NPDES PERMIT NO. NM0030163
FACT SHEET

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

APPLICANT

State of New Mexico Department of Game & Fish (DGF)
Glenwood State Fish Hatchery
P.O. Box 25112
Santa Fe, NM 87504

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

PREPARED BY

Laurence E. Giglio
Environmental Engineer
NPDES Permits & Technical Branch (6WQ-PP)
Water Quality Protection Division
VOICE: 214-665-6639
FAX: 214-665-2191
EMAIL: giglio.larry@epa.gov

DATE PREPARED

November 26, 2012

PERMIT ACTION

Renewal of a permit previously issued December 14, 2007, with an effective date of January 1, 2008, and an expiration date of December 31, 2012.

RECEIVING WATER – BASIN

White Water Creek– San Francisco River Basin

DOCUMENT ABBREVIATIONS

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

4Q3	Lowest four-day average flow rate expected to occur once every three-years
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FCB	Fecal coliform bacteria
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
ug/l	Micrograms per liter
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	Wasteload allocation
WET	Whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

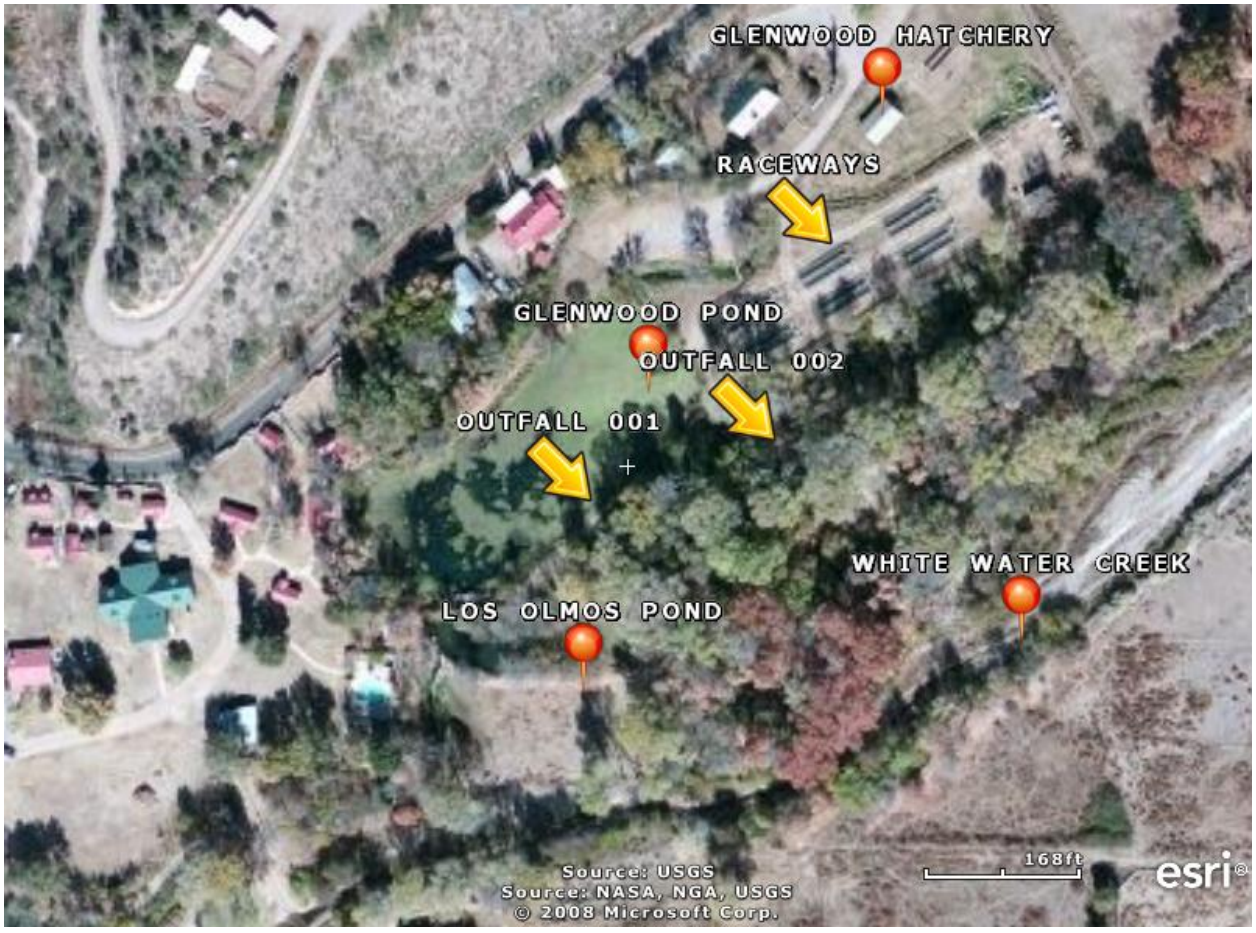
Changes from the previous permit issued December 14, 2007, with an effective date of January 1, 2008, and an expiration date of December 31, 2012, are:

