REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0030155

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

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

is authorized to discharge from a facility located at 1025 Hatchery Road, city of Santa Rosa, Guadalupe County, New Mexico to receiving waters named Ortega-Borsich ditch, thence to Pecos River, in Segment No. 20.6.4.211 of Pecos River Basin.

Combined Outfall (Outfall 001) - Latitude 34^{o} 54' 52" North, Longitude 104^{o} 40' 14" West

in accordance with this cover page and the effluent limitations, monitoring requirements and other conditions set forth in Part I, Part II and Part III.

This permit supersedes and replaces NPDES Permit No. NM0030155 with an effective date of October 1, 2013.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Charles W. Maguire
Director
Water Division (6WQ)

Prepared by

Jim Afghani
Environmental Engineer
Permitting Section (6WQ-PP)

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
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FDA	United States Food and Drug Administration
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
lbs	Pounds
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

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL EFFLUENT LIMITS BASED ON THE HIGHEST MONTHLY AVERAGE FLOW OF 4.226 MGD – OUTFALL 001

During the period beginning the effective date and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge combined treated wastewater from the hatchery to Ortega-Borshich ditch thence to Pecos River in segment No. 20.6.4.211. The combined flow is an outcome of recent interconnection of warm-water (Outfall 004) and cold-water (Outfall 003) settling ponds through installation of a pipe. This has eliminated the need to operate both discharges separately and making the combined outfall (Outfall 001) permanent. Such discharges shall be limited and monitored by the permittee and reported as Outfall 001, as specified below:

POLLUTANT	**MINIMUM**		**MAXIMUM**		**FREQUENCY**	**TYPE**
pH	6.6 s.u.		9.0 s.u.		2/Month	Grab
	30-DAY AVG	**DAILY MAX**	**30-DAY AVG**	**DAILY MAX**		
Flow	Report MGD	Report MGD	***	***	Daily	Measured over weir
TSS	353 lbs/day	529 lbs/day	10 mg/L	15 mg/L *1	2/Month	Grab
SS	N/A	N/A	0.1 ml/L	0.5 ml/L *1	2/Month	Grab
Total Nitrogen *2, 3	Report	Report	Report	Report	1/Quarter	Grab
Total Phosphorus	Report	Report	Report	Report	1/Quarter	Grab
Temperature	N/A	N/A	N/A	Report (^{0}F)	2/Month	Grab
TRC	N/A	N/A	N/A	11 ug/L *1	Daily *4	Instantaneous Grab *2
Boron *5	32	45	750 ug/L	1037 ug/L	1/Quarter	Grab
Heptachlor *5	3.416E-05	4.725E-05	0.00079 ug/L	0.00109276 ug/L	1/Quarter	Grab

Footnotes:

*1 See **Appendix A of Part II** of the permit for minimum quantification limits. Monitoring and reporting requirements begin on the effective date of this permit

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

*3 Total Nitrogen is defined as the sum of Total Kjeldahl Nitrogen (as N), Nitrate (as N), and Nitrite (as N). See EPA methods 351.2 and 353.2 and others approved methods in 40 CFR 136.3.

*4. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC sampling is required during the period when the FDA approved drug Chloramine-T is used as a treatment for the Bacterial Gill Disease.

*5. Five (5) years of data is required to evaluate the need to continue sampling. See fact sheet for discussion.

2. OUTFALL 01B (Special Testing) - FINAL Effluent Limits: Non-FDA Approved Drugs, Medications and/or Chemicals

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge hatchery wastewater containing either non-approved Food and Drug Administration (FDA) drugs, medications or chemicals (DMC), or DMC used in a manner not consistent with FDA approval, to Ortega-Borsich ditch thence to Pecos River (Segment No. 20.6.4.211) from combined outfall (Outfall 001). Such discharges shall be limited and monitored by the permittee and reported as Outfall 01B, as specified below:

POLLUTANT	30-DAY AVG	DAILY MAX	30-DAY AVG	DAILY MAX	FREQUENCY	TYPE
Flow	Report MGD	Report MGD	***	***	Daily	Measured over weir
TRC	N/A	N/A	N/A	11 ug/L *1	Daily *6	Instantaneous Grab *5

WHOLE EFFLUENT TOXICITY TESTING (48-HOUR STATIC RENEWAL*2)	30-DAY AVG	48-HOUR MIN	FREQUENCY	TYPE
Daphnia pulex	Report	Report	Once/Use *3	Grab *4
Pimephales promelas	Report	Report	Once/Use *3	Grab *4

Footnotes:

*1 See **Appendix A of Part II** of the permit for minimum quantification limits.

*2 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.

*3 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.

*4 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.

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

*6. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. TRC sampling is required during the period when the FDA approved drug Chloramine-T is used as a treatment for the Bacterial Gill Disease.

3. FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks. In addition, samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream. The sample point shall be clearly marked by the facility if it is not at the final outfall location. There shall be no flow from any source into the piping system after the sample point and prior to the final outfall.

B. **SCHEDULES OF COMPLIANCE** - None.

C. **MONITORING AND REPORTING** (MINOR DISCHARGERS)

1. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.

2. Monitoring discharge information shall be submitted electronically. To submit electronically, access the Net-DMR website at www.epa.gov/netdmr and contact the R6NetDMR.epa.gov in-box for further instructions.

   a. Reporting periods shall end on the last day of the months March, June, September, and December.

   b. The permittee is required to submit regular monthly reports as described above no later than the 15th day of the month.

3. If any daily average and daily maximum value exceeds the effluent limitations specified in Part IA, the permittee shall report the excursion in accordance with the requirements of Part III.D.

4. Any daily average and daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

5. NO DISCHARGE REPORTING: If there is no discharge from <u>any</u> outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.

D. **OVERFLOW REPORTING**

The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary).

Overflows that endanger health or the environment shall be orally reported at (214) 665-6595, and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows that endanger health or the environment shall be provided to EPA and the NMED Surface Water Quality Bureau within 5 days of the time the permittee becomes aware of the circumstance.

E. **POLLUTION PREVENTION REQUIREMENTS**

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

a. The influent loadings, flow and design capacity;

b. The effluent quality and plant performance;

c. The age and expected life of the wastewater treatment facility's equipment;

d. Bypasses and overflows of the tributary sewerage system and treatment works;

e. New developments at the facility;

f. Operator certification and training plans and status;

g. The financial status of the facility;

h. Preventative maintenance programs and equipment conditions and;

i. An overall evaluation of conditions at the facility.

PART II - OTHER CONDITIONS

A. **MINIMUM QUANTIFICATION LEVEL (MQL)**

The permittee shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most sufficiently sensitive methods (lowest minimum levels) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). The following pollutants may not have EPA approved methods with a published ML at or below the effluent limit, if specified:

POLLUTANT	**CAS Number**	**STORET Code**
Total Residual Chlorine	7782-50-5	50060
Cadmium	7440-43-9	01027
Silver	7440-22-4	01077
Thallium	7440-28-0	01059
Cyanide	57-12-5	78248
Dioxin (2,3,7,8-TCDD)	1764-01-6	34675
4, 6-Dinitro-0-Cresol	534-52-1	34657
Pentachlorophenol	87-86-5	39032
Benzidine	92-87-5	39120
Chrysene	218-01-9	34320
Hexachlorobenzene	118-74-1	39700
N-Nitroso dimethylamine	62-75-9	34438
Aldrin	309-00-2	39330
Chlordane	57-74-9	39350
Dieldrin	60-57-1	39380
Heptachlor	76-44-8	39410
Heptachlor epoxide	1024-57-3	39420
Toxaphene	8001-35-2	39400

For pollutants listed on Appendix A of Part II with MQL's, analyses *may* be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the DMR reporting requirements. In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, may be tested to the MQL, permit limit(s) or the state WQS. Results of analyses that are less than the listed MQL, permit limit(s) or the state WQS may be reported as "non-detect." Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future DMR reporting requirements until/or unless changes are required for adoption of a lower MQL.

B. **24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS**

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and concurrently to NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

C. **PERMIT MODIFICATION AND REOPENER**

In accordance with [40 CFR Part 122.44(d)], the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new State water quality standards are established and/or remanded by the New Mexico Water Quality Control Commission.

In accordance with [40 CFR Part 122.62(s)(2)], the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at [40 CFR Part 124.5].

D. **WHOLE EFFLUENT TOXICITY TESTING** (48-HOUR ACUTE NOEC FRESHWATER)

1. SCOPE AND METHODOLOGY

   a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	01B
REPORTED ON DMR AS FINAL OUTFALL:	01B
EFFLUENT DILUTION SERIES:	32%, 42%, 56%, 75%, and 100%
CRITICAL DILUTION:	100%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

   Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

   Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA-821-R-02-012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

   b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

   c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

   d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

e. 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 test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.
- The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for Daphnia pulex survival test, and Fathead minnow survival test.
- The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for Daphnia pulex survival test, and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below.

c. Dilution Water

- Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

- toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

- toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

- If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

  - a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

  - the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

  - the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 3 below; and

  - the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- The permittee shall collect two **grab** samples from the outfall(s) listed at Item 1.a above.

