

NPDES PERMIT NO. NM0030813

FACT SHEET

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

APPLICANT

Oshara Village Water Reclamation Facility
No. 2 Willow Back Rd
Santa Fe, NM 87508

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
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PREPARED BY

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DATE PREPARED

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PERMIT ACTION

Proposed reissuance of the current NPDES permit issued August 10, 2006, with an effective date of September 1, 2006, and an expiration date of August 31, 2010.

RECEIVING WATER – BASIN

Arroyo Hondo – Rio Grande Basin – 13020201 HUC

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
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
EA	environmental assessment
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
lbs	pounds
ug/l	micrograms per liter (one part per billion)
mg/l	milligrams per liter (one part per million)
MGD	million gallons per day
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMIP	New Mexico NPDES permit implementation procedures
NPDES	national pollutant discharge elimination system
SQL	minimum quantification level
O&G	oil and grease
PLC	programmable logic controller
POTW	publically owned treatment works
RP	reasonable potential
SBR	sequencing batch reactor
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
WET	whole effluent toxicity
WQCC	New Mexico Water Quality Control Commission
WQMP	water quality management plan
WQS	New Mexico state standards for interstate and intrastate surface waters
WWTP	wastewater treatment plant

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued August 10, 2006, with an effective date of September 1, 2006, and an expiration date of August 31, 2010, are:

- A. *E. coli* bacteria limits have been made more stringent and FCB limits have been eliminated
- B. pH limits have been made more stringent
- C. Percent removal of TSS and BOD have been added

II. APPLICANT LOCATION and ACTIVITY

As described in the application, the facility is located at No. 2 Willow Back Rd Santa Fe, New Mexico 87508, in Santa Fe County, New Mexico.

Under the North American Industry Classification System (NAICS) code 2213. The applicant operates a privately owned sanitary wastewater treatment facility equivalent to a publicly owned treatment works (POTW). The facility has a design flow capacity of 0.03 MGD serving a residential population of 300; Oshara Village Subdivision.

It is an advanced SBR treatment facility which has three major tanks: anoxic equalization tank, SBR tank, and effluent equalization and chlorine contact tank. The design flow is 30,000 gallons per day (0.03 MGD).

Figure 1



Influent flow from the Oshara Village Subdivision is by gravity from a 4 inches force main to a lift station which consists of a manhole wetwell, pumping system and valve vault. The wetwell is 6 feet in diameter and 10.5 feet deep. It provides a capacity of 625 gallons. There are two 4 inch submersible centrifugal sewage pumps in the wetwell. The plant currently serves 51 homes.

From the headworks, influent travels by gravity into the sludge storage tank, the first tank in the system. Here the solids and grit are allowed to settle, much like a primary clarifier. The storage tank can hold approximately 16,000 gallons. This tank is anaerobic, which provides an area to concentrate the sludge.

Next, an anoxic equalization tank is used to retain and equalize peak influent flows and provide denitrification. The total volume of this tank is approximately 16,000 gallons. Within the anoxic basin, there are two pumps which transfer the contents of the basin to the SBR.

Within the SBR basin is an aspirating jet aerator which delivers oxygen to the system. The SBR tank provides a capacity of 30,000 gallons per day. Each batch is treated with a cycle consisting of fill/react, interact/react, settle and decant. The phases of the SBR are programmable with a PLC. The operator can adjust the time sequence in order to better treat the influent prior to discharge. The Oshara Village SBR was functional in November of 2008 and went offline in February 2009 because of a failure in the decant valve. The decanter is to decant supernatant from below the surface to prevent scum from getting into the effluent. However, this valve failed and allowed both supernatant and solids to be removed, which caused an apparent spill in February 2009. The system was taken offline to repair this valve. The new valve is still has since been repaired with a new valve. The new valve is still in the process of being hooked up to the system. The decant valve which failed will be rebuilt and placed in storage for use if another failure occurs.

The disinfection system consists of a chlorine contact tank which has a volume of 15,000 gallons. Liquid sodium hypochlorite is dosed directly into decant pipe during each decant period. A chemical metering pump with auto/manual control provides the required dose of the solution. The effluent is then dechlorinated with a dose of sodium bisulphate in the manhole prior to discharge.

The effluent is metered with a 6 inch flume and an ultrasonic flow meter prior to discharge into the Arroyo Hondo. The discharge pipe is 10 inches in diameter with riprap to help with erosion.