1. The permit establishes more stringent pH requirements.
2. The permit adds monitoring for total aluminum.

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at Catwalk Road, Glenwood, Catron County, New Mexico. Under the SIC Code 0921, the applicant operates a finfish hatchery raising rainbow trout for stocking in lakes and/or streams. The facility described in the application produces an average harvestable weight of 60,000 pounds of rainbow trout per year using 6000 pounds maximum monthly food.

PLAT OF GLENWOOD STATE FISH HATCHERY



The hatchery has two sets of outdoor raceways and a hatchery building. The prime source of water for hatchery operations is from the groundwater infiltration lines. These are buried lines

upstream of the hatchery and during high flow periods provide approximately 2500 gallons per minute (GPM). The second source of water are three water wells located approximately one mile west of the hatchery in the Allred Farms pastures The three wells provide approximately 1400 GPM.

All of the water at the hatchery is pumped or lifted first to the main mixing box or pumped into the two "A" series raceways and the hatchery building. This is done to remove nitrogen gas that is produced with the pumped water. The water from the main mixing box delivers the water to the individual series of major raceways; A, B, C and D. Each raceway has a bottom drain piping system and an overflow plumbing system located at its lower or downstream end. The two systems are not cross connected; each system discharges to Glenwood Pond through its own separate system.

The flow of water from the main mixing box is almost nearly continuous. During normal hatchery operations, with the bottom drain standpipe in place, the water and a small amount of suspended solids; consisting mainly of floating fish wastes and uneaten food, goes through the overflow system into Glenwood Pond. During cleaning operations, generally done once a week for each raceway, the standpipe in the bottom drain system is pulled out and the water flows down the bottom drain piping system to the upper end of Glenwood Pond. During the cleaning operation, hatchery staff cleans the raceway walls and bottom with squeegees. As the flow from the mixing box continues to enter the raceway, all of the water in the raceway along with the wiped down sediments, drains into Glenwood Pond through the separate bottom drain system. Raceway cleaning generally is only done on one or two raceways at a time, so there is always a discharge from the overflow water system into Glenwood Pond from those raceways not being cleaned.

Allred Farms owns the water rights at the hatchery, and allows DGF to use it for their operations. When Allred Farms wants the water for irrigation, Allred Farms enters hatchery grounds, pulls a standpipe located in the overflow pipe system located between the hatchery building and Glenwood Pond and this diverts the overflow water to a separate piping system that takes the water to directly to Allred's Farms. After leaving Outfalls 001 and 002, hatchery staff has no control of the disposition of the water being discharged.

