

## **FACT SHEET**

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT NO. NM0030112 TO DISCHARGE TO WATERS OF THE UNITED STATES

### **APPLICANT**

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P.O. Box 25112  
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### **ISSUING OFFICE**

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### **DATE PREPARED**

November 5, 2020

### **PERMIT ACTION**

Amendment of a permit previously issued on February 22, 2019 with an effective date of April 1, 2019, and an expiration date of March 21, 2024.

### **RECEIVING WATER – BASIN**

Rio Cebolla, thence to Jemez River – Rio Grande Basin

**DOCUMENT ABBREVIATIONS**

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

<b>4Q3</b>	Lowest four-day average flow rate expected to occur once every three-years
<b>BAT</b>	Best available technology economically achievable
<b>BCT</b>	Best conventional pollutant control technology
<b>BPT</b>	Best practicable control technology currently available
<b>BMP</b>	Best management plan
<b>BOD</b>	Biochemical oxygen demand (five-day unless noted otherwise)
<b>BPJ</b>	Best professional judgment
<b>CBOD</b>	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
<b>CD</b>	Critical dilution
<b>CFR</b>	Code of Federal Regulations
<b>cfs</b>	Cubic feet per second
<b>COD</b>	Chemical oxygen demand
<b>COE</b>	United States Corp of Engineers
<b>CWA</b>	Clean Water Act
<b>DMR</b>	Discharge monitoring report
<b>DO</b>	Dissolved oxygen
<b>ELG</b>	Effluent limitation guidelines
<b>EPA</b>	States Environmental Protection Agency
<b>ESA</b>	Endangered Species Act
<b>FDA</b>	U.S. Food and Drug Administration
<b>FWS</b>	United States Fish and Wildlife Service
<b>mg/l</b>	Milligrams per liter
<b>ug/l</b>	Micrograms per liter
<b>lbs</b>	Pounds
<b>MG</b>	Million gallons
<b>MGD</b>	Million gallons per day
<b>NMAC</b>	New Mexico Administrative Code
<b>NMED</b>	New Mexico Environment Department
<b>NMIP</b>	Mexico NPDES Permit Implementation Procedures
<b>NMWQS</b>	Mexico State Standards for Interstate and Intrastate Surface Waters
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>MLQ</b>	Minimum quantification level
<b>O&amp;G</b>	Oil and grease
<b>POTW</b>	Publicly owned treatment works
<b>RP</b>	Reasonable potential
<b>SS</b>	Settleable solids
<b>SIC</b>	industrial classification
<b>s.u.</b>	Standard units (for parameter pH)
<b>SWQB</b>	Surface Water Quality Bureau
<b>TDS</b>	Total dissolved solids
<b>TMDL</b>	Total maximum daily load
<b>TRC</b>	Total residual chlorine
<b>TSS</b>	Total suspended solids
<b>UAA</b>	Use attainability analysis
<b>USGS</b>	United States Geological Service
<b>WLA</b>	Waste Load allocation
<b>WET</b>	Whole effluent toxicity
<b>WOTUS</b>	Waters of the United States
<b>WQCC</b>	New Mexico Water Quality Control Commission
<b>WQMP</b>	Water Quality Management Plan
<b>WWTP</b>	Wastewater Treatment Plant

**I. CHANGES FROM THE PREVIOUS PERMIT**

Changes from the permit previously issued on February 22, 2019 with an effective date of April 1, 2019, and an expiration date of March 21, 2024 are as follow:

