NPDES PERMIT NO. NM0020303
FACT SHEET

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

APPLICANT

Village of Los Lunas
P.O. Box 1209
Los Lunas, NM 87031

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

PREPARED BY

Ruben Alayon-Gonzalez
Water Division
VOICE: 214-665-2785
EMAIL: alayon-gonzalez.ruben@epa.gov

DATE PREPARED

February 6, 2018

PERMIT ACTION

Proposed reissuance of the current permit issued with an effective date of April 18, 2013 and an expiration date of May 31, 2018.

RECEIVING WATER – BASIN

Rio Grande – Middle Rio Grande Basin

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD_5	Biochemical oxygen demand (five-day)
BPJ	Best professional judgment
C/100 mL	Colonies (#) per 100 Milliliters
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
F&WS	United States Fish and Wildlife Service
MDL	Method detection limit
mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
MGD	Million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES Permit Implementation Procedures
NMWQS	New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
POTW	Publically Owned Treatment Works
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plan

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued April 18, 2013, with an effective date of June 1, 2013, and an expiration date of May 31, 2018, are:

A. Total Phosphorus & Total Nitrogen were added to the draft permit as a monitoring only requirement.

B. Ammonia monitoring is eliminated from this draft permit.

C. WET testing changed from 48-Hr. Acute test to a 7-Day Chronic test based on the new 4Q3.

II. DISCHARGE LOCATION

As described in the application, the facility is a POTW located at 1960 Heaton LP, S.E., Los Lunas, Valencia County, New Mexico.

The discharge from the POTW is to the Rio Grande in Waterbody Segment No. 20.6.4.105 of the Rio Grande Basin. The outfall of the facility is located at:

Latitude 34° 46' 48" North, Longitude 106° 43' 50" West

III. APPLICANT ACTIVITY

Under the SIC Code 4952, the facility is a POTW treating domestic wastewater. The facility has a design flow of 2.7 MGD serving a total population of 15,454.

The Village of Los Lunas Wastewater Treatment Plant (WWTP) is a combination of two liquid stream treatment processes with a combined sludge treatment and disposal process. The first liquid stream treatment process is conventional activated sludge process which was first put into service in 1981 and was designed for 1.2 million gallons per day (MGD). Due to changes in discharge permit requirements, the facility was de-rated to 0.8 MGD in the mid-1900s. The second liquid stream treatment process is a membrane bioreactor (MBR) facility that is configured for biological nitrogen removal using a process configured similar to the Modified Ludzack-Ettinger configuration. The MBR was put into service in 2009 and had a design capacity of 0.9 MGD. In 2015, the MBR was upgraded with additional membrane cassettes that double the capacity to 1.8 MGD. The current total design flow for the entire WWTP is therefore approximately 2.7 MGD. The plat is currently treating approximately 1.6 MGD.

Raw sewage is received through an 18-inch gravity line into the influent lift station. Plant drain flows from several nearby facilities and treatment structures, and a bypass line from the MBR plant are also plumbed to the influent line. The wastewater is then pumped to the entrance works structure, or it can be routed to the MBR entrance works, for preliminary treatment. The conventional activated sludge plant (CASP) entrance works consists of coarse screening via a mechanical rake bar screen while grit is removed by an aerated grit chamber. Flow is measured by a 9-inch Parshall Flume before discharging into the biological treatment process.

The biological treatment process consists of two identical trains that are divided into two zones per train. Both zones are aerated by single drop tube-style aeration devices. Oxidized wastewater then enters the secondary clarifiers, which are followed by a UV disinfection system. CASP effluent is pumped to a mixing box where it is blended with MBR plant effluent prior to discharge to the river.

