NPDES PERMIT NO. NM0030112 FACT SHEET

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

APPLICANT

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ISSUING OFFICE

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DATE PREPARED

February 21, 2024

PERMIT ACTION

Proposed reissuance of the current NPDES permit issued 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:

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	States Environmental Protection Agency
ESA	Endangered Species Act
FDA	U.S. Food and Drug Administration
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	Mexico NPDES Permit Implementation Procedures
NMWQS	Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
PFAS	Per- and Polyfluoroalkyl Substances
POTW	Publicly owned treatment works
RP	Reasonable potential
SS	Settleable solids
SIC	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
WOTUS	Waters of the United States
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater Treatment Plant

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

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:

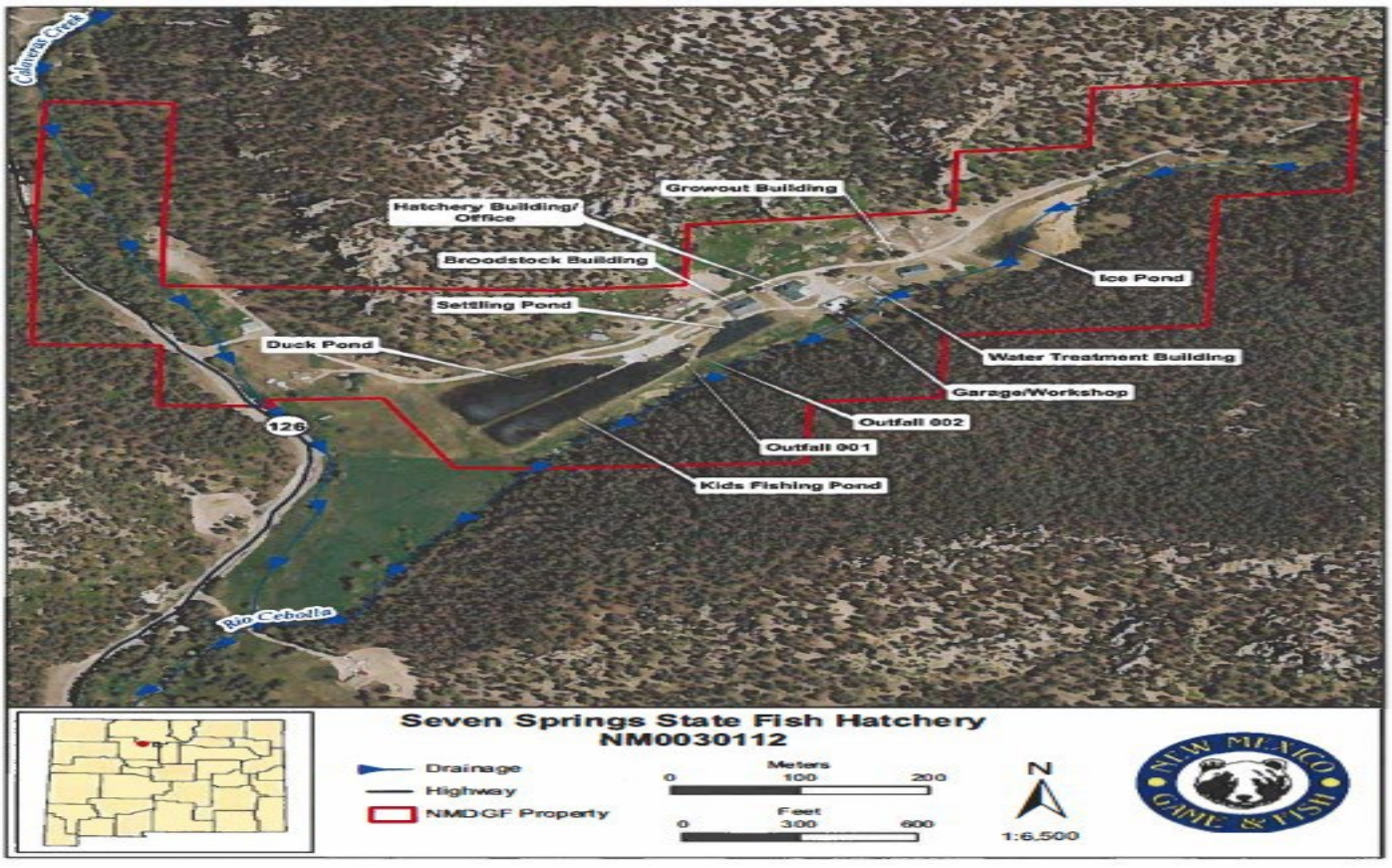
1. The long-term 30-day average flow of 0.77 MGD reported in the application at Outfall 001has been used per NMIP to calculate the permit limitations.