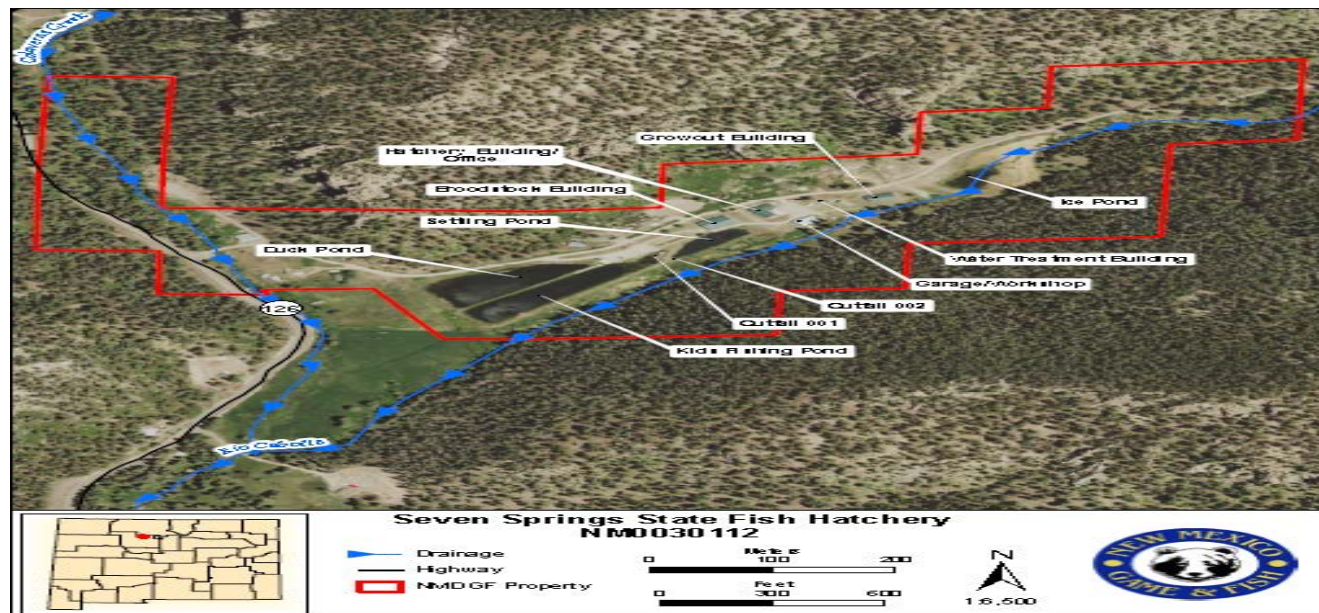
- Removal of limitations for aluminum at Outfall 001 as requested by NMDGF. This is based on a sampling study conducted by the NMDGF at source of each spring in conjunction with effluent samples. The study shows that aluminum concentrations in source water are consistently higher than the discharge wastewater.
- Sampling of total recoverable aluminum and hardness as requested by NMED. For the first two years from the effective date of this amended permit, filtered samples for total recoverable aluminum and hardness will be taken quarterly above and below the outfall. This data is needed for a baseline water quality (BWQ) assessment for the next permit cycle.

In accordance with 40 CFR 124.5(c)(2), only the portions of the permit being modified are open for review and comment.

**II. APPLICANT LOCATION and ACTIVITY**

As described in the application, the facility (Latitude 35° 55' 39.072" N and Longitude 106° 42' 13.2978" W) is located at 346 Forest Road 314, city of Jemez Springs, Sandoval County, NM. Under the SIC code 921, the facility hatches and raises Rio Grande cutthroat trout for stocking in lakes and streams with estimated production maximum of 10,200 lbs annually. Water sources are Calaveras, Cebolla, Coldwater and Seven Springs; some of the springs water are oxygenated before being utilized.

The facility primarily consists of 2 raceways, 3 ponds, including settling pond and kid fishing pond, buildings: grow out, hatchery, and brood stock. During normal operation water overflows from one building to another, thence to the raceways. The wastewater is discharged to the fishing pond, where Outfall 001 is located. The wastewater at the fishing pond is routed to the wetlands, then to a neighbor’s pasture; it is also discharged to Rio Cebolla. When weekly cleaning occurs in the building(s) or raceways, wastewater mainly consisting of unconsumed food, fish waste and other sediments from the cleaning activity is directly discharged to the settling pond, where Outfall 002 is located. At the settling pond the wastewater is discharged to Rio Cebolla. Average long-term flows at Outfalls 001 and 002 are 0.503 MGD and 0.146 MGD, respectively. A map of the facility is attached.



### III. EFFLUENT CHARACTERISTICS

The facility has provided the laboratory test results for the priority pollutants (metals, cyanide/chlorine, volatile, acid compounds, base/neutral compounds and pesticides) listed in Appendix D of NMIP for Outfall 001 and Outfall 002. Samples were collected on November 27, 2017 and analyzed on December 1, 2017. Test results and applicant's certification dated March 23, 2018 stated that all analytes tested were either not detected or were detected below the MQL except for aluminum and uranium at both Outfall 001 and 002.