WWTP Effluent Line and Outfall Improvements

The Village of Los Lunas is currently working to design and construct a new 24” effluent discharge line that will be parallel the existing 16” effluent line approximately 1,400 linear feet and discharge into the Rio Grande Bosque adjacent to the existing WWTP outfall. The construction of the new line will be funded by the U.S. EPA’s Clean Water State Revolving Loan Fund program and an Environmental Information Document is currently being prepared to facilitate the State Environmental Review Process and compliance with NEPA. Construction of the project may fall within the Rio Grande’s Ordinary High Water Mark and require U.S Army Corp of engineers 404 permit in addition to the required SWPPP and NPDES General Construction Permit. The project is currently being designed and the anticipated schedule for completion is as follows:

- Begin Construction – October 2018
- End Construction – March 2019
- Begin Discharge – March 2019
- Attain Operational Level – March 2019

*With the construction of the new 24” effluent discharge line, the current effluent will split into two parallel pipes under the same outfall number **001**. The permittee shall sample from splitter box and measure flow from both lines as part of the new draft permit.

Sludge Management Improvements

The Village of Los Lunas is currently working to bid and construct new sludge management facilities at the WWTP. The project includes construction of a new building to house mechanical sludge thickening and dewatering processes, rehabilitation of the existing digester for more efficient volatile solids reduction and biological nitrogen removal, and renovation of the existing sludge thickening process. The new facilities will improve the quality of treated sludge but is not anticipated to impact WWTP effluent quality and will not increase the WWTP capacity. Digested sludge will be hauled to the Village's existing surface disposal site, composted with Village green waste at the Transfer Station, or hauled to the Valencia County Regional Landfill for disposal. The project is being funded by a combination of Clean Water State Revolving Loan fund money and local economic development funds. The project will be advertised for contractor bidding soon and the anticipated schedule for completion is as follows:

- Begin Construction – March 2018
- End Construction – July 2019
- Begin Discharge – July 2019
- Attain Operational Level – August 2019

IV. EFFLUENT CHARACTERISTICS

The facility submitted EPA Permit Application Form 2A, received December 11, 2017, which provides a quantitative description of the discharge shown below.

POLLUTANT TABLE – 1

PARAMETER	Max. Daily (mg/L, unless noted)	Avg. Daily (mg/L, unless noted)
Flow, MGD	1.24 MGD	1.12 MGD
Temperature, winter	21.70 °C	21.18 °C
Temperature, summer	28.10 °C	26.00 °C
pH, minimum	6.91 s.u.	--
pH, maximum	7.81 s.u.	--
BOD_5	7.00	7.00
FCB	160.7 MPN	62.01 MPN
TSS	0.00	0.00
Ammonia (as N)	0.51	0.40
TRC	0.01	0.01
D.O.	7.69	6.43
Total Kjeldahl Nitrogen (TKN)	13.0	6.7
Nitrate plus Nitrite Nitrogen	14.0	7.40
Oil & Grease	0.00	0.00
Phosphorus (Total)	3.60	2.86
Total Dissolved Solids (TDS)	584	559

The facility has to sample and report all priority pollutants identified in Part D, Expanded Effluent Testing Data of EPA Permit Application Form 2A. All the pollutants were sampled and those pollutants that were detected at concentrations exceeding the MQL are listed below:

POLLUTANT TABLE – 2 – Expanded Pollutant List

PARAMETER (Pollutants greater than MQL)	**Max. Daily** (mg/L, unless noted)	**Avg. Daily** (mg/L, unless noted)
Antimony	0.0013	0.001
Arsenic	0.017	0.0143
Copper	0.0057	0.00463
Mercury	0.0049 µg/L	0.0028 µg/L
Nickel	0.005	0.004
Zinc	0.053	0.049
Phenol	0.68 µg/L	0.68 µg/L
Di-n-butyl phthalate	0.99 µg/L	0.33 µg/L

A summary of the last 3-years of available pollutant data taken from DMRs shows the following exceedances of pollutant limits.