- The permittee shall collect a second **grab** sample for use during the 24 hour renewal of each dilution concentration for the tests. The permittee must collect the **grab** samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first **grab** sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

- The permittee must collect the **grab** samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

- If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent **grab** sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent **grab** sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

Daphnia pulex

- If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.
- Report the NOEC value for survival, Parameter No. TOM3D.
- Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

Pimephales promelas (Fathead minnow)

- If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.
- Report the NOEC value for survival, Parameter No. TOM6C.
- Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

d. If retests are required by NMED, enter the following codes:

- For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
- For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

E. **DRUGS, MEDICATIONS and CHEMICALS** (DMC)

Anytime drugs, medications and chemicals (DMC), at either concentrations and/or uses not approved by

the FDA, are used either in amounts or a manner that it would allow it to enter the receiving stream, the Department of Game and Fish (DGF) shall notify both EPA and NMED of its impending use. Notification to NMED shall be by phone within one business day of its decision to use the DMC, and to EPA within three days. Written notification shall also be to both EPA and NMED, in writing no less than five-business days later.
Both notifications shall provide the name of the DMC, its amount, concentration of use and reason for its use, along with the expected date and time of its use, and expected duration of use.

Also, anytime the DGF uses DMC at either amounts and/or uses not approved by the FDA, such that it would allow it to enter the receiving stream, DGF shall conduct WET tests. The testing shall be reported on the discharge monitoring report DMR and reported as Outfall 01B. On the DMR, report in the comment section the date, time duration and the name of the DMC used. Also note the date of the letter sent to EPA and NMED.

WET testing shall be conducted on the maximum dose of each instance of intermittent use of drugs, medications and/or chemicals not approved by the FDA, or drugs, medications and/or chemicals for purposes other than those for which FDA approval was granted (not including chlorine). For long-term use of these drugs, medications and/or chemicals, only one WET test shall be required on the maximum dose of the treatment, unless that maximum dose is later increased by 20 percent. At that point, and any later increases above 20 percent, then additional WET tests will be required. The sample shall NOT be flow weighted with another outfall flow. The sample shall occur at the outfall location consistent with the unit being treated, during the time that the expected highest dose is being administered and shall be taken at a time taking into consideration the lag-time for the slug of maximum dosage of DMC to flow from the point of application to the sample point. The grab sample for the WET test shall be taken 30-minutes after the expected arrival time of the treated water of DMC at the outfall. The expected arrival time can be determined by direct observation by use of a floatable marker such as wooden blocks.

F. CHLORINE USEAGE AS TREATMENT

The permittee shall not use chlorine in the hatchery operation nor discharge any chlorine that may eventually lead to the outfall(s) at the facility. However, the March 2018 Hatchery Management Plan attached to 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 draft 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 draft 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 draft 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."

G. BEST MANAGEMENT PRACTICES

1. IMPLEMENTATION

   The permittee shall develop and implement a Best Management Practices (BMP) Plan that achieves the objectives and the specific requirements listed below. A copy of the plan shall be submitted to EPA and NMED within three (3) months of the effective date of the permit. EPA

shall have the right to disapprove the BMP plan within sixty (60) days of receipt of the plan. Upon receipt of a BMP denial, the permittee shall resubmit a revised Plan within 30-days. Upon either acceptance of the Plan, or no-action by EPA after the 60-day review time, the plan shall be deemed approved. The Plan shall be implemented as soon as possible but no later than six (6) months from the date of approval.

2. PURPOSE

Through implementation of the BMP Plan the permittee shall prevent or minimize the generation of and the potential for the release of pollutants from the facility to the waters of the United States through normal operations and ancillary activities.

3. OBJECTIVES

The permittee shall develop and amend the BMP Plan consistent with the following objectives for the control of pollutants.

a. The number and quantity of pollutants and the toxicity of effluent generated, discharged or potentially discharged at the facility shall be minimized by the permittee to the extent feasible by managing each influent waste stream in the most appropriate manner.
b. Under the BMP Plan, and any Standard Operating Procedures (SOPs) included in the Plan, the permittee shall ensure proper operation and maintenance of the treatment facility.

4. REQUIREMENTS

The BMP Plan shall be consistent with the objectives mentioned above and the general guidance contained in the publication entitled “Best Management [practices Guidance Document” (U.S. EPA 1981) or “Guidance manual for Developing Best Management Practices (BMP’s)” (U.S. EPA October 1993), or any subsequent revisions to the guidance document where applicable.

The Plan shall be documented in narrative form, and shall include any necessary plot plan, drawings or maps, and shall be developed in accordance with good engineering practices. The BMP Plan shall be organized and written with the following structures:

a. Name and location of the facility.
b. Statement of BMP policy.
c. The location of all monitoring (sampling) stations.
d. Summary of all data required to the monitoring and sampled for as a permit condition.
e. Specific management practices and standard operating procedures to achieve objective, including, but not limited to the following;
    - Modification of equipment, facilities, technology, procedures.
    - Improvement in management or general operational phases of the facility.
    - Inspections and records.
    - Reporting of BMP’s incidents.

5. MINIMUM PRACTICES REQUIRED AND IMPLEMENTED IN THE BMP

a. Solids Control
    - Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.