Pollutants	Outfall 001 (ug/L)	Outfall 002 (ug/L)	MQL (ug/L)
Mercury, total	0.00092	0.00087	0.005
Aluminum (*)	78.2	104	2.5
Antimony	0.044 (J)	0.047 (J)	60
Arsenic	0.42 (J)	0.39 (J)	0.5
Barium	18	19.6	100
Beryllium	0.101	0.078	0.5
Boron	13.5	13.0	100
Chromium	0.26	0.34	10
Cobalt	0.02 (J)	0.032	50
Copper	0.22	0.29	0.5
Lead	0.106	0.189	0.5
Molybdenum	0.76	0.58	10
Nickel	0.08 (J)	0.20	0.5
Selenium	0.3 (J)	0.3 (J)	5
Uranium (*)	0.663	0.579	0.1
Vanadium	0.79	0.65	50
Zinc	1.4 (J)	8.8	20
Chloromethane	0.04 (J)	0.03 (J)	-
Di-n-butyl Phthalate	0.049 (J)	0.034 (J)	10
Butyl Benzyl Phthalate	0.18 (J)	0.061 (J)	10
Bis(2-ethylhexyl) Phthalate	0.15 (J)	-	10
Toluene	-	0.06 (J)	10
Diethyl Phthalate	-	0.043 (J)	10
Chlorine	-	22 (J)	33
Thallium	-	0.017 (J)	0.5

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

During the permit term DMRs showed several pH measures exceeded the maximum limit of 8.8 s.u.

### 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 WOTUS.

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 application was received on March 27, 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 draft permit for TSS and SS. Water quality-based effluent limitations are established in the draft 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 concentrated aquatic animal production facility that produces 100,000 lbs or more annually. Since the facility produces less than 100,000 lbs estimated annually, BMP is appropriate. BMP for solid control, materials storage, structural maintenance, recordkeeping and training is required (40 CFR 451.11).

Limitations for TSS were established at 10 mg/l monthly average and 15 mg/l daily max. Limitations for SS were set at 0.1 ml/l monthly average and 0.5 ml/l daily max. The limitations are retained in the draft permit for Outfalls 001 and 002.

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 average 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)(l)/(mg)(MG) \* flow in MGD

Monthly average TSS loading = 10 mg/l \* 8.345 (lbs)(l)/(mg)(MG) \* 0.8238 MGD = 69 lbs/day

Daily max. average TSS loading = 15 mg/l \* 8.345 (lbs)(l)/(mg)(MG) \* 0.8238 MGD = 103 lbs/day

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

Parameter	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
TSS	69 lbs/day	103 lbs/day	10 mg/L	15 mg/L
SS	N/A	N/A	0.1 ml/L	0.5 ml/L
pH	N/A	N/A	6 to 9 s.u.	

Mass loading for Outfall 002 is not established due to non-continuous flow; “Report” is adequate.

### C. WATER QUALITY BASED LIMITATIONS

#### 1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit 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.

#### 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 Rio Cebolla, segment 20.6.4.108 NMAC. The designated uses of the receiving water are domestic water supply, fish culture, high quality cold-water aquatic life, irrigation, 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 high quality cold-water aquatic life, criteria for pH is between 6.6 and 8.8 s.u. pursuant to 20.6.4.900.H(1) NMAC.

b. 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 reasonable potential to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant. RP analysis was conducted with the stream data collected at station 31RCebol011.4 (not the point of discharge, the pond) and showed that aluminum has potential to exceed the NMWQS.

According to the NMDGF, the source water at the hatchery consists of three artesian springs, which if the hatchery was not present would flow to the Rio Cebolla. From the beginning of the permit term hatchery staff have been collecting water samples at the source of each spring in conjunction with effluent samples required by the permit.