POLLUTANT/limit	**Month/Year of Exceedances - Value**
E. coli/avg - 126 cfu/100 ml	Aug/15 - 231
E. coli/max – 410 cfu/100 ml	Aug/15 - 980, Oct/15 - 435, Feb/16 - 1,120, May/16 - 649
E. coli quantity – 12.9 bcfu/day	Aug/15 - 20, Feb/16 - 18
TSS/7day-avg – 45 mg/l	Nov/16 - 65

V. 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 pollutant discharges into the waters of the United States. In addition, the amendments made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

The facility submitted a complete permit application December 11, 2017. It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The existing permit is administratively continued until this permit is issued.

VI. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

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

Regulations contained in 40 CFR §122.44 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

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

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

> BPT (Best Practicable Control Technology Currently Available) – The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.
>
> BCT (Best Conventional Pollutant Control Technology) – Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.
>
> BAT (Best Available Control Technology Economically Achievable) – The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

The facility is a POTW treating sanitary wastewater. POTW's have technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are 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 no less than 30-day average 85 percent removal (minimum) are found at 40 CFR §133.102(a). TSS limits are also 30 mg/L for the 30-day average, 45 mg/L for the 7-day average, and no less than 30-day average 85 percent removal (minimum), and are found at 40 CFR §133.102(b). The percent removal requirements for BOD_5 and TSS are new permit limits which were not included in the previous permit. The percent removal is calculated as follows:

> {[(influent concentration - effluent concentration) / influent concentration] x 100}

ELG's for pH are between 6.0 – 9.0 s.u. and are found at 40 CFR §133.102(c). Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day (with exceptions noted in 40 CFR §§122.45(f)(1)(i)-(iii)). When determining mass limits for POTW's, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

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

The calculations of mass limits are as follows:

30-day average TSS/BOD_5 loading = 30 mg/L * 8.345 lbs/gal * 2.7 MGD
30-day average TSS/BOD_5 loading = 676 lbs/day

Based on 40 CFR §122.45(f), all pollutants limited in permits shall have limitations expressed in terms of mass. Limits are established in the draft permit for the 7-day average limits for BOD and TSS as follows:

7-day average TSS/BOD_5 loading = 45 mg/L * 8.345 lbs/gal * 2.7 MGD
7-day average TSS/BOD_5 loading = 1,014 lbs/day

Technology-Based Effluent Limits – based on 2.7 MGD flow

PARAMETER	DISCHARGE LIMITATIONS			
	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.
	(lbs/day)		(mg/L, unless noted)	
Flow	***	***	Measure MGD	Measure MGD
BOD_5	676	1,014	30	45
TSS	676	1,014	30	45
Percent Removal (minimum), BOD_5 and TSS	85% BOD_5 & TSS (30-day average)			
pH	6.0 – 9.0 standard units			

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under §301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

2. Implementation

NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (NMWQS), 20.6.4.105 of the Rio Grande Basin, as approved by EPA effective August 11, 2017. The designated uses of the receiving water are irrigation, marginal warmwater aquatic life, livestock watering, public water supply, wildlife habitat, and primary contact.

4. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. BACTERIA

The applicable criteria for *E. coli* bacteria, based on the primary contact designated use for the receiving water body (see NMAC 20.6.4.900.D), are a monthly geometric mean of 126 cfu/100 mL and a single sample of 410 cfu/100 mL, same as the current permit.

In June 2010, EPA approved a NMED TMDL for the Middle Rio Grande Watershed for bacteria and a WLA was assigned to Los Lunas WWTP. For further discussion of the TMDL and limit calculations, see Section D below.

b. pH

The applicable criterion for pH, based on the primary contact designated use for the receiving water body (see NMAC 20.6.4.900.D) as well as the aquatic life marginal warmwater designated use (see NMAC 20.6.4.900.H(6)), is 6.6 to 9.0 s.u. This is more restrictive than the technology based limits for pH.

c. Ammonia

The current permit has ammonia reporting quarterly because it was a pollutant of concern with the increase of flow the last permit term. This draft permit will eliminate ammonia and instead will include Total Nitrogen (TN) monitoring.

d. TP & TN

Since the design flow rate of the WWTP is 2.7 MGD, the facility is designated as a major POTW, this draft permit will include TP & TN monitoring on a quarterly basis.

e. TOXICS

i. General Comments

CWA §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 criteria, the permit must contain an effluent limit for that pollutant.