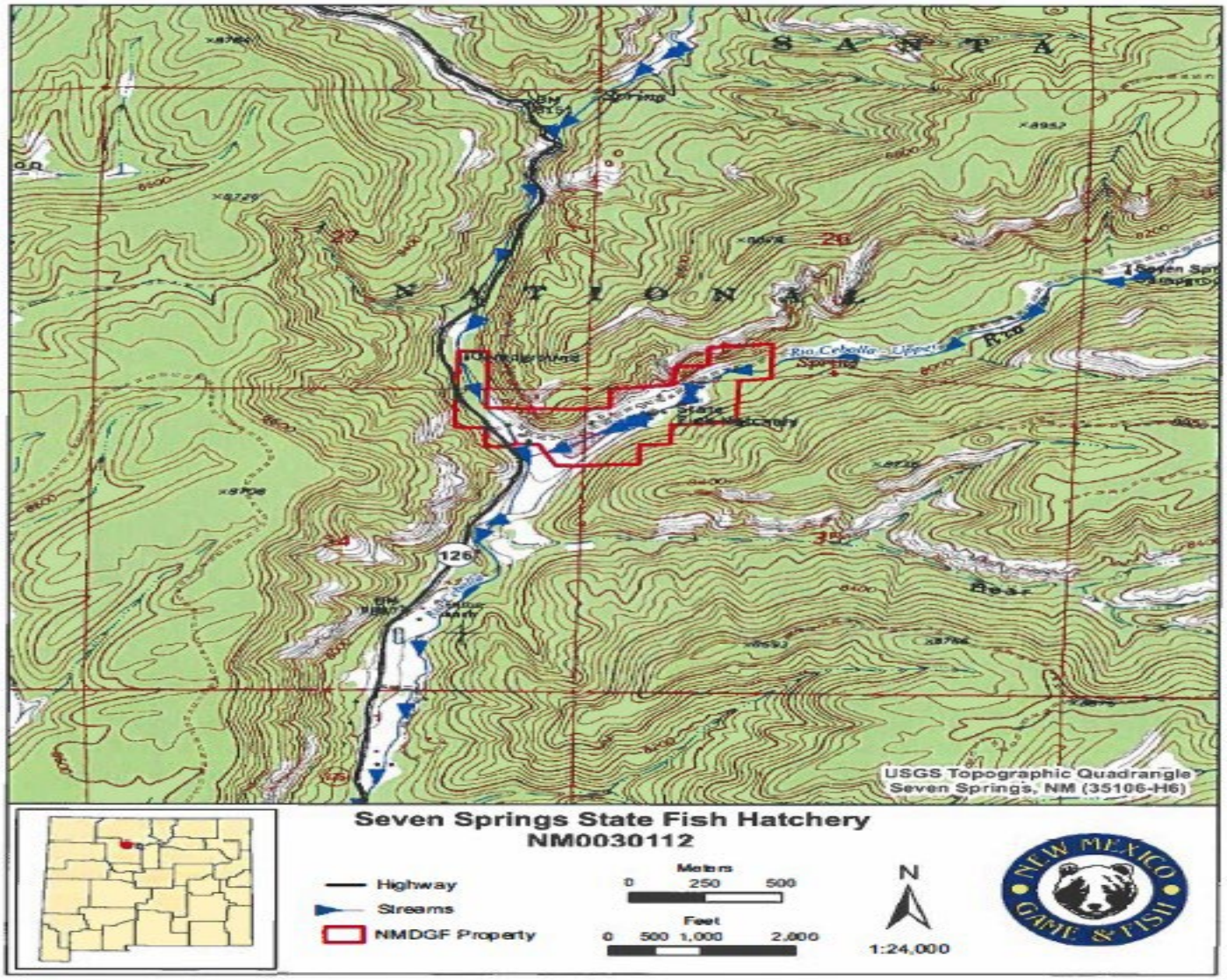
2. Added monitoring for newly approved NMWQS to the draft permit. They must be collected and analyzed within the first year of the permit effective date. Submit the results to both EPA and NMED.