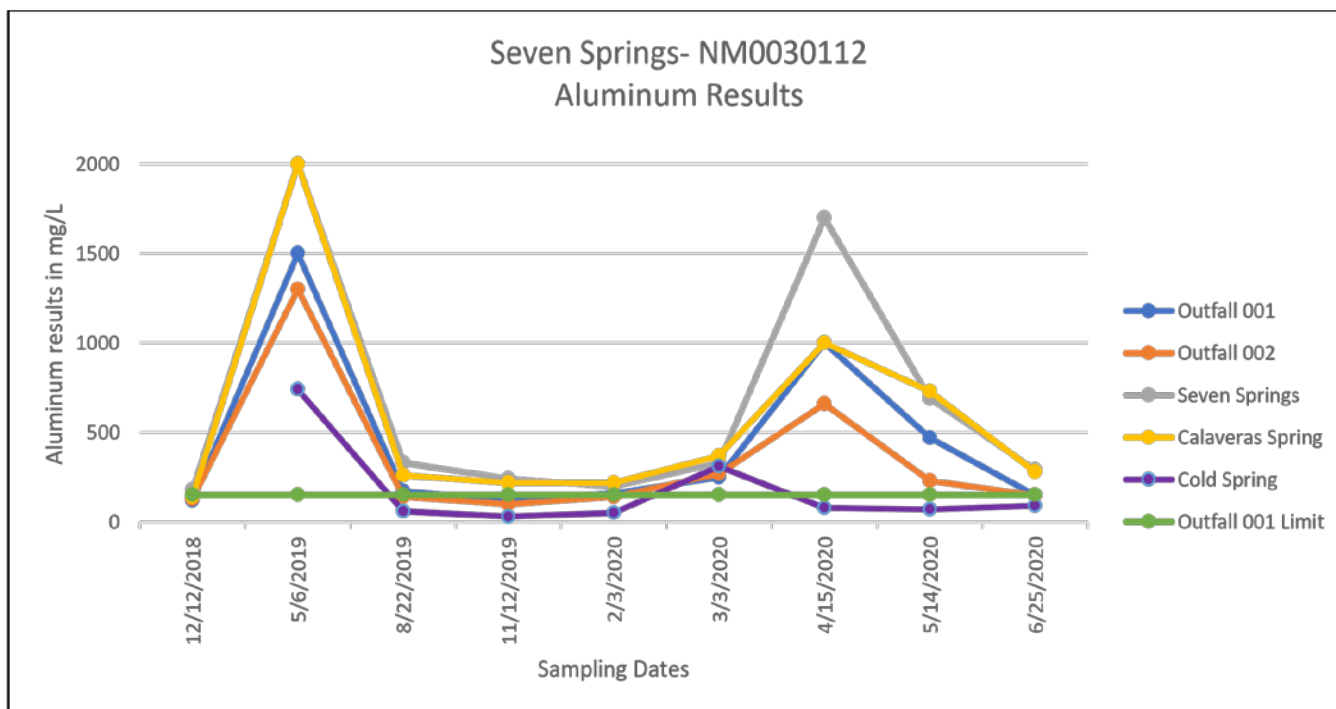
Two of the three springs have had consistent results of higher aluminum concentrations than the permit limit. These source water results have also been consistently higher than the outfall results. From this, the NMDGF has concluded that the exceedance of aluminum limits at the hatchery is due to the source water and that as water flows through the hatchery, aluminum concentrations are improving prior to discharge into the Rio Cebolla. To acquire additional baseline data, hatchery staff increased sampling from quarterly to monthly for both source and effluent locations. Following are the results from all sampling events provided by the NMDGF:

Please note that Outfall 002 is included in the data table for comparison, but there is no limit set in the permit for Outfall 002. Seven Springs, Calaveras Springs and Cold Springs are the three artesian springs, which supply all the water for hatchery operations. Permit limit at Outfall 001 are 151.2 ug/L and 1.04 lbs/day.

Date	Outfall 001 mg/L	*Outfall 001 lbs/day	Outfall 002 mg/L	Seven Spring mg/L	Calaveras Spring mg/L	Cold Spring mg/L
12/12/2018	120	.33	130	180	140	N/A
5/6/2019	1500	8.93	1300	2000	2000	740
8/22/2019	170	.59	140	330	260	60
11/12/2019	120	.33	100	240	220	30
2/3/2020	160	.44	140	200	220	50
3/3/2020	250	.69	270	330	370	310
4/15/2020	1000	5.06	660	1700	1000	80
5/14/2020	470	1.94	230	690	730	70
6/25/2020	150	.49	150	290	280	90

Results for outfall 001 in red exceed the permit limit for outfall 001. Concentration results for the three springs are also highlighted in red where they already exceed the outfall 001 limit prior to entering the hatchery. Outfall 002 was not included as it does not contribute to Outfall 001 results. \*lbs/day was calculated from the hatcheries monthly bench sheets.