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

The facility is designated a major POTW for permitting purposes and must supply the expanded pollutant testing list described in EPA Application Form 2A as presented above in Part IV of this Fact Sheet.

Based on the pollutant data provided by the facility and shown in Part IV of this Fact Sheet, a water quality screen has been run to determine if discharged pollutant concentrations demonstrate RP to exceed WQS for the various designated uses. If RP exists, the screen would also calculate the appropriate permit limit needed to be protective of such designated uses. The screen is based on the NMIP as of March 15, 2012. The receiving stream hardness value, 125.1 mg/L, represents the average of values obtained from a STORET water quality station (32RGRAND394.8, "Rio Grande at Hwy. 6") about 1.5 miles upstream of the facility discharge, and it was used in the screen for any hardness-dependent WQS. The water quality screen is included in the Fact Sheet.

None of the pollutants demonstrate RP to violate WQS consistent with the designated uses for the receiving water.

ii. Critical Conditions

Critical conditions are used to establish certain permit limitations and conditions. The State of New Mexico Water Quality Standards allow a mixing zone for establishing pollutant limits in discharges. The state establishes a critical low flow designated as 4Q3, which is the minimum average four consecutive day flow that occurs with a frequency of once in three years. The Surface Water Quality Bureau of NMED provided EPA with the 4Q3 value for the Rio Grande.

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

CD = Qe/(F*Qa + Qe), where:

Qe = facility flow = 2.7 MGD
Qa = critical low flow of the receiving waters above Bosque Farms = 31.96 cfs = 20.66 MGD + 0.21 MGD (avg. flow Bosque Farms WWTP) = 20.87 MGD
*conversion factor: 1.547 cfs/MGD
F = fraction of stream allowed for mixing = 1.0

CD = 2.7 MGD/[(1.0)*(20.87 MGD) + 2.7 MGD]
= 0.11
= **11%**

iii. Total Residual Chlorine (TRC)

The facility uses UV to control bacteria. The previous permit, however, set a 19 µg/L TRC limit when chlorine is used in any process throughout the plant. The same requirement will be maintained in this draft permit. Regulations at 40 CFR Part 136 define "instantaneous grab" as analyzed within 15 minutes of collection. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. Sampling and reporting is required when chlorine is used for either bacteria control and/or when chlorine is used to treat filamentous algae and/or used to disinfect process treatment equipment at the facility.

D. TMDL REQUIREMENTS

In June 2010, EPA approved a NMED TMDL for the Middle Rio Grande Watershed for bacteria. The TMDL was developed to address *E. coli* impairments in four assessment units, including the receiving water for Los Lunas WWTP's discharge. According to the TMDL document, there are probable nonpoint and point sources of *E. coli* bacteria throughout the basin. The TMDL assigned an *E. coli* wasteload allocation (WLA) of 4.3×10^9 cfu/day to the facility. This calculation was based on the previous design capacity flow of 0.9 MGD, and applied the monthly geometric mean criteria of 126 cfu/100mL.

Based on the facility's updated design flow of 2.7 MGD, the new WLA is 1.29×10^{10} cfu/day with an increase of 8.60×10^9 cfu/day to the WLA. These changes were incorporated in the current NPDES permit to the WLA for Los Lunas WWTP and the LA will not affect the overall TMDL. NMED's Surface Water Quality Bureau was consulted in the development of these limits, and supports these reallocations as an application of Section IV(B)(1) of New Mexico's Water Quality Management Plan (WQMP). Thus, the WLA of **1.29×10^{10} cfu/day** is incorporated into the draft permit as a mass-based limit for the 30-day average, in addition to the concentration-based limits that were carried forward from the previous permit. To calculate the load based on the facility's actual discharge flow, the formula is:

load [cfu/day] = *E. coli* conc. [cfu/100mL] * flow [MGD] * 3.79×10^7 [conversion factor]

The segment to which the POTW discharges is also impaired for temperature. However, temperature is not a pollutant of concern for POTWs, thus monitoring and/or permit limits are not recommended at this time.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS

Procedures for implementing WET terms and conditions in NPDES permits are contained in the March 15, 2012 NMIP. Table 11 of Section V of the NMIP outlines the type of WET testing for different types of discharges. Analysis of past WET data to determine RP was sent with the application.

