NPDES PERMIT NO. NM0030155 FACT SHEET

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

APPLICANT

State of New Mexico Department of Game & Fish (NMDGF)
Rock Lake State Fish Hatchery
P.O. Box 25112
Santa Fe, NM 87508

ISSUING OFFICE

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Region 6
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PREPARED BY

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DATE PREPARED

August 30, 2018

PERMIT ACTION

Renewal of a permit previously issued on August 29, 2013 with an effective date of October 1, 2013, and an expiration date of September 30, 2018.

RECEIVING WATER – BASIN

Pecos River Basin

DOCUMENT ABBREVIATIONS

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

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
DO	Dissolved oxygen
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
lbs	Pounds
MG	Million gallons
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
SS	Settleable solids
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
SWQB	Surface Water Quality Bureau
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Waste Load allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

I. **CHANGES FROM THE PREVIOUS PERMIT**

Changes from the permit previously issued on August 29, 2013 with an effective date of October 1, 2013, and an expiration date of September 30, 2018 are as follow:

1. NMDGF created a combined outfall (Outfall 001) for the hatchery by installing a pipe between warm-water (Outfall 004) and cold-water (Outfall 003) settling ponds.

2. Removed monitoring and reporting requirements for Outfall 003 and Outfall 004. The new discharge for the hatchery is Outfall 001.

3. Removed a WET limit of 72% that was established in the previous permit because the required WET results passed.

4. Added total phosphorus reporting requirements as a part of the State nutrient assessment protocol.

II. **APPLICANT LOCATION and ACTIVITY**

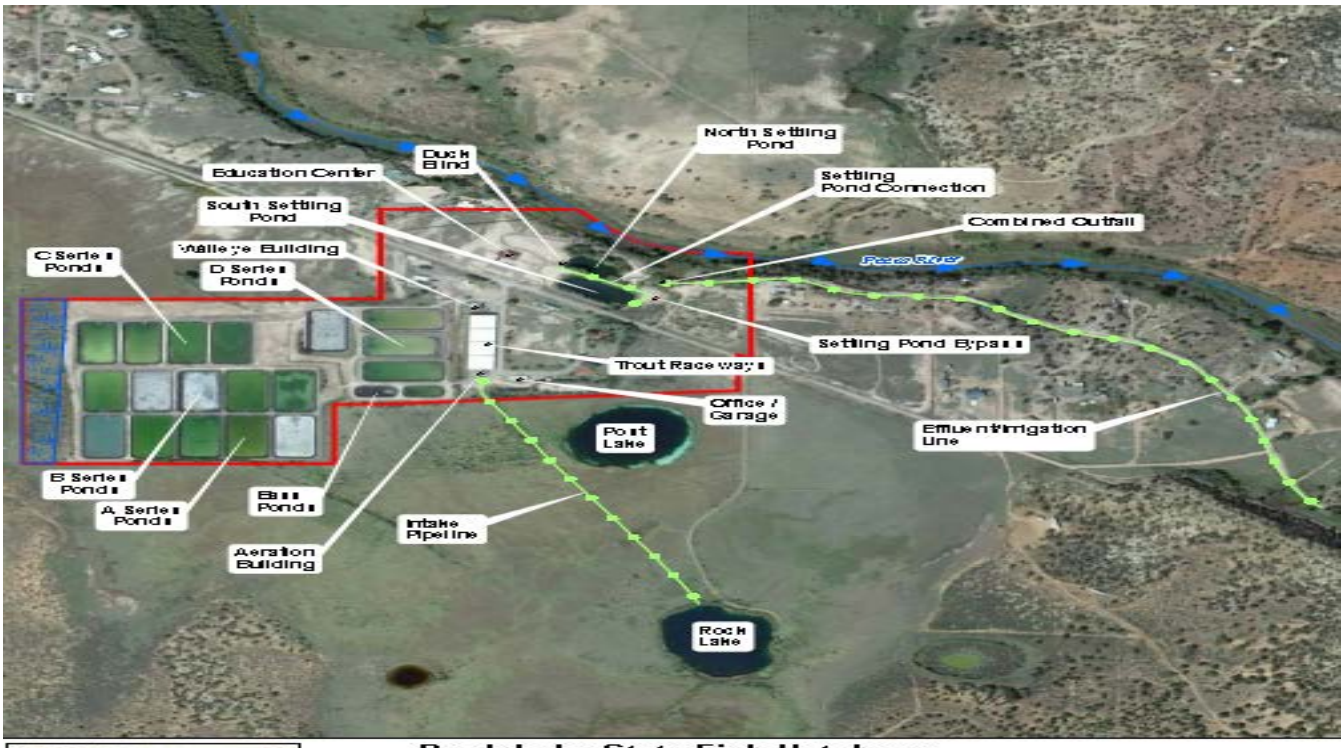
As described in the application, the facility (Latitude 34° 54' 47" N and Longitude 106° 42' 19" W) is located at 1025 Hatchery Rd., Santa Rosa, NM 88435 in Guadalupe County, New Mexico.