The discharge is located on the Arroyo Hondo at Latitude 35° 36' 35.856" N and Longitude 105° 59' 57.048" W , in Santa Fe County, New Mexico. A map of the facility is provided in Figure 1.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received June 29, 2010, are presented below:

Table 1

Parameter	Max	Avg
Flow, MGD	0.0105	0.0053
Temperature, winter	No Data	No Data
Temperature, summer	No Data	No Data
pH, minimum, SU	9.0 su	N/A

pH, maximum, SU	9.0 su	N/A
BOD (mg/l)	23.20	10.13
TSS (mg/l)	28	14

A summary of the last 3-years pollutant data taken from NM0030813 DMRs in violation for limited parameters is listed in Table 2. There were two letters of violation/ warning letters issued 11/28/2008 and a third letter of violation/ warning letter issued 3/29/2011. The dates in violation for limited parameters are as listed:

Table 2

Dates of Violation	Chemical	Limit	Value
12/31/2008	BOD ₅	≤ 30 mg/l for 30 day avg.	86.8 mg/l
12/31/2008	BOD ₅	≤ 45 mg/l for 7 day avg.	147 mg/l
1/31/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
1/31/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
2/28/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
2/28/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
3/31/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
3/31/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
4/30/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
4/30/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
5/31/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
5/31/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
6/30/2010	BOD ₅	≤ 30 mg/l for 30 day avg.	Not received
6/30/2010	BOD ₅	≤ 45 mg/l for 7 day avg.	Not received
11/30/2009	pH	6 s.u.	Not received
11/30/2009	pH	9 s.u.	Not received
12/31/2009	pH	6 s.u.	Not received
12/31/2009	pH	9 s.u.	Not received
1/31/2010	pH	6 s.u.	Not received
1/31/2010	pH	9 s.u.	Not received
2/28/2010	pH	6 s.u.	Not received
2/28/2010	pH	9 s.u.	Not received
3/31/2010	pH	6 s.u.	Not received
3/31/2010	pH	9 s.u.	Not received
6/30/2010	pH	6 s.u.	Not received
6/30/2010	pH	9 s.u.	Not received
11/30/2008	FCB	≤ 500 cfu/100ml	533 cfu/100ml
11/30/2008	FCB	≤ 500 cfu/100ml	1730 cfu/100ml
11/30/2008	TSS	≤ 30 mg/l	36.5 mg/l
12/31/2008	TSS	≤ 30 mg/l	33.5 mg/l
11/30/2008	TSS	≤ 45 mg/l	66 mg/l
1/31/2010	TSS	≤ 30 mg/l	Not received
1/31/2010	TSS	≤ 45 mg/l	Not received
2/28/2010	TSS	≤ 30 mg/l	Not received

2/28/2010	TSS	≤ 45 mg/l	Not received
3/31/2010	TSS	≤ 30 mg/l	Not received
3/31/2010	TSS	≤ 45 mg/l	Not received

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 the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The previous permit expired August 31, 2010. The application was received on June 29, 2010. The existing permit is administratively continued until this permit is issued.

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for TSS and BOD. Water quality-based effluent limitations are established in the proposed draft permit for *E. coli* bacteria, pH and TRC.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

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, *E. coli* bacteria, 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.

The facility is a POTW treating sanitary wastewater. POTW's have technology-based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are BOD, TSS and pH. BOD limits of 30 mg/l for the 30-day average and 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits; also 30 mg/l for the 30-day average and 45 mg/l for the 7-day average, average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). ELG's for pH are between 6.6-9 s.u. and are found at 40 CFR §133.102(c). Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day. When determining mass limits for POTW's, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

$$\text{Loading in lbs/day} = \text{pollutant concentration in mg/l} * 8.345 \text{ lbs/gal} * \text{design flow in MGD}$$

$$30\text{-day average BOD}_5/\text{TSS loading} = 30 \text{ mg/l} * 8.345 \text{ lbs/gal} * 0.03 \text{ MGD}$$

$$30\text{-day average BOD}_5/\text{TSS loading} = 7.51 \text{ lbs/day}$$

$$7\text{-day average BOD}_5/\text{TSS loading} = 45 \text{ mg/l} * 8.345 \text{ lbs/gal} * 0.03 \text{ MGD}$$

$$7\text{-day average BOD}_5/\text{TSS loading} = 11.27 \text{ lbs/day}$$

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

Final Effluent Limits - 0.03 MGD design flow.

Table 3

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			
	lbs/Day		mg/l (unless noted)	
Parameter	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.
Flow	N/A	N/A	Measure MGD	Measure MGD
BOD	7.51	11.27	30	45

BOD ₅ , % removal, minimum ¹	≥ 85%	---	---	---
TSS	7.51	11.27	30	45
TSS, % removal, minimum ²	≥ 85%	---	---	---
pH	N/A	N/A	6.6 – 9.0 standard units	

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 (20.6.4.98 NMAC, amended through January 14, 2011). The discharge is to receiving waters named Arroyo Hondo, thence Cienega Creek, thence the Santa Fe River of the Rio Grande-Santa Fe watershed. The designated uses of the receiving water(s) are primary contact, livestock watering, wildlife habitat and marginal warmwater aquatic life.

4. Permit Action - Water Quality-Based Limits

¹ Percent removal is calculated using the following equation:
 (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration.

² Percent removal is calculated using the following equation:
 (average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration.