OUTFALL 001

In Section VI.C.4.d.ii above, "Critical Conditions", it was shown that the critical dilution (CD) for the facility is 11%. Based on the nature of the discharge – a POTW with a design flow of more than 1.0 MGD, the perennial nature of the receiving water, and the critical dilution of 11% – the NMIP directs the WET test to be a chronic test using *Ceriodaphnia dubia* and *Pimephales promelas* at a once per quarter frequency consistent with the NMIP. The proposed permit requires five (5) dilutions in addition

to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 5%, 6%, 8%, 11% and 15%.

If all WET tests pass during the first year, the permittee may request a monitoring frequency reduction for either or both test species for the following 2-5 years of the permit. The invertebrate species (*Ceriodaphnia dubia*) testing frequency may be reduced to once per six (6) months. The vertebrate species (*Pimephales promelas*) testing frequency may be reduced to once per year. If any tests fail during that time, the frequency will revert back to the once per quarter frequency for the remainder of the permit term. Both species shall resume quarterly monitoring at a once per three months frequency on the last day of the permit.

The previous permit established WET biomonitoring with a CD = 71%. The CD has changed based on changes in 4Q3 flow, which is used to calculate the CD. The 4Q3 has decreased from 35.12 MGD to 20.87 MGD. DMR reports reveal thirteen (13) passing tests for both the *Daphnia pulex* and *Pimephales promelas* species during the last permit term. The EPA Reasonable Potential (RP) Analyzer for Outfall 001 indicates that RP does not exist for either species. WET limits will not be established in the proposed permit for the invertebrate or vertebrate species for Outfall 001. EPA concludes that this effluent does not cause or contribute to an exceedance of the State water quality standards. Therefore, WET limits will not be established in the proposed permit.

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 to the Rio Grande at segment 20.6.4.105. Discharges shall be limited and monitored by the permittee as specified below:

WHOLE EFFLUENT TOXICITY TESTING 7-DAY CHRONIC NOEC FRESHWATER (*1)	VALUE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Ceriodaphnia dubia	Report	Quarterly	24-hr Composite
Pimephales promelas	Report	Quarterly	24-hr Composite

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

F. MONITORING FREQUENCY FOR LIMITED PARAMETERS AND APPLICATION RENEWAL

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). Based on the design flow of the facility, 2.7 MGD, the NMIP recommends that limited parameters have either daily or weekly monitoring frequencies, depending on the parameter measured. Flow shall be monitored daily using an instantaneous form of measurement. *E. coli* bacteria and D.O. shall be monitored once per week using grab samples. pH shall be monitored daily using grab samples. The other parameters – BOD_5 and TSS – are monitored once per week using 24-hour composite samples. When chlorine is used in any process throughout the plant, total residual chlorine (TRC) shall be sampled daily using instantaneous grab samples. Regulations at 40 CFR Part136 define instantaneous grab as being analyzed within 15 minutes of collection. TP and TN shall be monitored on a quarterly basis. When WET biomonitoring takes place, TP and TN should be monitored at the same time and place that WET samples are collected for that quarter.