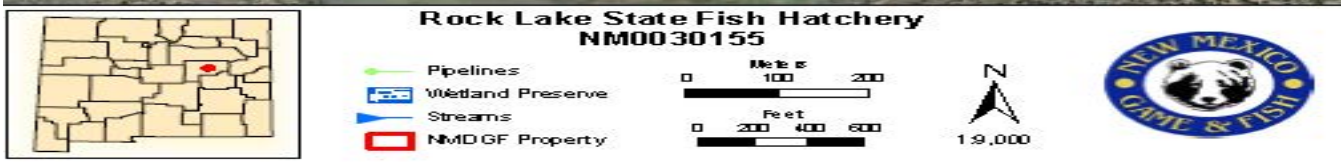
Under the SIC code 921, the facility is to hatch and raise cold-water (rainbow trout) and warm-water (walleye, large mouth bass, channel catfish, tiger Muskie and fathead minnow) species for stocking in lakes and streams with total estimated proposed production maximum of 143,934 pounds annually.

The source of water is from the spring fed, natural deep-water, Rock Lake. The water is pumped to a distribution chamber that provides passive aeration by allowing it to flow over a series of steps before being divided between the cold-water raceways and the warm water rearing ponds. The facility primarily consists of 18 raceways, 12 ponds and 10 circular tanks.

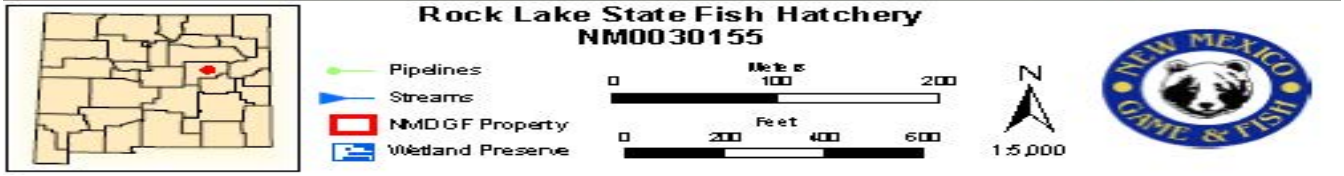
The cold-water system consists of two parallel raceways. At the end of the raceways, the water passes through a gated splitter box where it can either be directed to mix with the warm water discharge or to continue to the cold-water settling pond (previously discharging to Outfall 003). The warm water process consists of eleven ponds, each one acre in size. The discharge from these ponds flows past the same splitter box that separates it from the cold water thus sending it to a settling pond (previously discharging to Outfall 004).

During the recent upgrades at the facility, both settling ponds have been interconnected by constructing a pipe between the warm-water and cold-water settling ponds, before final discharge as a combined outfall (Outfall 001) to the Ortega-Borsich drainage thence to the Pecos River.