Glenwood Pond is located on hatchery property and is used by the general public for fishing. Consistent with the previous permit, Outfall 001 is proposed to be used to evaluate the impacts on the receiving water of the water from the hatchery. The monitoring samples for permit conditions will be taken at Outfall 001 at the weir. Hatchery staff has noted that Outfall 002 has not discharged in over 10 years, but the structure is still present and could be operational if needed. Outfall 002, consistent with the previous permit, will only monitor flow, as the nature of pollutants is identical to Outfall 001.

The locations of the two outfalls based on the flow diagram in the application package are:

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

III. EFFLUENT CHARACTERISTICS

In the previous application the applicant tested volatile, base/neutral and acid compounds, and pesticides and they were not detected. For this renewal application, metals were required to be tested and the results are as follows:

POLLUTANT *	ug/l	POLLUTANT *	ug/l
Aluminum (D)	22.3	Mercury	0.0184
Antimony	ND**	Molybdenum	ND
Arsenic	1.6	Nickel	0.6
Barium	ND	Selenium	ND
Beryllium	ND	Silver	ND
Cadmium	ND	Thallium	ND
Chromium (D)	0.50	Uranium	ND
Cobalt	ND	Vanadium	ND
Copper	1.6	Zinc	ND
Lead	0.5		

* Total unless denoted by (D) which is dissolved
**ND non detect

A review of DMR data over the past 24-months shows two exceedances. The first was in May 2012, pH was 6.29 su with a limit of 6.5 su and lastly, in June, 2012, the 30-day average TSS effluent was 10.5 mg/l with a limit of 10.0 mg/l.

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water," more commonly known as the "swimmable, fishable" goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered 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 facility submitted a complete permit application June 12, 2012. 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 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS and SS. Water quality-based effluent limitations are established in the proposed draft permit for pH and lead and monitor and report requirements for total aluminum.

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 BOD, TSS, fecal coliform, pH, and O&G.

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

Technology-based effluent limitations found at 40 CFR §451 have been promulgated for this type of activity. Regulations for best practicable control technology currently available (BPT), apply for discharge of pollutants from a concentrated aquatic animal production facility that produces 100,000 pounds or more per year of aquatic animals in a flow-through system. The facility produces approximately 60,000 pounds annually. The production is under the minimum requiring BMPs relating to solids control, materials storage, structural maintenance, recordkeeping and training.

The previous permit however, predated 40 CFR §451, and established technology-based limitations for total suspended solids (TSS) and settleable solids (SS) in accordance with 40 CFR §122.44(l)(2)(ii). Limitations for TSS were established at 10 mg/l daily avg., 15 mg/l daily max. Limitations for SS were established at 0.1 milliliter/liter (ml/l) daily avg., 0.5 ml/l daily max. These limitations will be retained in the draft permit for both outfalls.

Mass loading limits shall be established for TSS in the draft permit for Outfall 001. Effluent flow of 1.79 MGD; based on the highest 30-day maximum flow over the past two years, conversion factor of 8.345 lbs/gallon, and daily maximum concentrations of 15 mg/l, monthly average concentration of 10 mg/l, yields mass loadings of:

Daily maximum: 1.79 X 8.345 X 15 = 224 lbs/day
Monthly average: 1.79 X 8.345 X 10 = 149 lbs/day

Mass limits are not established for SS based on the nature of the pollutant consistent with the previous permit and other hatchery permits in the state. Technology-based limitations are not established for Outfall 002 as the discharge from Outfall 002 is identical to that from Outfall 001, which is monitored for permit compliance purposes consistent with the previous permit.

BMPs are narrative conditions that can aid in achieving permit compliance in addition to chemical specific limits. Regulations at 40 CFR §122.4 state that in addition to conditions established under 40 CFR §122.43(a), each NPDES permit shall include conditions meeting the following requirements when applicable. The authority for BMPs are found at 40 CFR §122.44(k)(4) which state that BMPs "…are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA."

The current permit had a provision for the facility to prepare a BMP and to implement the plan. Maintenance of the BMP is continued as part of this permit. The plan shall be updated as needed and located at the hatchery. The BMP plan shall be made available to staff from either EPA and/or NMED upon request.