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, village of Jemez Springs, Sandoval County, NM. Under the SIC code 0921, 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 spring's waters 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. A map of the facility is attached.





III. EFFLUENT CHARACTERISTICS

The facility provided the laboratory test results for the priority pollutants, including 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 August 16, 2023, and analyzed on August 18, 23, 24 and 25, 2023, and September 5, 11, 25, and 26, 2023. Per the laboratory certification letter to the applicant dated September 29, 2023, all analytes were analyzed according to EPA procedures or equivalent. Most pollutants were undetected, but the following were found at Outfall 001 and 002.

Pollutant	Outfall 001 (ug/L)	Outfall 002 (ug/L)	MQL (ug/L)	RL (ug/L)	MDL (ug/L)	PQL (ug/L)
Barium	17	15	100	3		
Mercury	0.00142	0.00115	0.0005		0.0002	0.0005
Phenol	0.18	0.2	10		0.1	0.5
Uranium	0.62	0.50	0.1	0.5		

MDL: Method Detection Limit**; MQL**: Minimum Quantification Level; **PQL**: Practical Quantitative Limit; **RL**: Reporting Limit

In addition to the above, the effluent data for the past 12 months and total discharge flow data for the past 24 months from Outfall 001 and Outfall 002 are presented in the DMRs below:

Pollutant	Outfall 001	Outfall 002
Highest Monthly Average	0.63 MGD	0.75 MGD
Settleable Solids	0 mg/L	0 mg/L
Total Suspended Solids	3 mg/L	3.5 mg/L
pH, maximum	7.8 s.u.	8.5 s.u.
TRC	N/A	NA
Aluminum, total recoverable	1.7 mg/L	NA
Aluminum, total	1000 ug/L	930 ug/L

From February 2019 to September 2023, an analysis of DMR data revealed that the permit limitations for certain pH, total aluminum, and total suspended solids values were exceeded. Additionally, the State inspected the hatchery on June 5, 2019. Related findings can be found on the NMED website at https://www.env.nm.gov/wp-content/uploads/sites/25/2017/07/NPDES-Inspection-Reports-Individual-1.pdf.

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 September 20, 2023. 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 pounds or more annually. Since the facility produces less than 100,000 pounds 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 Outfall 001 and Outfall 002.

According to the regulations mentioned in § 122.45 (f)(1) at 40 CFR, all pollutants that are limited in permits must have their limits expressed in terms of mass, such as pounds per day. In the case of determining mass limits for industrial facilities like fish hatcheries per NMIP, the highest 30-day average flow from the most recent two-year flow data reported in DMRs, or the long-term average flow reported in the application, should be used for industrial discharges. Per the renewal application, Outfall 001, and Outfall 002 reported discharges of approximately the maximum monthly average of 0.770 MGD and 0.75 MGD, respectively. The following mathematical relationship is used to determine mass limits:

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) * 0.77 MGD = 64 lbs./day

Daily max. average TSS loading = 15 mg/L * 8.345 (lbs.) (L)/(mg)(MG) * 0.77 MGD = 96 lbs./day

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

Parameter	**Monthly Average**	**Daily Maximum**	**Monthly Average**	**Daily Maximum**
TSS	64 lbs./day	96 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.	

Note: 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

New water quality standards (WQS) for the state of New Mexico were adopted by the NM WQCC on July 24, 2020. USEPA approved them on October 27, 2020. On April 23, 2022, NM WQCC adopted additional WQS, which USEPA approved on January 19, 2023. The newly approved pollutants have been included in the draft permit. To comply with the permit, one sample of each pollutant must be collected and analyzed within the first year of the permit's effective date. The results must be submitted to both EPA and NMED. In addition, the newly approved pollutants should be a part of the pollutant scan with the reapplication process. 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 are between 6.6 and 8.8 s.u. pursuant to 20.6.4.900.H(1) 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 reasonable potential (RP) to cause an in-stream excursion above a water quality criterion, the permit must contain an effluent limit for that pollutant.