North Settling Pond
Duck Blind
Education Center
Setting Pond Connection
South Settling Pond
Combined Outfall
Walleye Building
C Series Ponds
D Series Ponds
Peach Creek
Setting Pond Bypass
Trout Raceways
Office / Garage
Effluent/Irrigation Line
Pond Lake
B Series Ponds
A Series Ponds
Ball Ponds
Intake Pipeline
Aeration Building
Rock Lake


Rock Lake State Fish Hatchery
NM0030155
Pipelines
Wetland Preserve
Streams
NMDGF Property
Meters
0 100 200
Feet
0 200 400 600
N
1:9,000


North Settling Pond (Warm)
Combined Outfall
Education Center
Duck Blind
Effluent Irrigation Line
Peach Creek
South Settling Pond (Cold)
Walleye Building
Setting Pond Bypass
Setting Pond Connection
Trout Raceways
D4
D3
D2
D1
C4
C3
C2
C1
B5
B4
B3
B2
B1
A5
A4
A3
A2
A1
Office / Garage
Aeration Building
Pond Lake
Ball Pond 1
Ball Pond 2
Intake Pipeline


Rock Lake State Fish Hatchery
NM0030155
Pipelines
Streams
NMDGF Property
Wetland Preserve
Meters
0 100 200
Feet
0 200 400 600
N
1:5,000

III. **EFFLUENT CHARACTERISTICS**

The facility has provided the laboratory test results for the priority pollutants listed in Appendix D of NMIP. Applicable pollutants were sampled on November 28, 2017 and analyzed on December 1, 2017. Test results and applicant's certification dated March 22, 2018 stated that most of the tested pollutants were either not detected (ND) or were detected below the minimum quantification level (MQLs) except for uranium. TRC was detected at 27 ug/L at the combined outfall.

Pollutants	**Combined Outfall (ug/L)**	**MQL (ug/L)**
TRC	27.0000 (**J**)	33.0
Mercury, total	0.00006 (**J**)	0.005
Aluminum	2.7 (**J**)	2.5
Arsenic	0.2 (**J**)	0.5
Barium	10.9	100
Boron	100	100
Chromium	0.07 (**J**)	10
Cobalt	0.013 (**J**)	50
Copper	0.1 (**J**)	0.5
Lead	0.018 (**J**)	0.5
Nickel	0.15 (**J**)	0.5
Uranium (*)	1.52	0.1
Vanadium	0.04 (**J**)	50
Zinc	0.8 (**J**)	20
Chloromethane	0.03 (**J**)	-
Isophorone	0.021 (**J**)	10
Diethyl Phthalate	0.014 (**J**)	10
Di-n-butyl Phthalate	0.044 (**J**)	10
Butyl Benzyl Phthalate	0.038 (**J**)	10

Note: (*) Exceed MQLs; (**J**) Lab reported as estimated value

During the previous permit term, DMRs for Outfalls 003 and COMB identified several effluent exceedances for TRC and TSS and reported pH values lower than 6.6. Also, DMRs show insufficient data for Boron and Heptachlor for Outfall 003 and Outfall 004. See sampling frequency for these two pollutants in previous permit.

IV. **REGULATORY AUTHORITY/PERMIT ACTION**

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established 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. The renewal application was received on March 28, 2018. It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

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 permit for TSS and SS. Water quality-based effluent limitations are established in the proposed permit for pH.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

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

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants including TSS and SS.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

2. Effluent Limitation Guidelines

Pursuant to 40 CFR 451, ELGs have been promulgated for this concentrated aquatic animal production facility that produces 100,000 pounds or more annually. BPT is appropriate to flow-through and recalculating systems. BAT and BCT requirements are the same as for BPT. No quantitative requirements for specific pollutants or toxic substances are established. BMP for solid control, materials storage, structural maintenance, recordkeeping and training are required (40 CFR 451.11).

Limitations for TSS were established at 10 mg/L monthly average and 15 mg/L daily maximum. Limitations for SS were set at 0.1 ml/L monthly average and 0.5 ml/L daily maximum. The limitations are retained in the proposed permit for the combined outfall (Outfall 001).

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, maximum 30-day 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)(l)/(mg)(MG) * flow in MGD
Monthly average TSS loading = 10 mg/L * 8.345 (lbs)(l)/(mg)(MG) * 4.226 MGD = 353 lbs/day

Daily maximum average TSS loading = 15 mg/L * 8.345 (lbs)(l)/(mg)(MG) * 4.226 MGD = 529 lbs/day

A summary of the technology-based limits for the facility

Parameter	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
TSS	353 lbs/day	529 lbs/day	10 mg/L	15mg/L
SS	N/A	N/A	0.1 ml/L	0.5 ml/L
pH	N/A	N/A	6 to 9 s.u.	