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 are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the

designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

3. State Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through November 20, 2012). The facility discharges to 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. Whitewater Creek has the following designated uses: domestic water supply, fish culture, high quality coldwater 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

Criteria for pH is listed in 20.6.4.900.H.(1) for high quality coldwater aquatic life within the range of 6.6-8.8 su's. This is more restrictive than the previous permit as the water segment has changed from the previous permit. The previous permit listed it for 20.6.4.601, which had marginal warmwater and marginal coldwater as designated uses. The minimal change from 6.6 to 9.0 su from the previous permit to this draft permit 6.6 to 8.8 su does not require a compliance schedule as the facility does not have a historical record of exceeding the upper range for pH.

b. TOXICS

i. General Comments

The CWA in Section 301 (b) requires that effluent limitations for point sources include any limitations necessary to meet water quality standards. Federal regulations found at 40 CFR §122.44 (d) state that if a discharge poses the reasonable potential to cause an in-stream excursion above a water quality criteria, the permit must contain an effluent limit for that pollutant.

ii. Critical Conditions - Toxics

Discharges from the hatchery are to Whitewater Creek. Critical low-flow of Whitewater Creek is zero (0) cfs. In the attached WQS spreadsheet, **Appendix A** of the Fact Sheet, WQS were evaluated for the pollutants shown above. Based on the attached spreadsheet, none of the pollutants exhibit an RP to cause an exceedance of WQS.

c. TMDL CONSIDERATIONS

Whitewater Creek, from the mouth of the San Francisco River to Whitewater Campground, is listed on the "2012-2014 State of New Mexico Clean Water Act Section 303(d)/305(b) Integrated Report." Whitewater Creek from San Francisco River to Whitewater Campground is impaired for turbidity. Previously a TMDL was approved by EPA April 11, 2002, that addressed a previous impairment for chronic dissolved aluminum. The TMDL however did not have a WLA assigned to the hatchery. The NM SWQB is scheduled to revisit the TMDL in 2014. The attached **Appendix A** of the fact sheet shows that the discharge does not have RP to cause or contribute aluminum impairment. After consultation with the SWQB, the draft permit will establish total aluminum monitoring in the draft. This will provide data that the SWQB can use in its pending TMDL work. A standard reopener clause is established in the permit that would allow additional conditions if a TMDL is revised, and/or new water quality standards established.

The TMDL did establish a WLA for the hatchery to address turbidity. The TMDL established a WLA for TSS and is 334 #/day. Consistent with TMDL and permit limitations, the WLA is considered to be a monthly average. Since the 334 #/day is greater than the 149 #/day previously established in the technology-based section above (See Section V.B.2), the draft permit will continue the use of the more stringent technology-based limitation.

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). Sample frequency is based on the March 15, 2012, NMIP.

For both Outfalls 001 and 002, flow is proposed to be measured and reported daily consistent with the current permit. For Outfall 001, the pollutants pH, SS and TSS shall be sampled and reported twice per month grab samples. Sample frequencies for TSS, pH and SS are at the same levels of the previous permit and are appropriate for the type of discharge. Total aluminum shall be reported at a once per quarter frequency for the first two years, then semi-annually thereafter.

The draft permit has a footnote added that will require if during the permit term a discharge is from Outfall 002 but not Outfall 001, that monitoring and compliance requirements shall be sampled from Outfall 002 consistent with limits and conditions of Outfall 001. These will be reported on the DMR form for Outfall 001 and the comment section will note that the discharge is from Outfall 002, and that Outfall 001 did not discharge.

6. Drugs Medications and/or Chemicals Used In Hatchery Practices

The hatchery has not requested that the facility will administer drugs medications and/or chemicals (DMC) used for aquaculture purposes in the water system, in a manner and/or amount that will allow it to be discharged to waters of the United States. The permit does not authorize the use of DMC in the permit and a permit modification would be required prior to such use.