The Figure below shows the aluminum results at each location versus the limit set for outfall 001. The green line represents outfall 001 limit:



Based on the above referenced study carried out by the NMDGF, aluminum limitations will be removed from the final permit issued on February 22, 2019. The amended permit will still be required reporting of aluminum at Outfall 001.

### 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 except for aluminum as follow:

Parameter	Frequency	Sample Type
Flow	Daily	Measured over weir
pH	2/month	Grab
TSS	2/month	Grab
SS	2/month	Grab
Aluminum (Total Recoverable)	1/Quarter	Grab
TRC	2/Month	Instantaneous Grab

### D. WHOLE EFFLUENT TOXICITY

Majority of discharge is from Outfall 001 to an unassessed fishing pond. The CD of 100% at this outfall in the previous permit because the State did not allow dilution into pond, lake or playas (4Q3 = 0). This CD is retained for this draft permit. Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP. Table 12 on page 43 of the NMIP outlines the type of WET testing for different types of discharges. Based on the nature of the discharge: minor industrial, the NMIP directs the WET testing to be acute tests (48-hrs.) using *Daphnia pulex* and *Pimephales promelas* once every six months.



The previous permit required a total of ten (10) tests for *Daphnia pulex* and six (6) tests for *Pimephales promelas*. DMRs show that they all passed except test results for the due date of September 30, 2018 have not been received at the time of the draft permit. Comments letter dated January 3, 2019 states that test results that were due September 30, 2018 were submitted and the hatchery passed the tests. WET monitoring for the same species will continue with 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 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% effluent. The permittee shall limit, and monitor discharge(s) as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	30-day Average Minimum	48-Hr. Minimum	Frequency <sup>*2</sup>	Type
WET Testing (48-hr Static Renewal) <sup>*1</sup>	Report	Report	Once/6 months	Grab
<i>Daphnia pulex</i> (in 1 <sup>st</sup> year)	Report	Report	Once/6 months	Grab
<i>Pimephales promelas</i> (in 1 <sup>st</sup> year)	Report	Report	Once/6 months	Grab
If All Tests Pass				
<i>Daphnia pulex</i> (years: 2, 3, 4, 5)	Report	Report	Once/6 months	Grab
<i>Pimephales promelas</i> (years: 2, 3, 4, 5)	Report	Report	Once/year	Grab
If Any Test Fails				
<i>Daphnia pulex</i> (years: 2, 3, 4, 5)	Report	Report	Once/3 months	Grab
<i>Pimephales promelas</i> (years: 2, 3, 4, 5)	Report	Report	Once/3 months	Grab

Footnote:

1. Monitoring and reporting requirements begin 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.

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.

Outfall 002 is used when cleaning occurs; the discharge is to the settling pond, thence to Rio Cebolla. Except for sediments, discharged pollutants at Outfall 002 are closely the same as at Outfall 001. In addition, CD is 100% at Outfall 001; therefore, it is not necessary to do WET testing at Outfall 002, which has a much lower CD.

**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 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 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 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.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	30-day Average Minimum	48-Hr. Minimum	Frequency	Type
WET Testing (48-hr Static Renewal)	Report	Report	Once/Use <sup>*1</sup>	Grab <sup>*2</sup>
Daphnia pulex	Report	Report	Once/Use	Grab
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.

The previous permit stated 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. However, because TRC has been detected (0.022 ug/L) below the MQL of 33 ug/L at the settling pond, TRC will be monitored and reported at Outfall 002 during facility cleanings if any, including raceway, troughs and tanks (settling pond), and measured daily at Outfall 01B when DMC is used.

**VI. TMDL REQUIREMENTS**

2018-2020 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List (IL) shows segment 20.6.4.108 of Rio Cebolla (Fenton Lake to headwaters) with probable impairment of nutrients (5/5C) and turbidity (5/5A). According to the IL, the following are the definitions of impaired categories:

5/5A: Impaired for one or more designated or existing uses and a TMDL is underway or scheduled. AUs are listed in this category if the AU is impaired for one or more designated uses by a pollutant. Where more than one pollutant is associated with the impairment of a single AU, the AU remains in IR Category 5A until TMDLs for all pollutants have been completed and approved by USEPA.

