONCENTRATIONS AGAINST WATER QUALITY CRITERIA AND ESTABLISH EFFLUENT LIMITATIONS FOR ALL APPLICABLE PARAMETERS

No limits are established if the receiving stream is not designated for the particular uses.

No limits are established if the potential instream waste concentrations are less than the chronic water quality criteria.

The most applicable stringent criteria are used to establish effluent limitations for a given parameter.

Water quality criteria apply at the end-of-pipe for acute aquatic life criteria and discharges to public lakes.

If background concentration exceeds the water quality criteria, water quality criteria apply. And "Need TMDL" shown to the next column of Avg. Mass

Monthly avg concentration = daily max. / 1.5.

APPLICABLE WATER QUALITY-BASED LIMITS

The following formular is used to calculate the allowable daily maximum effluent cincentration

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Daily Max. Conc. = Cs + (Cs - Ca)(F*Qa/Qe)

Monthly Avg. Conc. = Daily Max. Conc. / 1.5

Where:

Cs = Applicable water quality standard

Ca = Ambient stream concentration

F = Fraction of stream allowed for mixing (1.0 is assigned to domestic water supply and human health uses)

Qe = Plant effluent flow

Qa = Criteria Low flow (4Q3) or Harmonic Mean flow for Human Health Criteria

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Radioactivity, Nutrients, and Chlorine, as Total														
Aluminum, Total	7429-90-5	01105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum, dissolved	7429-90-5		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium, dissolved	7440-39-3	01007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron, dissolved	7440-42-8	01022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt, dissolved	7440-48-4	01037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium, dissolved	7440-61-1	22706	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium, dissolved	7440-62-2	01087	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ra-226 and Ra-228 (pCi/l)		11503	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Strontium (pCi/l)		13501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tritium (pCi/l)		04124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross Alpha (pCi/l)		80029	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asbestos (fibers/l)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Residual Chlorine	7782-50-5	50060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia as N, total (mg/l)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate as N (mg/l)		00620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrite + Nitrate (mg/l)		00630	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
METALS AND CYANIDE, as Total														
Antimony, Total (P)	7440-36-0	01097	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic, Total (P)	7440-38-2	1002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium, Total	7440-41-7	01012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium, Total	7440-43-9	01027	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (III), dissolved	16065-83-1	01033	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (VI), dissolved	18540-29-9	01034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium, Total	7440-47-3	01034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper, Total	7440-50-8	01042	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead, Total	7439-92-1	01051	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese, dissovled	7439-96-5	01056	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, Dissolved	7439-97-6	71900	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, Total	7439-97-6	71900	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum, dissolved	7439-98-7	1060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum, total recoverable	7439-98-7	01062	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, Total (P)	7440-02-0	01067	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (P)	7782-49-2	01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (SO4 >500 mg/l)		01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total recoverable	7782-49-2	01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silver, Total	7440-22-4	01077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thalllium, Total (P)	7440-28-0	01059	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc, Total	7440-66-6	1092	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide, total recoverable	57-12-5	00720	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIOXIN														0
2,3,7,8-TCDD	1746-01-6	34675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOLATILE COMPOUNDS														
Acrolein	107-02-8	34210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acrylonitrile	107-13-0	34215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	71-43-2	34030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Bromoform	75-25-2	32104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	56-23-5	32102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	108-90-7	34301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clorodibromomethane	124-48-1	32105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	67-66-3	32106	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorobromomethane	75-27-4	32101	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	107-06-2	34531	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	75-35-4	34501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	78-87-5	34541	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropylene	542-75-6	34561	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	34371	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Bromide	74-83-9	34413	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	75-09-2	34423	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	95-94-3		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	79-34-5	34516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	127-18-4	34475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tolune	108-88-3	34010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-trans-Dichloroethylene	156-60-5	34546	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	71-55-6		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	79-00-5	34511	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	79-01-6	39180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	75-01-4	39175	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ACID COMPOUNDS														
2-Chlorophenol	95-57-8	34586	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	120-83-2	34601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	105-67-9	34606	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3-Methyl-4-chlorophenol	59-50-7		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Methyl-4,6-dinitrophenol	534-52-1	34657	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	51-28-5	34616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	87-86-5	39032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	108-95-2	34694	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,5-Trichlorophenol	95-95-4		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	88-06-2	34621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-(2,4,5Trichlorophenoxy)propionic acid (Silvex)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BASE/NEUTRAL														
Acenaphthene	83-32-9	34205	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anthracene	120-12-7	34220	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzidine	92-87-5	39120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	56-55-3	34526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	50-32-8	34247	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,4-Benzofluoranthene	205-99-2	34230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	207-08-9	34242	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethyl)Ether	111-44-4	34273	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloro-1-methylethyl) ether	108-60-1	34283	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	39100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(chloromethyl) ether	542-88-1		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Butyl Benzyl Phthalate	85-68-7	34292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Chloronapthalene	91-58-7	34581	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	218-01-9	34320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenoxyacetic acid	94-75-7		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	53-70-3	34556	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	95-50-1	34536	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Daily Avg Load lb/day
1,3-Dichlorobenzene	541-73-1	34566	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	106-46-7	34571	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	91-94-1	34631	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diethyl Phthalate	84-66-2	34336	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl Phthalate	131-11-3	34341	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Di-n-Butyl Phthalate	84-74-2	39110	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	121-14-2	34611	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Diphenylhydrazine	122-66-7	34346	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluoranthene	206-44-0	34376	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluorene	86-73-7	34381	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobenzene	118-74-1	39700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	87-68-3	34391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclohexane (HCH)-T	608-73-1		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	77-47-4	34386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	67-72-1	34396	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	34403	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isophorone	78-59-1	34408	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	98-95-3	34447	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrosamines	Various		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrosodibutylamine	924-16-3		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrosodiethylamine	55-18-5		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodimethylamine	62-75-9	34438	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodi-n-Propylamine	621-64-7	34428	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodiphenylamine	86-30-6	34433	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N-Nitrosopyrrolidine	930-55-2		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nonylphenol	84852-15-3		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorobenzene	608-93-5		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pyrene	129-00-0	34469	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	120-82-1	34551	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PESTICIDES AND PCBS														
Aldrin	309-00-2	39330	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-BHC	319-84-6	39337	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-BHC	319-85-7	39338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gamma-BHC	58-89-9	39340	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlordane	57-74-9	39350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorodiphenyldichloroethane (DDD)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorodiphenyldichloroethylene (DDE)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorodiphenyltrichloroethane (DDT)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT and derivatives	50-29-3	39300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	60-57-1	39380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diazinon	333-41-5	39570	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-Endosulfan	959-98-8	34361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-Endosulfan	33213-65-9	34356	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan sulfate	1031-7-8	34351	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin	72-20-8	39390	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin Aldehyde	7421-93-4	34366	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	76-44-8	39410	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor Epoixde	1024-57-3	39420	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs	336-36-3	39516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	8001-35-2	39400	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