In addition to the parameters identified in this fact sheet, EPA designated major POTW's are required to sample and report other parameters listed in tables of the EPA Form 2A and WET testing for its permit renewal. The minimum pollutant testing for NPDES permit renewals specified in Form 2A requires three samples for each of the parameters being tested. Current practice is to obtain the three samples over a short time frame, sometimes within two weeks during the permit renewal testing process. In order to obtain a meaningful snapshot of pollutant testing for permit renewal purposes, the draft permit shall require that the testing for Tables A.12, B.6, and Part D of EPA Form 2A, or its equivalent if modified in the future, during the second, third and fourth years after the permit effective date. In addition, one yearly test must be during the warm summer months; defined as the period from June 1 through August 31, and another yearly test shall be sampled during cold weather; defined as the period from December 1 through February 28. The remaining yearly test may be taken during any time in that year. This testing shall coincide with any required WET testing event for that year. The permittee shall report the results as a separate attachment in tabular form sent to the Permitting Section Chief of the Water Division within 60 days of receipt of the lab analysis and shall also be reported on the NPDES permit renewal application Form 2A or its equivalent/replacement.

With the construction of the new 24" effluent discharge line, the current effluent will split into two parallel pipes under the same outfall number 001. The permittee shall sample from splitter box and measure flow from both lines as part of the new draft permit.

VII. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge." The specific requirements in the permit apply as a result 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 NM0020303, Parts I and Parts IV.

B. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

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

C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant indicated in Part F of its application (EPA Form 3510-2A) that it does not have any non-categorical Significant Industrial Users (SIU) or any Categorical Industrial Users (CIU).

D. OPERATION AND REPORTING

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

VIII. 303(d) LIST

In New Mexico's 2016-2018 CWA §303(d) / 305(b) Integrated List, the Rio Grande is listed as being impaired for *E. coli* and temperature. A TMDL for *E. coli* was developed in 2010, and in Part VI.C.5 of the Fact Sheet, permit conditions were identified as being based on the approved TMDL to address the *E. coli* impairment. Temperature is also listed as impaired, but no TMDL is available right now. 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.

IX. ANTIDEGRADATION

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

X. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the CWA, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit maintains limitations that are at least as stringent as or more stringent than the previous permit.

XI. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, http://www.fws.gov/endangered/, six species in Valencia County are listed as endangered or threatened. The Southwestern willow flycatcher (*Empidonax traillii*), Rio Grande silvery minnow (*Hybognathus amarus*) and New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) are listed as endangered. The Mexican spotted owl (*Strix occidentalis lucida*), Yellow-billed Cuckoo (*Coccyzus americanus*) and Pecos sunflower (*Helianthus paradoxus*) are listed as threatened.

The southwestern willow flycatcher (*Empidonax traillii extimus*) breeds in dense riparian habitats in southwestern North America, and winters in southern Mexico, Central America, and northern South America. Its breeding range includes far western Texas, New Mexico, Arizona, southern California, southern portions of Nevada and Utah, southwestern Colorado, and possibly extreme northern portions of the Mexican States of Baja California del Norte, Sonora, and Chihuahua. The subspecies was listed as endangered effective March 29, 1995. Approximately 900 to 1100 pairs exist.

Currently, the Rio Grande silvery minnow (*Hybognathus amarus*) is known to occur only in one reach of the Rio Grande in New Mexico, a 280 km (174 mi) stretch of river that runs from Cochiti Dam to the headwaters of Elephant Butte Reservoir. This includes a small portion of the lower Jemez River, a tributary to the Rio Grande north of Albuquerque. Its current habitat is limited to about seven percent of its former range. In December 2008, silvery minnows were introduced into the Rio Grande near Big

Bend, Texas as a nonessential, experimental population under section 10(j) of the ESA (73 FR 74357). Preliminary monitoring is being conducted to determine whether or not that reintroduction has been successful. Throughout much of its historic range, the decline of the Rio Grande silvery minnow is attributed primarily to destruction and modification of its habitat due to dewatering and diversion of water, water impoundment, and modification of the river (channelization). Competition and predation by introduced non-native species, water quality degradation, and other factors also have contributed to its decline.

Yellow-billed Cuckoos (*Coccyzus americanus*) are fairly large, long, and slim birds. The mostly yellow bill is almost as long as the head, thick and slightly downcurved. They have a flat head, thin body, and very long tail. Wings appear pointed and swept back in flight. Yellow-billed Cuckoos are warm brown above and clean whitish below. Their blackish face mask is accompanied by a yellow eyering. In flight, the outer part of the wings flash rufous. From below, the tail has wide white bands and narrower black ones.