D. WHOLE EFFLUENT TOXICITY LIMITATIONS

Procedures for implementing WET terms and conditions in NPDES permits are contained in the NMIP. Table 11 of Section V of the NMIP outlines the type of WET testing for different types of discharges. The previous permit conducted WET testing to be protective of Glenwood Pond, a pond used by the public for fishing. The critical dilution is 100% to reflect the discharge into Glenwood Pond, since the State does not allow discharges into lakes, reservoirs and/or playas to benefit from a mixing zone, and discharges must meet end-of-pipe conditions with no dilution. The effluent concentrations using a 75% dilution series are 32%, 42%, 56%, 75% and 100%. The test species will be the Ceriodaphnia dubia and Pimephales promelas (fathead minnow). The test frequency will be once per term, using grab samples, during periods of raceway cleaning, and the test shall be conducted during the period April 1 and June 30.

Discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS 30-DAY AVG MINIMUM	7-DAY MINIMUM
Whole Effluent Toxicity (7-Day NOEC) 1/		
Ceriodaphnia dubia	REPORT	REPORT
Pimephales promelas	REPORT	REPORT

EFFLUENT CHARACTERISTIC	MONITORING REQUIREMENTS FREQUENCY	TYPE
Whole Effluent Toxicity (7-Day NOEC) 1/		
Ceriodaphnia dubia	1/permit term	Grab
Pimephales promelas	1/permit term	Grab

FOOTNOTES

1/ Monitoring and reporting requirements begin on the effective date of this permit. See PART II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

VI. ANTIDEGRADATION

The NMAC, Section 20.6.4.8 "Antidegradation Policy and Implementation Plan" sets forth the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving waters, which is protective of the designated uses of that water, NMAC Section 20.6.4.8.A.2.

VII. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at USFWS, Southwest Region 2 website, http://www.fws.gov/southwest/es/NewMexico/SBC_view.cfm?spcnty=Catron nine species in Catron County are listed as endangered (E) or threatened (T). The interior least tern (E) (*Sterna antillarum*), southwestern willow flycatcher (E) (*Empidonax traillii extimus*), the Loach minnow (E) *(Tiaroga cobitis)*, the Spikedace (E) (*Meda fulgida)*, the Black-footed ferret (E, extirpated in the county) (*Mustela nigripes*), the Mexican spotted owl (T) (*Strix occidentalis lucida*), the Chiricahua leopard frog (T) (*Rana chiricahuensis*), the Gila trout (T) (*Oncorhynchus gilae*) and the Zuni fleabane (T) (*Erigeron rhizomatus*).

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, EPA has determined that the reissuance of this permit will have "*no effect*" on listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1. No additions have been made to the USFWS list of threatened and endangered species and critical habitat designation in the area of the discharge since prior issuance of the permit.

2. EPA has received no additional information since the previous permit issuance which would lead to revision of its determinations.

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

4. EPA determines that Items 1, thru 3 result in no change to the environmental baseline established by the previous permit, therefore, EPA concludes that reissuance of this permit will have "no effect" on listed species and designated critical habitat.

VIII. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

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

IX. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if State Water Quality Standards are promulgated or revised. In addition, if the State amends 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.

X. VARIANCE REQUESTS

No variance requests have been received.

XI. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and [40 CFR 122.44(l)(i)(A)], which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The proposed permit has maintained the concentration limits contained in the previous permit for SS and TSS. Mass loading has been slightly reduced due to changes in flow. A new limit for lead has been added not in the previous permit. All of the changes represent permit requirements that are consistent with the WQS and with WQMP.

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, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service and to the National Marine Fisheries Service prior to the publication of that notice.

XIII. FINAL DETERMINATION

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

XIV. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Forms 1 and 2B received June 12, 2012.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of November 30, 2012.
Sections 122, 124, 125, 133, 136

C. STATE OF NEW MEXICO REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through November 20, 2012.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 15, 2012.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2012 - 2014.