5/5C: Impaired for one or more designated or existing uses and Additional data will be collected before a TMDL is scheduled. AUs are listed in this category if there is not enough data to determine the pollutant of concern or there is not adequate data to develop a TMDL. For example, AUs with biological impairment will be listed in this category until further research can determine the pollutant(s) of concern. When the pollutant(s) are determined, the AU will be moved to IR Category 5A and a TMDL will be scheduled. If it is determined that the current designated uses are inappropriate, it will be moved to IR Category 5B and a UAA will be developed. If it is determined that “pollution” is causing the impairment (vs. a “pollutant”), the AU will be moved to IR Category 4C.

A TMDL for nutrients and turbidity has not been completed. Therefore, no additional permit requirements are needed at this time. The permit has a reopener clause that would allow the permit to be changed if later a TMDL for each impairment is 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 draft 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 October 2, 2018 for Sandoval County, NM at <https://ecos.fws.gov/ecp0/reports/species-by-current-range-county?fips=35043>, the species are Jemez Mountains salamander (*Plethodon neomexicanus*) (endangered), Yellow-billed Cuckoo (*Coccyzus americanus*) (threatened), Mexican spotted owls (*Strix occidentalis lucida*) (threatened), Southwestern willow flycatcher (*Empidonax traillii extimus*) (endangered), Rio Grande silvery minnow (*Hybognathus amarus*) (endangered) and New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) (endangered).

1. **Jemez Mountains salamander** is a species of salamander in the family Plethodontidae endemic to New Mexico. Its natural habitat is temperate forests. It is threatened by habitat loss, is in rapid decline. Ninety percent of the Jemez Mountains salamander population lives within the boundaries of the Santa Fe National Forest. To protect the Jemez Mountains salamander, one must safeguard the Jemez Mountains—a striking landscape characterized by large tracts of undisturbed wilderness, rocky peaks, and mountain streams. Because volcanic activity formed the mountains, they also contain unique features such as hot springs, fumaroles, and the Valles Caldera itself, a ring of hills born from the remnants of several extinct volcanoes.

The Jemez Mountains salamander is the most imperiled of the three salamanders that live in New Mexico and is very vulnerable to losing more of its already limited habitat. It is now found in only 38 percent of the sites it historically occupied. Logging, wildfires, and fire suppression activities such as trench-digging and application of fire-suppressant chemicals threaten the remaining salamanders. So, does road building. Sometimes these tiny amphibians don’t make it across roads alive during their nightly travels.

2. **Yellow-billed Cuckoo** uses wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes. In the Midwest, look for cuckoos in shrub-lands of mixed willow and dogwood, and in dense stands of small trees such as American elm. In the central and eastern U.S., Yellow-billed Cuckoos’ nests in oaks, beech, hawthorn, and ash. In the West, nests are often placed in willows along streams and rivers, with nearby cottonwoods serving as foraging sites.

3. **Mexican spotted owl** nests, forages, roosts and disperses in a wide variety of biotic communities:

- Mixed-conifer forests are commonly used throughout the range and may include Douglas fir, white fir, southwestern white pine, limber pine, and ponderosa pine. Understory may include Gambel oak, maples, box elder, and/or New Mexico locust. Highest densities of Mexican spotted owls occur in mixed-conifer forests that have experienced minimal human disturbance.
- Madrean pine-oak forests are commonly used throughout the range, and, in the southwestern U.S., are typically dominated by an overstory of Chihuahua and Apache pines, with species such as

Douglas fir, ponderosa pine, and Arizona cypress. Evergreen oaks are typically prominent in the understory.

- Rocky canyons are utilized by Mexican spotted owls in the northern part of their range, including far northern Arizona and New Mexico, and southern Utah and Colorado.

Nesting habitat is typically in areas with complex forest structure or rocky canyons, and contains mature or old growth stands which are uneven-aged, multistoried, and have high canopy closure. In the northern portion of the range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons. Elsewhere, most nests are in Douglas-fir trees (*Pseudotsuga menziesii*).

