



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0030163

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 and Fish,
Glenwood State Fish Hatchery
P.O. Box 25112
Santa Fe, NM 87504

is authorized to discharge to receiving waters named Glenwood Pond, thence to Whitewater Creek; thence to the San Francisco River in Segment No. 20.6.4.603 of the San Francisco River Basin

from a facility located at located at Catwalk Road, approximately 1 mile northeast of Glenwood in Catron County, New Mexico

the discharges are located on that water at the following coordinates:

Outfall 001: Latitude 33° 19' 14" North, Longitude 108° 52' 50" West
Outfall 002: Latitude 33° 19' 15" North, Longitude 108° 52' 48" 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 hereof.

This permit supersedes and replaces NPDES Permit No. NM0030163 issued December 14, 2007, with an effective date of January 1, 2008, and an expiration date of December 31, 2012.

This permit shall become effective on

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

Issued on

Prepared by

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Environmental Engineer
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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – Outfall 001 – 1.79 MGD Flow

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 waste water from Glenwood Pond thence to Whitewater Creek; thence to the San Francisco River from Outfall 001 (See footnote #5). Such discharges shall be limited and monitored by the permittee as specified below.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Standard Units		MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	MINIMUM	MAXIMUM		
PH	6.6	8.8	2/Month	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/l, unless noted (*1)		MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX		
Flow	Report MGD	Report MGD	***	***	Continuous	Weir (*2)
Total Suspended Solids	149	224	10	15	2/Month	Grab
Settleable Solids	N/A	N/A	0.1 ml/l	0.5 ml/l	2/Month	Grab
Aluminum, total	Report	Report	Report	Report	(*3)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-DAY AVG MINIMUM	7-DAY MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY TESTING (7-Day Static Renewal) (See Part II, Section C)				
Ceriodaphnia dubia	Report	Report	Once per term (*4)	Grab
Pimephales promelas	Report	Report	Once per term (*4)	Grab

Footnotes:

- *1 See **Appendix A of Part II** of the permit for minimum quantification limits.
- *2 Flow will be monitored by measurement of head over the weir.
- *3 Starting on the PED and lasting until two (2) years after the PED, the permittee shall report total aluminum concentration and mass at a frequency of once per quarter. Starting two (2) years after the PED, the permittee shall report total aluminum at a frequency of once per six months.
- *4 Once per term. Sampling for the whole effluent toxicity test shall occur between April 1 and June 30 during raceway cleaning. See Part II, Section C.
- #5 If during the permit term there is a discharge from Outfall 002 and not Outfall 001, the monitoring limitations and other monitoring requirements above shall apply to Outfall 002 and shall be reported on the Outfall 001 DMR. The DMR will state in the remarks section that the discharge is from Outfall 002.

2. FINAL Effluent Limits – Outfall 002

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 waste water from the hatchery through Outfall 002 to Los Olmos Pond, thence to Whitewater Creek; thence to the San Francisco River. Such discharges shall be limited and monitored by the permittee as specified below. See footnote #5 of Outfall 001 above.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/l, unless noted (*1)		MEASUREMENT FREQUENCY	SAMPLE TYPE
POLLUTANT	DAILY AVG	DAILY MAX	DAILY AVG	DAILY MAX		
Flow	Report MGD	Report MGD	***	***	Once/day	Weir (*1)

Footnotes:

*1 When flowing, flow will be monitored by measurement of head over the weir.

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.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge from the weir locations prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

None

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.
2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.
3. NO DISCHARGE REPORTING

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

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II below with MQL's, analyses must 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 Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II.

The permittee may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR §136. For any pollutant for which the permittee determines an effluent specific MDL, the permittee shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific MQL shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

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 State of New Mexico water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(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 (7-DAY CHRONIC NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

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

CRITICAL DILUTION: 100%

EFFLUENT CONCENTRATIONS: 32%, 42%, 56%, 75% and 100%

EFFLUENT DILUTION SERIES: 75%

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 EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and 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:

i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.

ii. The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.

iii. 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.

iv. 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.

v. 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.

vii. a PMSD range of 13 - 47 for *Ceriodaphnia dubia* reproduction;

viii. 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

i. 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.

ii. 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.

iii. 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

i. 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;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

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

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.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) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

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

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) 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 (**GRAB** Samples Authorized For This Permit)

i. The permittee shall collect a minimum of three **GRAB** samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect second and third **GRAB** samples for use during 24-hour renewals of each dilution concentration for each test. 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.

iii. The permittee must collect the **GRAB** samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last **GRAB** sample. Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage.

iv. 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 if the discharge occurs over multiple 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 4 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.

i. *Pimephales promelas* (Fathead Minnow)

(A) 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

(B) Report the NOEC value for survival, Parameter No. TOP6C

(C) Report the LOEC value for survival, Parameter No. TXP6C

(D) Report the NOEC value for growth, Parameter No. TPP6C

(E) Report the LOEC value for growth, Parameter No. TYP6C

(F) 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

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

ii. *Ceriodaphnia dubia*

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

(B) Report the NOEC value for survival, Parameter No. TOP3B

(C) Report the LOEC value for survival, Parameter No. TXP3B

(D) Report the NOEC value for reproduction, Parameter No. TPP3B

(E) Report the LOEC value for reproduction, Parameter No. TYP3B

(F) 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

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

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

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

ii. 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. BEST MANAGEMENT PRACTICES

1. IMPLEMENTATION

The permittee shall continue to maintain and update its Best Management Practices (BMP) Plan that achieves the objectives and the specific requirements listed below. The current plan provided previously shall remain in effect with this permit. The following are elements of the plan that must be maintained in updates as needed.

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;
 - i. Modification of equipment, facilities, technology, procedures.
 - ii. Improvement in management or general operational phases of the facility.
 - iii. Inspections and records.
 - iv. Reporting of BMP's incidents.

5. MINIMUM PRACTICES REQUIRED AND IMPLEMENTED IN THE BMP

- a. Solids Control
 - i. 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.
 - ii. 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.
 - iii. 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
 - i. 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.
 - ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.
- c. Structural Maintenance
 - i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

- ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.
- d. Recordkeeping
 - i. 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.
 - ii. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.
- e. Training
 - The permittee must:
 - i. 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.
 - ii. 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 and NMED 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.