RP analysis (appendix A attached) was conducted with the stream data provided by the NMED and collected at stations Rio Cebolla-NM21-11080, Rio Cebolla-NM21-11144, and 31RCebol017.9 (not the point of discharge, the pond). It showed there is no potential to exceed the NMWQS. During the previous permit development in 2019, NMED had submitted the following study to show that the source water already contained concentrations of aluminum:

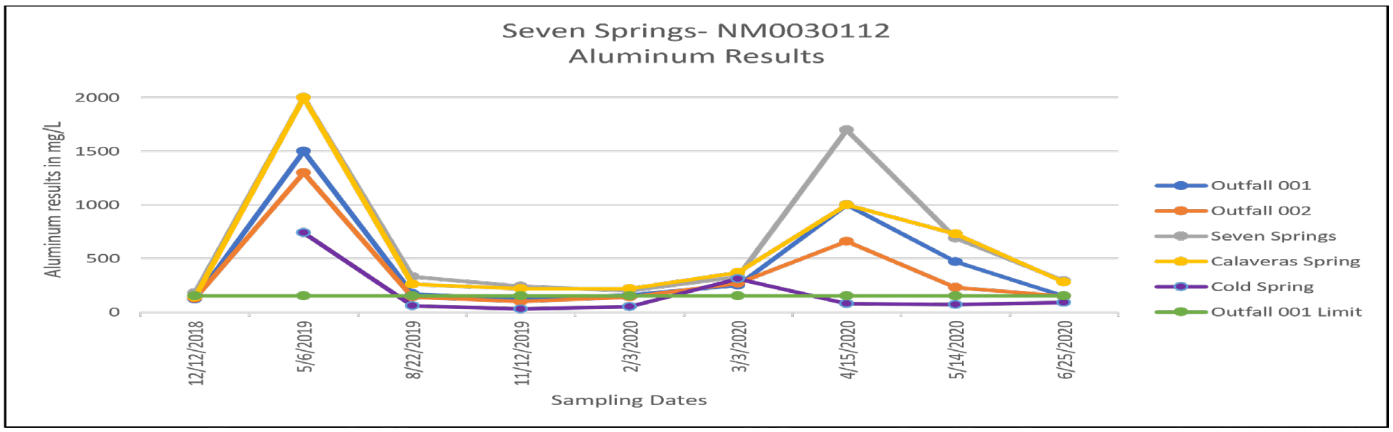
"According to the NMDGF, the source water at the hatchery consists of three artesian springs, which if the hatchery was not present would flow to the Rio Cebolla. From the beginning of the permit term hatchery staff have been collecting water samples at the source of each spring in conjunction with effluent 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
12/12/18	120	.33	130	180	140	N/A
05/06/19	1500	8.93	1300	2000	2000	740
08/22/19	170	.59	140	330	260	60
11/12/19	120	.33	100	240	220	30
02/03/20	160	.44	140	200	220	50
03/03/20	250	.69	270	330	370	310
04/15/20	1000	5.06	660	1700	1000	80
05/14/20	470	1.94	230	690	730	70
06/25/20	150	.49	150	290	280	90

Note: 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 the Outfall 001 limit:



Based on the above-referenced study by the NMDGF, aluminum limitations were removed from the final permit issued on February 22, 2019-the amended permit required reporting of aluminum at Outfall 001. In addition, the recent renewal application received on September 20, 2023, along with laboratory results and DMRs (June 2019 – September 2023) indicate the presence of total aluminum in source water and treated discharge wastewater. The reporting requirements for aluminum to continue in this draft permit.

Pollutant	Outfall 001 (Daily Max.)	Outfall 002 (Daily Max.)	Calaveras Source	Cold Spring	Seven Spring
Total aluminum	1.5 mg/L	1.5 mg/L	ND	0.081 mg/L	ND

ND: Not Detected at the Reporting Limit

c. Per- and polyfluoroalkyl substances

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in producing other products, airports, and military installations can contribute to PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase the risk of adverse health effects. However, PFAS testing and reporting are not required for fish hatcheries as they are not identified as an industry having PFAS contaminants.

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. DMRs show that all tests conducted during the previous permit cycle passed with a NOEC of 100%. The Reasonable Potential analysis (appendix B attached) indicates a limit is needed for WET, however due to all tests passing, there is no limit needed.

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	Value	Monitoring Requirements	
WET Testing (48-hr Static Renewal) *1		Frequency*2	Type
Daphnia pulex (in 1st year)	Report	Once/6 months	Grab
Pimephales promelas (in 1st year)	Report	Once/6 months	Grab
If All Tests Pass			
Daphnia pulex (years: 2, 3, 4, 5)	Report	Once/6 months	Grab
Pimephales promelas (years: 2, 3, 4, 5)	Report	Once/year	Grab
If Any Test Fails			
Daphnia pulex (years: 2, 3, 4, 5)	Report	Once/3 months	Grab
Pimephales promelas (years: 2, 3, 4, 5)	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.