The New Mexico meadow jumping mouse (jumping mouse) is endemic to New Mexico, Arizona, and a small area of southern Colorado. The jumping mouse is grayish-brown on the back, yellowish-brown on the sides, and white underneath. The species is about 7. 4 to 10 inches (187 to 255 mm) in total length, with elongated feet (1.2 inches (30.6 mm)) and an extremely long, bicolored tail (5.1 inches (130.6 mm)). The jumping mouse is a habitat specialist. It nests in dry soils, but uses moist, streamside, dense riparian/wetland vegetation up to an elevation of about 8,000 feet. The jumping mouse appears to only utilize two riparian community types: 1) persistent emergent herbaceous wetlands (i.e., beaked sedge and reed canarygrass alliances); and 2) scrub-shrub wetlands (i.e., riparian areas along perennial streams that are composed of willows and alders). The New Mexico meadow jumping mouse has seen a significant population decline. This decline is mainly due to habitat loss and fragmentation across its range. About 95 percent of the range is found on federal and state lands. Based on the further threat of habitat loss, the U.S. Fish and Wildlife Service (USFWS) designated the New Mexico meadow jumping mouse as endangered under the Endangered Species Act (ESA) on June 9, 2014.

Unlike most owls, Mexican spotted owls (*Strix occidentalis lucida*) have dark eyes. They are an ashy-chestnut brown color with white and brown spots on their abdomen, back and head. Their brown tails are marked with thin white bands. They lack ear tufts. Young owls less than 5 months old have a downy appearance. Females are larger than males. The primary threats to its population in the U.S. (but likely not in Mexico) have transitioned from timber harvest to an increased risk of stand-replacing wildland fire. Recent forest management now emphasizes sustainable ecological function and a return toward pre-settlement fire regimes, both of which are more compatible with maintenance of spotted owl habitat conditions than the even-aged management regime practiced at the time of listing.

Pecos sunflower (*Helianthus paradoxus*) is a wetland plant that grows on wet, alkaline soils at spring seeps, wet meadows, stream courses and pond margins. It has seven widely spaced populations in west-central and eastern New Mexico and adjacent Trans-Pecos Texas. These populations are all dependent upon wetlands from natural groundwater deposits. Incompatible land uses, habitat degradation and loss, and groundwater withdrawals are historic and current threats to the survival of Pecos sunflower.

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. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.

2. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.

3. EPA determines that Items 1 and 2 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

XII. HISTORICAL and ARCHAEOLOGICAL PRESERVATION CONSIDERATIONS

Archaeological resources must be considered as early in the planning construction process as possible. Several laws and regulation govern the treatment of archaeological resources. In all cases for federally-funded projects, compliance with these laws are mandatory.

XIII. EVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit http://www.epa.gov/ejscreen.

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

The EJ Screen score for the facility was at the 75th percentile (75%ile), and this is below the 80%ile cut-off for engaging in enhanced outreach around the availability of the Draft Permit for review and comment. Therefore, the Village of Los Lunas is not considered to be discharging in an EJ community and no enhanced outreach is necessary.

XIV. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality Standards are promulgated or revised. In addition, if the State amends a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XV. VARIANCE REQUESTS

No variance requests have been received.

XVI. 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 District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XVII. FINAL DETERMINATION

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

XVIII. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 1 and 2A with attachments received December 11, 2017

B. 40 CFR CITATIONS

Citations to 40 CFR are as of February 8, 2018. Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through March 2, 2017.

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

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2016-2018.

Total Maximum Daily Load for Middle Rio Grande Watershed, April 13, 2010.

D. Other

US Fish and Wildlife Service (USFWS), Southwest Region 2 website, https://www.fws.gov/endangered

EJSCREEN: Environmental Justice Screening and Mapping Tool website, https://www.epa.gov/ejscreen