- In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and off-line settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting aquatic animals in the production system.
- Remove and dispose of aquatic animal mortalities properly on a regular basis to prevent discharge to waters of the U.S., except in cases where the permitting authority authorizes such discharge in order to benefit the aquatic environment.

b. Materials Storage
- Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the U.S.
- Implement procedures for properly containing, cleaning, and disposing of any spilled material.

c. Structural Maintenance
- Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
- Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.

d. Recordkeeping
- In order to calculate representative feed conversion ratios, maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals.
- Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

e. Training
The permittee must:
- In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
- Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

6. DOCUMENTATION

The permittee shall maintain a copy of the BMP Plan at the facility and shall make the plan available to EPA upon request.

7. MODIFICATION

The permittee shall amend a copy of the BMP Plan whenever there is a change in the facility or in the operation of the facility that increases the generation of pollutants or their release or potential release to the receiving waters. The permittee shall also amend the plan, as appropriate, when plant operations covered by the BMP Plan change. Any such changes to the BMP shall be consistent with the objective and specific requirements listed above. All changes in the BMP Plan shall be reported to EPA in writing.

8. MODIFICATION FOR INEFFECTIVENESS

At any time, if the BMP Plan proves to be ineffective in achieving the general objective of

preventing and minimizing the generation of pollutants and their release and potential release to the receiving waters and/or meeting the specific requirements above, the permit and/or the BMP Plan shall be subject to modifications to incorporate revised BMP requirements.

H. **WHOLE EFFLUENT TOXICITY TESTING** (7-DAY CHRONIC NOEC FRESHWATER)

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
EFFLUENT DILUTION SERIES:	18%, 24%, 32%, 42%, and 56%
CRITICAL DILUTION:	42%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Ceriodaphnia dubia chronic static renewal survival and reproduction test, Method 1002.0, EPA 821 R 02 013, or the most recent update thereof. This test should be terminated when 60% of the surviving females in the control produce three broods or at the end of eight days, whichever comes first.

Pimephales promelas (Fathead minnow) chronic static renewal 7-day larval survival and growth test, Method 1000.0, EPA 821 R 02 013 or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. 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 test failures. However, upon failure of any WET test, the permittee must report the test results to NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- The mean number of Ceriodaphnia dubia neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- 60% of the surviving control females must produce three broods.
- The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the young of surviving females in the Ceriodaphnia dubia reproduction test; the growth and survival endpoints of the Fathead minnow test.
- A PMSD range of 13 - 47 for Ceriodaphnia dubia reproduction;
- A PMSD range of 12 - 30 for Fathead minnow growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

- For the Ceriodaphnia dubia survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.
- For the Ceriodaphnia dubia reproduction test and the Fathead minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA/821/R-02-013 or the most recent update thereof.
- If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and

the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 3 below.

c. Dilution Water

- Dilution water used in the toxicity tests will be receiving water collected as close to the
- point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

  - toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

  - toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

- If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 2.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

  - a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

  - the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);

  - the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 3 below; and

  - the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

- The permittee shall collect two **grab** samples from the outfall(s) listed at Item 1.a above.

- The permittee shall collect a second **grab** sample for use during the 24 hour renewal of each dilution concentration for the tests. The permittee must collect the **grab** samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first **grab** sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

- The permittee must collect the **grab** samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

- If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent **grab** sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent **grab** sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA/821/R-02-013, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal effects results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall submit the results of each valid toxicity test as follows below. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

- Pimephales promelas (Fathead Minnow)

  - If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a ‘1’; otherwise, enter a ‘0’ for Parameter No. TLP6C

  - Report the NOEC value for survival, Parameter No. TOP6C

  - Report the LOEC value for survival, Parameter No. TXP6C

  - Report the NOEC value for growth, Parameter No. TPP6C

  - Report the LOEC value for growth, Parameter No. TYP6C

  - If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a ‘1’; otherwise, enter a ‘0’ for Parameter No. TGP6C

  - Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6C

- Ceriodaphnia dubia

  - If the NOEC for survival is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TLP3B

  - Report the NOEC value for survival, Parameter No. TOP3B

  - Report the LOEC value for survival, Parameter No. TXP3B

  - Report the NOEC value for reproduction, Parameter No. TPP3B

  - Report the LOEC value for reproduction, Parameter No. TYP3B

  - If the No Observed Effect Concentration (NOEC) for reproduction is less than the critical dilution, enter a '1'; otherwise, enter a '0' for Parameter No. TGP3B

  - Report the higher (critical dilution or control) Coefficient of Variation, Parameter No. TQP3B

d. If retests are required by NMED, enter the following codes:

- For retest number 1, Parameter 22415, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'

- For retest number 2, Parameter 22416, enter a '1' if the NOEC for survival is less than the critical dilution; otherwise, enter a '0'