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**	
WET Testing (48-hr Static Renewal)	30-day Average Minimum	48-Hr. Minimum	Frequency	Type
Daphnia pulex	Report	Report	Once/Use*1	Grab*2
Pimephales promelas	Report	Report	Once/Use*1	Grab*2

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 developed in 2019 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, TRC was detected (0.022 ug/L) below the MQL of 33 ug/L at the settling pond; it was required to 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. This requirement will continue in this permit.

VI. TMDL REQUIREMENTS

2024-2026 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 aluminum, total recoverable, nutrients and turbidity (AU IR category 5/5C). According to the IL, the following are the definitions of impaired categories:

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 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 aluminum, total recoverable, nutrients and turbidity has not been completed. Therefore, no additional permit requirements are needed currently. 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 January 23, 2024, for Sandoval County, NM at https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=35043, the species are:

1. Knowlton's cactus (Pediocactus knowltonii) (Endangered)
2. Mexican wolf (Canis lupus baileyi) (Endangered)
3. Mexican spotted owl (Strix occidentalis lucida) (Threatened)
4. Yellow-billed Cuckoo (Coccyzus americanus) (Threatened)
5. New Mexico meadow jumping mouse (Zapus hudsonius luteus) (Endangered)

6. Southwestern willow flycatcher (Empidonax traillii extimus) (Endangered)
7. Rio Grande Silvery Minnow (Hybognathus amarus) (Endangered)

According to online review information, **Knowlton's cactus** is a small, round cactus that can grow alone or in clusters. It is typically gray green in color and can be anywhere from 0.3 to 1 inch tall and 0.4 to 1.2 inches in diameter. The cactus has 18-23 radial spines on each spine cluster, with no central spines. It usually blooms in early April and continues to flower until early May, with most plants blooming when they are three or four years old. The Knowlton cactus is found in the Colorado Plateau Province of the Navajoan Desert, specifically on the slopes of the San Juan Mountains. It only grows in red-brown clay soils derived from alluvial deposits overlying the San Jose Formation.

The cactus was first discovered in 1958, and collectors immediately sought it out. Within 20 years, the population had been significantly reduced from an estimated 100,000 individuals to just 1,000 by 1978. Even today, collectors still highly prized the cactus for its small size and rarity. There are many threats to the Knowlton cactus population, including off-road vehicle use and development near the population, petroleum exploration activities, livestock grazing, and drought. Additionally, rodents, especially deer mice, eagerly eat the fruits of the cactus, which causes low seed production.

According to online review information, the **Mexican wolf** is the smallest, southern-most occurring, rarest, and most genetically distinct subspecies of gray wolf in North America. Mexican wolves typically weigh 50 - 80 pounds, measure about 5 ½ feet from nose to tail, and stand 28 to 32 inches at the shoulder. They have a distinctive, richly colored coat of buff, gray, rust, and black, often with distinguishing facial patterns; solid black or white variations do not exist as with other North American gray wolves.

Once common throughout portions of the southwestern United States, the Mexican wolf was eliminated from the wild by the 1970s. Private individuals and government agents trapped, shot, and poisoned them. Bounties were paid. By the mid-1900s, Mexican wolves had been effectively eliminated from the United States, severely reducing Mexican populations. In 1977, the U.S. Fish and Wildlife Service initiated efforts to conserve the species. In 1998, Mexican wolves were released to the wild for the first time in the Blue Range Wolf Recovery Area within the Mexican Wolf Experimental Population Area.
Mexican wolf has been missing from the landscape for more than 30 years. Finally, the howl of this magnificent animal can once again be heard in the mountains of the southwestern U.S.

According to online review information, **Mexican spotted owl** nests, forages, roosts, and disperses in a wide variety of biotic communities:

• Mixed-conifer forests are commonly used throughout the range. They may include Douglas fir, white fir, southwestern white pine, limber pine, and ponderosa pine.
The understory may consist of Gambel oak, maples, box elder, and/or New Mexico locust. The 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 generally 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 structures or rocky canyons. It 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 (Pseudo Suga menziesii). The habitat uses patterns by foraging owls have yet to be well known. However, Mexican spotted owls generally forage in a broader array of habitats than they use for roosting, 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, habitat use patterns varied between study areas and individual birds, making generalization difficult.