The patterns of habitat use by foraging owls are not well known, but Mexican spotted owls generally forage in a broader array of habitats than they use for roosting, and most commonly in Douglas fir. Ganey and Balda (1994) found that, in northern Arizona, owls generally foraged slightly more than expected in unlogged forests, and less so in selectively logged forests. However, patterns of habitat use varied between study areas and between individual birds, generalizing difficult.

4. **Southwestern willow flycatcher** 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.

5. **Rio Grande silvery minnow** was once abundant throughout the Rio Grande and Pecos basins, but now is limited to just a few locations of the Rio Grande in New Mexico. Within North America, the Rio Grande silvery minnow inhabits the Rio Grande River. The Rio Grande silvery minnow currently occupies less than 10% of its historic range and is now only found in the Rio Grande River from Cochiti Pueblo, downstream to the in-stream flow of Elephant Butte Reservoir. Apparently, this species is now extinct in Texas.

The maximum size for the Rio Grande silvery minnow is 8.9 cm (3.5 in). They travel in schools. The abundance of the Rio Grande silvery minnow varies from season to season and from year to year. If stream or river flows do not significantly increase during the spring, this species is less likely to spawn that year. Silvery minnows tend to skim the bottom of rivers and streams. These fish are herbivores, whose diet consists of river plants and benthic macro-invertebrates.

Silvery minnows prefer large streams with slow to moderate current flowing over a mud, gravel substrate, or shifting sand-silt substrate bottom. Silvery minnows typically occupy stream habitats where water depths are moderate 0.2 to 0.8 m (8 in. to 31.5 in.) and have velocity from 0 to 30 cm (0 to 1 ft./sec). During the winter, these minnows are most found in nearly still water with debris cover. However, during low flows, they are found in isolated pools and in watered reaches immediately downstream of diversion structures. Rio Grande silvery minnows have also been found in irrigation ditches and canals.

6. **New Mexico meadow jumping mouse** is a water-loving animal that lives only along the banks of southwestern streams. It is semi-aquatic, and its large back feet may assist it with swimming as well as jumping. Unlike other subspecies of meadow jumping mouse, it is never found in meadows or grasslands without suitable perennial water and riparian habitat. It is rarely found more than a few feet (1.8 m) from running water.

These mice are naturally rare and scattered across isolated population centers, and no wonder; riparian areas make up less than 1 percent of the landmass in the Southwest. But these precious arteries of life are in decline, and the jumping mouse along with them. The mouse has been extirpated from 70 to 80 percent of its historic range, which extended from the San Juan Mountains in southwestern Colorado into the Rio Grande Valley in New Mexico and the White Mountains in Arizona. These days, they are found only in 5 isolated mountain ranges in Colorado, New Mexico, and Arizona, and in the Rio Grande Valley.

In all historical locations surveyed since 2000, populations have undergone large declines and, in some cases, may have completely disappeared. Overgrazing by livestock is the primary driver of this decline; cattle grazing, even with low numbers of cows, destroys sensitive streamside habitat through loss of vegetation, alteration of the vegetative community by selective grazing of certain species, soil compaction, and general destruction from trampling. A mouse in grazed habitat generally cannot collect enough food during its short active period to make it through the winter. During surveys in 2005 and 2006, every population of New Mexico meadow jumping mice was found in areas inaccessible to livestock.

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. The draft permit is consistent with the States WQS and does not increase pollutant loadings.
4. EPA determines that Items 1, thru 3 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.

#### **IX. HISTORICAL & 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 NMWQS are promulgated or revised. In addition, if the State develops a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

#### **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 draft permit and draft 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 27, 2018.

B. 40 CFR CITATIONS - Sections 122, 124, 125, 133, 136, 451

**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**

1. Email from NMED to EPA, Region 6, 10/1 & 10/9/2018 providing the ambient and flow data.
2. Email dated August 3, 2020 from Samantha Ferguson, Environmental Compliance Specialist with New Mexico Department of Game and Fish providing a letter from Kirk A. Patten, Chief, Fisheries Management requesting amendment their NPDES permit. This letter also provided data from a sampling study conducted by the New Mexico Department of Game and Fish at source of each spring in conjunction with effluent samples.
3. Emails from Daniel Valenta, Environmental Scientist-Specialist, with NMED on September 28 and October 29, 2020 requesting to update TMDL and providing language on anti-deg to be included in amended permit.