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

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

2. Implementation

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

3. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC, effective August 11, 2018 for federal CWA purposes). The discharge is to Pecos River, segment 20.6.4.211 NMAC. The designated uses of the receiving water are fish culture, irrigation, marginal warm-water aquatic life, livestock watering, wildlife habitat and primary contact.

4. Permit Action - Water Quality-Based Limits

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

a. pH

For primary contact and marginal warm water aquatic life, criteria for pH is between 6.6 and 9.0 s.u. pursuant to 20.6.4.900.D NMAC

b. Bacteria - not applicable since there is no discharge of sanitary waste.

c. Toxics

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 RP to cause an in-stream excursion above water quality criteria, the permit must contain an effluent limit for that pollutant. Appendix A of the Fact Sheet shows the RP for those pollutants that had detections reported on the application form as noted above in section III. As shown, tested pollutants demonstrated no RP to exceed NMWQS. However, DMR reports show few results for Boron and Heptachlor during the previous permit term at Outfall 003 and Outfall 004 and no results for both pollutants at combined outfall (Outfall 001). Boron and Heptachlor were required to be sampled once every quarter. Therefore, limitation for both pollutant will continue in the proposed permit based on insufficient DMR data and based on previous RTC discussion as follows:

Comment 2: *From NMGF: "The New Mexico Department of Game and Fish, Rock Lake State Fish Hatchery, asks EPA to consider Boron was detected in inflow source water at or above the MQL for each re-test performed and for which results were provided to EPA. The New Mexico Department of Game and Fish, Rock Lake State Fish Hatchery, requests the frequency for Boron testing be reduced to twice/month during the first year of the permit term and removed for the remaining years of the permit term if during the first year Boron levels remain at or below the proposed limits at Outfall 003 and 004. Reducing the frequency will allow for combining sample collection and delivery resulting in greater efficiency and cost savings without a significant reduction in data collection. The New Mexico Department of Game and Fish, Rock Lake State Fish Hatchery, also requests the EPA approved test method for Boron be included in the final permit."*

Response 2: *The permittee diverts Rock Lake water flow to Pecos River; without the hatchery operation Rock Lake water would not flow to the river. Therefore, the permittee is responsible for any pollutant existing in the lake water that they divert to the river. In addition, there were no RPs at the source water (Rock Lake) with the submitted test results for Re-Test 1 & 2. RPs existed with the original pollutant scans at the outfalls.*

EPA does not concur with the request of removing the monitoring requirement but has reduced the monitoring frequency to <u>once/3 months</u>, which EPA believes will provide a sufficient amount of data points to determine RP in five years pursuant to 40 CFR 122.44(i). EPA approved test methods (subject to change) are listed in according with 40 CFR 136 stated under MONITORING PROCEDURES (Page 4, Part III). The permittee must use EPA approved methods capable of meeting the MQL of 100 ug/l in Appendix A of Part II of the permit.

Comment 3: *From NMGF: "The New Mexico Department of Game and Fish, Rock Lake State Fish Hatchery, requests to have all requirements for Heptachlor testing be removed for both Outfall 003 and 004. Heptachlor was Not Detected in hatchery effluent sampled for re-test purposes at each outfall on May 8, 2013. Additionally, our research shows that there is no test available to detect heptachlor at the proposed detection limit or within 100 times the detection limit. If this request is not granted, Rock Lake State Fish Hatchery requests test frequency for Heptachlor at both Outfall 003 and 004 be reduced to twice/ month during the first year of the permit term and removed for the remaining years of the permit term if during the first year Heptachlor levels remain at or below the proposed limits. The New Mexico Department of Game and Fish, Rock Lake State Fish Hatchery, also requests the EPA approved test method for Heptachlor be included in the final permit."*

Response 3: *As explained in Response 2, the permittee is responsible for any pollutant existing in the lake water that they divert to the river. RPs existed with the original pollutant scans at the outfalls. EPA*

does not concur with the permittee's requests. The Re-Test was completed with method 8081A, which is not one of the EPA approved test methods pursuant to 40 CFR 136.3. There are approved methods with method detection limits (MDL) below the MQL for heptachlor, 0.01 ug/L, such as: EPA methods 608, 505, and 617. According to page 1 of Part II, for any individual analytical test result less than the MQL (0.01 ug/l), a value of zero may be reported.