According to online review information, **the 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 and 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, a ring of hills born from the remnants of several extinct volcanoes. The Jemez Mountains salamander is the most imperiled of the three salamanders living in New Mexico and is very vulnerable to losing its already limited habitat. It is now found in only 38 percent of historically occupied sites. Logging, wildfires, and fire suppression activities such as trench-digging and applying fire-suppressant chemicals threaten the remaining salamanders. So does road building. Sometimes, these tiny amphibians don't make it to a crossroads alive during their nightly travels.

According to online review information**,** the **Yellow-billed Cuckoo** uses wooded habitats 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 shrublands of mixed willow, dogwood, and thick stands of small trees such as American elm. In the central and eastern U.S., Yellow-billed Cuckoo's nest 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.

According to online review information, **the 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 and jumping. Unlike other subspecies of meadow jumping mice, it is only found in meadows or grasslands with suitable perennial water and riparian habitat. It is rarely seen more than a few feet (1.8 m) from running water.

These mice are naturally rare and scattered across isolated population centers. It is 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, Arizona, and the Rio Grande Valley.

In all historical locations surveyed since 2000, populations have undergone significant declines and, in some cases, may have disappeared entirely. Overgrazing by livestock is the primary driver of this decline; even with low numbers of cows, cattle grazing 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 a grazed habitat generally cannot collect enough food during its short active period to survive the winter. During surveys in 2005 and 2006, every New Mexico meadow jumping mice population was found in areas inaccessible to livestock.

According to online review information, **the 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 the decline is the reduction, degradation, and elimination of the riparian habitat. Other causes 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 ruin the flycatcher habitat, and issuance of the permit will not affect this species.

According to online review information, **Rio Grande silvery minnow** was once abundant throughout the Rio Grande and Pecos basins but is now 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. It is now only found in the Rio Grande River from Cochiti Pueblo, downstream to the in-stream flow of Elephant Butte Reservoir. 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 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 currents flowing over a mud or 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 to 31.5 in.) and have velocities from 0 to 30 cm (0 to I ft./sec). These minnows are primarily found in nearly still water with debris cover during the winter. However, they are in isolated pools and watered reaches immediately downstream of diversion structures during low flows. Rio Grande silvery minnows have also been found in irrigation ditches and canals.

By 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 it adversely modify designated critical habitat. EPA makes this determination based on the following:

1. operation and treatment of discharge at the hatchery have remained the same since prior permit issuance.

2. EPA has not received any additional information since the previous permit issuance, which would lead to a revision of its determinations.

3. The draft permit is consistent with the State WQS and does not increase pollutant loadings.

4. The NPDES program regulates the discharge of pollutants from the treatment facility and does not regulate forest and agricultural management practices.

5. EPA determines that Items 1 through 4 results in no change to the environmental baseline established by the previous permit; therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

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 permit's life 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: No variance requests have been received.

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, the Regional Director of FWS, and the National Marine Fisheries Service before 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 September 20, 2023.
B. 40 CFR CITATIONS: Sections 122, 124, 125, 133 and 136
C. STATE OF NEW MEXICO REFERENCES

NMQWS, 20.6.4 NMAC, effective April 23, 2022.
Implementation Guidance for the NMIP, March 15, 2012.
2024-2026 State of New Mexico Clean Water Act 303(d)/305(b) Integrative Report

D. CORRESPONDENCE

Application received for renewal of NPDES permit NM0030112 from Samantha Ferguson, New Mexico Department of Game and Fish, on September 20, 2023.

The application renewal for permit NM0030163 was found administratively complete on March 20, 2023. Jim Afghani, EPA, emailed Samantha Ferguson and Patten, Kirk, New Mexico Department of Game and Fish, a Letter of Completeness for permit NM0030112 on October 24, 2023.

Jim Afghani, EPA, emailed Susan Lucas Kamat, NMED, on November 8, 2023, requesting 4Q3, harmonic mean flow, and ambient water quality estimates for the NM0030112 permit. Data received from Issac Martinez, NMED, on February 2, 2024.

Jim Afghani, EPA, emailed Silvia Zavala, EPA, on February 22, 2024, requesting a WET review for the NM0030112 permit. Received comment on March 4, 2024.

Jim Afghani, EPA, emailed Susan Lucas Kamat, NMED, on February 22, 2024, requesting a draft permit review for the NM0030112 permit. Received comment on March 12, 2024.