APPENDIX 4

Facility Name	City of Roswell							
NPDES Permit Number	NM0020311					Outfall Number	001	
Proposed Critical Dilution*	70							
			*Critical Dilution in draft permit, do not use % sign.					
			Enter data in yellow shaded cells only. Fifty percent should be entered as 50, not 50%.					
Test Data								
		VERTEBRATE				INVERTEBRATE		
Date (mm/yyyy)	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU	Lethal NOEC	Sublethal NOEC	Lethal TU	Sublethal TU
03/31/20	90	90	1.11	1.11	68	38	1.47	2.63
6/30/20								
9/30/20	90	90	1.11	1.11	90	90	1.11	1.11
12/31/20	90	90	1.11	1.11	90	90	1.11	1.11
3/31/21	90	90	1.11	1.11	90	90	1.11	1.11
6/30/21								
9/30/21	90	90	1.11	1.11	90	90	1.11	1.11
12/31/21	90	90	1.11	1.11	90	90	1.11	1.11
3/31/22	90	90	1.11	1.11	90	90	1.11	1.11
6/30/22	90	90	1.11	1.11	90	90	1.11	1.11
9/30/22	90	90	1.11		90	90	1.11	
12/30/22	90	90	1.11		90	90	1.11	
3/31/23	90	90	1.11		90	90		
6/30/23	90	90	1.11	1.11	90	90	1.11	1.11
9/30/23	90	90	1.11	1.11	90	90	1.11	1.11
12/31/23	90	90	1.11	1.11	90	90	1.11	1.11
3/31/24	90	90	1.11	1.11	90	90	1.11	1.11
6/30/24	90	90	1.11	1.11	90	90	1.11	1.11
9/30/24	90	90	1.11	1.11	90	90	1.11	1.11
	90	90	1.11	1.11	68	38	1.47	2.63
Count			17	14			16	14
Mean			1.111	1.111			1.134	1.220
Std. Dev.			0.000	0.000			0.090	0.406
CV			0.0	0			0.1	0.3
RPMF			#N/A	#N/A			1.1	1.3
		1.429	Reasonable Potential Acceptance Criteria					
Vertebrate Lethal		#N/A	#N/A					
			No Reasonable Potential exists. Permit requires WET monitoring, but no WET limit.					
Vertebrate Sublethal		#N/A	#N/A					
			No Reasonable Potential exists. Permit requires WET monitoring, but no WET limit.					
Invertebrate Lethal		1.132	No Reasonable Potential exists. Permit requires WET monitoring, but no WET limit.					
Invertebrate Sublethal		2.394736842	Reasonable Potential exists, Permit requires WET monitoring and WET limit.					