EPA has reduced the monitoring frequency to once/3 months, which EPA believes will provide a sufficient amount of data points to determine RP in five years pursuant to 40 CFR 122.44(i).

In addition, the previous permit had established as a "Report" requirements for total nitrogen due to possible impairment of nutrient mentioned under TMDL below; total phosphorus also needs to be included as a "Report" requirement in the proposed permit as a part of the State nutrient assessment protocol. The permit has a reopener clause that would allow the permit to be changed if at a later date the segment had a TMDL completed for nutrient. TRC is mentioned in section E below.

d. Temperature

For marginal warm-water aquatic life, criteria for temperature is maximum at 90^0F pursuant to 20.6.4.900.H(6). The temperature report was set for Outfalls 004 and COMB in the previous permit. EPA retains the temperature reporting for this renewed permit at the new Outfall 001 (combined outfall) since Outfall 004 will not be used to discharge.

5. Monitoring Frequency for Limited Parameters

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). The monitoring frequencies are retained from the previous permit as follow:

Parameter	**Outfall 001**	**Sample Type**
Flow	Daily	Measured over weir
pH	2/Month	Grab
TSS	2/Month	Grab
SS	2/Month	Grab
Temperature	2/Month	Grab
Total Nitrogen*	1/Quarter	Grab
Total Phosphorus	1/Quarter	Grab
TRC	2/Month	Instantaneous Grab
Boron	1/Quarter	Grab
Heptachlor	1/Quarter	Grab

* Defined as the sum of Total Kjeldahl Nitrogen (as N), Nitrate (as N), and Nitrite (as N).

D. WHOLE EFFLUENT TOXICITY

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 testing requirements are based on the instream concentration of effluent after complete mixing with 100% of the receiving water of the Pecos River at low-flow conditions, measured at United States Geological Survey (USGS) Station No. 008383000. NMED email dated June 27, 2018 provided the low-flow at the site as 3.0202 cfs, its stream mixing fraction of 1. The critical dilution is calculated and rounded off to a nearest number as follow:

Where: Cd = Qe ÷ (F*Qa + Qe) = 3.0202 ÷ (1* 3.0202 + 4.226) = 42%
Qe = 4.226 MGD (Production flow)
Qa = 3.0202 cfs = 1.9520 MGD (Critical low flow)
F = 1 (Stream mixing fraction)

Based on the nature of the discharge; *fish hatchery* (industrial), the type/size of the facility; m*inor*, the nature of the receiving water; *perennial*, and the critical dilution; 42 *%*, the NMIP directs the WET test to be a 7-day chronic test using *Ceriodaphnia dubia* and *Pimephales promelas.* A once per permit term frequency would be consistent with the NMIP.

DMR reports reveal passing of one required per term test for the *Ceriodaphnia dubia* and one required per term test for the *Pimephales promelas* during the last permit term. Because there is only one data point to work with, EPA RP Analyzer was not used to determine WET RP in this permit.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 18%, 24%, 32%, 42%, and 56%. The low-flow effluent concentration (critical low-flow dilution) is defined as 42% effluent.

During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from combined outfall (Outfall 001) to the Ortega-Borsich drainage thence to the Pecos River in segment 20.6.4.122 of the Pecos River Basin. Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	**DISCHARGE LIMITATION**		**MONITORING REQUIREMENT**	
WET Testing (7-day Static Renewal)[1]	30-day Ave. Minimum	7-day Minimum	Frequency[2]	Type
Ceriodaphnia dubia	Report	Report	Once/year	Grab
Pimephales promelas	Report	Report	Once/year	Grab

Footnote:

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.

2. The test shall take place between April 1 and June 30. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

The permittee shall also submit the results of any toxicity testing performed in accordance with the Part II of the Permit. Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the appropriate test method publication. The full reports required by each test section need not be submitted unless requested. However, the full report is to be retained following the provisions of 40 CFR Part 122.41(j)(2). The permit requires the submission of the toxicity testing information to be included on the DMR.

E. DRUGS MEDICATIONS and/or CHEMICALS (DMC)

The permittee shall comply with reporting requirements pursuant to 40 CFR 451.3 if investigational new animal drug (INAD) or any extra-label drug is used where such the use may lead to the receiving water.

Reporting is not required for an INAD or extra-label drug, previously approved by U.S. Food and Drug Administration (FDA), if its use is at or below the approved dosage and involves similar conditions of uses. The permittee shall also notify NMED and EPA of the use of non-FDA approved drug. Notification to NMED shall be by phone within one business day and to EPA within three days of the intention. Written notification shall also be to both NMED and EPA within five business days. Notifying information must include name of the DMC, the reason for treatment, date(s) and time(s) of the addition (including duration), method of application and the amount added.

When the DMC used is neither approved by FDA or its use is not consistent with FDA practices, including INAD and extra-label drug with above approved dosage, such that it may lead to the receiving water, the permittee shall conduct WET tests. The testing is retained from the previous permit, CD at 100% with additional effluent concentrations at 32%, 42%, 56%, 75%, and 100%, as table below. The permittee shall report WET tests on the DMR as Outfall 01B and mention reporting letter to NMED and EPA.

WET Testing (48-hr Static Renewal)	30-day Avg. Min.	48-Hr. Min.	Frequency	Type
Daphnia pulex	Report	Report	Once/Use[1]	Grab[2]
Pimephales promelas	Report	Report	Once/Use	Grab

Footnote:

1. Once/Use is for intermittent use of DMC. For long-term use, only one WET shall be required on the maximum dosage. If any dose is later increased by more than 20% of the maximum dosage, then additional WET tests will be required. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

2. The sample shall be taken approximately 30 minutes after the expected time of arrival of the treated water has passed through the outfall. The expected time of arrival can be estimated by direct observations with light floatable object.

Toxics - Total Residual Chlorine

The limits for TRC are based on acute and chronic chlorine limitations for the protection of aquatic life and the protection of wildlife uses in the numeric criteria table in 20.6.4.900 NMAC. The permit limit is determined using the mixing zone model. The critical dilution used in conjunction with the chronic criteria, 11 ug/L and end-of-pipe used with the acute criteria, 19 ug/L, are calculated. The most limiting criteria is then used to determine the limit.

The previous permit states that "The applicant shall not use chlorine in the hatchery operation nor discharge any chlorine that may eventually migrate to the outfall(s) at the facility." The 2018 Hatchery Management Plan attached with the renewal application describes the use of Chloramine-T at the hatchery. Consistent with USEPA's response to NMDGF comments for the Red River State Fish Hatchery final permit (NM0030147), TRC monitoring and limitation protective of WQS has been added to the proposed permit during the period when the FDA approved drug Chloramine-T is used as a treatment for Bacterial Gill Disease. A daily maximum TRC limit has been added in the proposed permit.

TRC is sampled using an instantaneous grab sample, and 40 CFR Part 136 defines instantaneous maximum as being measured within 15-minutes of sampling. Also, TRC cannot be averaged for reporting purposes. The proposed permit has a footnote for TRC stating that: *"The effluent limitation for TRC is the instantaneous maximum grab sample taken during periods of chlorine use and cannot be averaged for reporting purposes. Instantaneous maximum is defined in 40 CFR Part 136 as being measured within 15-minutes of sampling."*

VI. **TMDL REQUIREMENTS**

According to 2016-2018 State of New Mexico CWA §303(d)/§305(b) Integrated Report, Pecos River (segment 20.6.4.211 NMAC), from Sumner Reservoir to Santa Rosa Reservoir, is listed in the 303(d) with probable causes of impairment of nutrient/eutrophication biological indicators and bacteria; nutrient listing is marginal. Upper stream from Santa Rosa to El Rito Creek is not in the 303(d) list. Designated use of marginal warm-water aquatic life is not supporting. A TMDL for the causes is not completed. Therefore, no additional permit requirements are needed for the sedimentation. The permit has a reopener clause that would allow the permit to be changed if at a later date the segment had a TMDL completed.

VII. **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 water(s), which is protective of the designated uses of that water, NMAC Section 20.6.4.8. A.2.

VIII. **ENDANGERED SPECIES CONSIDERATIONS**

According to the USFWS list updated on September 11, 2018 for Guadalupe County, NM, the species are Piping Plover (Charadrius melodus) (threatened), Southwestern willow flycatcher (Empidonax traillii extimus) (endangered), Lesser prairie-chicken (Tympanuchus pallidicinctus) (under review), Pecos sunflower (Helianthus paradoxus) (threatened) and Wright's marsh thistle (Cirsium wrightii) (candidate).

1. **Piping Plover** is a small sand-colored, sparrow-sized shorebird that nests and feeds along coastal sand and gravel beaches in North America. Their breeding habitat includes beaches and sand flats on the Atlantic coast, the shores of the Great Lakes, and in the mid-west of Canada and the United States. They nest on sandy or gravel beaches or shoals. These shorebirds forage for food on beaches, usually by sight, moving across the beaches in short bursts. Threats to the survival of the Piping Plover include loss of beach habitat, vehicular and human traffic on beach nesting areas, and channelization and modification of river flow that have led to the elimination of sandbar nesting habitat.

2. **Southwestern Willow Flycatchers** habitat occurs in riparian areas along streams, rivers, and other wetlands where dense willow, cottonwood, buttonbush and arrow-weed are present. The primary reason for decline is the reduction, degradation and elimination of the riparian habitat. Other reasons include brood parasitism by the brown-headed cowbird and stochastic events like fire and floods that destroy fragmented populations. The permit does not authorize activities that may cause destruction of the flycatcher habitat, and issuance of the permit will have no effect on this species.

3. **Lesser Prairie-chicken** is an upland, grassland-nesting bird found in the mid-tall mixed grasslands, sand-sage grasslands and shinnery oak grasslands of western Kansas, southeast Colorado, northwest Oklahoma, the Texas panhandle, and eastern New Mexico. Lesser prairie-chicken populations have declined dramatically during the past several decades; as with the other prairie grouse species, the decline is largely due to loss or degradation of suitable habitat.

4. **Pecos Sunflower** inhabits desert wetlands. It grows in permanently saturated soils, such as desert wetlands (or cienegas) associated with springs, as well as the margins of streams and lakes.

It is threatened by various factors, particularly: the destruction or degradation of wetlands by filling; draining through diversion to provide water for livestock or irrigation; the construction of impoundments; the drying of its habitat through the depletion of local groundwater; excessive livestock grazing or mowing; the effects of local highway maintenance; and competition from non-native plant species (particularly saltcedar, Tamarix spp.).

5. **Wright's Marsh Thistle** is an impressive species to behold. The plant, related to the sunflower, can grow to eight feet tall. It produces a single, central stalk with dark green, succulent (and mildly prickly) leaves and numerous slender flowering branches that extend from the upper third of the main stem. The thistle produces white or pink flowers from August to October. As its name implies, Wright's marsh thistle grows in wetlands, typically in alkaline soils near seeps, springs, and along marshy edges of streams and ponds. It is endangered by water diversion, habitat loss and degradation through livestock grazing.

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on the above listed species and designated critical habitat. After review of the above referenced information, 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 proposed permit is identical to the previous permit. Also, no changes in the treatment of wastewater technology have been proposed or implemented since last issuance of the permit.

3. The NPDES program regulates the discharge of pollutants from the treatment facility and does not regulate forest, shorelines, wetlands, agricultural and other management practices. 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:

IX. **HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS**

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

X. **PERMIT REOPENER**

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

XI. **VARIANCE REQUESTS** - None

XII. **CERTIFICATION**

The permit is in the process of certification by the State Agency following regulations promulgated at 40 CFR 124.53. A proposed permit and public notice will be sent to the District Engineer of COE, to the Regional Director of FWS and to the National Marine Fisheries Service prior to the publication of that notice.

XIII. **FINAL DETERMINATION**

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

XIV. **ADMINISTRATIVE RECORD**

The following information was used to develop the proposed permit:

A. APPLICATION(S) - EPA Application Forms 1 and 2B received by EPA March 28, 2018.

B. 40 CFR CITATIONS - Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

NMQWS, 20.6.4 NMAC, effective June 5, 2013.
Implementation Guidance for the NMIP, March 15, 2012.
State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2016 -2018.

E. CORRESPONDENCE

Email from NMDGF to EPA, Region 6, 3/28/2018 providing the effluent data.
Email from NMED to EPA, Region 6, 6/28/2018 providing the flow data.