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

Stream segment specific WQS for pH ranges from 6.6 to 9.0 standard units as found in 20.6.4.900 D of the NMAC. The draft permit will propose a pH limit of 6.6 to 9.0 s.u., which is more restrictive than the technology-based limits presented earlier and those used in the previous permit.

b. Bacteria

Stream segment specific WQS for *E. coli* bacteria are 126 cfu/100 ml monthly geometric mean and 410 cfu/100 ml single sample maximum as found in 20.6.4.900 D. The previous permit had limits for fecal coliform bacteria (FCB) of 548 cfu/100 mL monthly geometric average and a 2507 cfu/100 mL single maximum. Since the previous permit issuance, New Mexico has adopted *E. coli* as the State bacteria standard in lieu of FCB.

c. 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.

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to POTWs, but also to facilities that are similar to POTWs, but which do not meet the regulatory definition of “publicly owned treatment works” (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to “make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities,” per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

The facility is designated as a minor, and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for TRC described below.

ii. TRC

The previous permit established water quality-based effluent limitations for TRC of 11 ug/l. This requirement will be maintained in the draft permit.

iii. Critical Dilutions

Critical dilutions are used to establish certain permit limitations and conditions. The State of New Mexico WQS allow a mixing zone for establishing pollutant limits in discharges. Both the NMWQS and NMIP establish a critical low flow designated as 4Q3, as the minimum average four consecutive day flow which occurs with a frequency of once in three years. The SWQB of the NMED provided EPA with the 4Q3 for the Oshara Water Reclamation Facility.

For permitting purposes of certain parameters such as WET, the critical dilution of the effluent to the receiving stream is determined. The critical dilution, CD, is calculated as:

$CD = Q_e / (F \cdot Q_a + Q_e)$, where:

Q_e = facility flow (0.03 MGD)

Q_a = critical low flow of the receiving waters (0 MGD [= 0 cfs])

F = fraction of stream allowed for mixing (1.0)

$$\begin{aligned} CD &= 0.03 \text{ MGD} / [(1.0)(0) + 0.03] \\ &= 1 \\ &= 100\% \end{aligned}$$

D. 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). Changes to sample frequencies have been made based on the NMIP in order to ensure consistency with similar sized facilities.

Technology based pollutants; BOD and TSS are proposed to be monitored one time per month. Flow is proposed to be continuously monitored when discharging, identical to the existing permit. The pollutant pH is proposed to be monitored five times per week when discharging which is more frequent than the previous permit but is consistent with similar facilities based on treatment technology and design flow. Sample type for BOD, TSS and pH are grab which is consistent with the previous permit.

Water quality-based pollutant monitoring frequency for *E. coli* shall be 1 time per month by grab sample which is also more frequent than the previous permit but consistent with similar facilities. TRC shall also be sampled five times per week using instantaneous grab samples. Regulations at 40 CFR §136 define instantaneous grab as being analyzed within 15-minutes of collection. This frequency is greater than the previous permit but is consistent with similar sized facilities.

E. WHOLE EFFLUENT TOXICITY

In Section V.C.4.c.ii above; “Critical Conditions”, it was shown that the critical dilution, CD, for the facility is 100%. Based on the nature of the discharge; a privately owned sanitary wastewater treatment facility equivalent to a POTW, the design flow; less than 0.1 MGD, the nature of the receiving water;

ephemeral, and the critical dilution; 100%, the NMIP directs the WET test to be a 48-hour acute test using *Daphnia pulex* at a once per permit term.

The proposed permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests based on a 0.75 dilution series. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical low-flow dilution) is defined as 100% effluent.

The previous permit established WET biomonitoring with CD = 100%. DMR reports reveal one (1) passing test for both the *Daphnia pulex* species and the *Pimephales promelas* species during the last permit term. The EPA Reasonable Potential Analyzer (See Appendix A) indicates that RP exists. However, EPA is overruling this finding because Oshara Water Reclamation Facility has not failed a WET test during their last term and is conducting tests at the maximum critical dilution. EPA concludes that this effluent does not cause or contribute to an exceedance of the State water quality standards. Therefore WET limits will not be established in the proposed permit.

During the period beginning the effective date of the permit and lasting through the expiration date of the permit, the permittee is authorized to discharge from Outfall 001 - the discharge to Arroyo Hondo. Discharges shall be limited and monitored by the permittee as specified below:

A summary of the water quality based limits for the facility is:

Final Effluent Limits - 0.03 MGD design flow.

Table 4

Effluent Characteristic	Discharge Monitoring	
	30-day Avg Min	48hr Minimum
WET Testing (48hr Static Renewal) ³		
<u>Daphnia pulex</u>	Report	Report

Table 5

Effluent Characteristic	Monitoring Requirements	
	Frequency	Type
WET Testing (48hr Static Renewal)		
<u>Daphnia pulex</u>	Once per term ⁴	24hr Composite

³ 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.

⁴ Once per permit-term. The test shall take place between November 1 and April 30 during the first year of the permit term. 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.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE

The sludge is removed from the sludge tank with a vacuum truck and taken to the Santa Fe WWTP for final disposal.

The permittee shall use only those sewage sludge disposal or reuse practices that comply with the federal regulations established in 40 CFR Part 503 "Standards for the Use or Disposal of Sewage Sludge". EPA may at a later date issue a sludge-only permit. Until such future issuance of a sludge-only permit, sludge management and disposal at the facility will be subject to Part 503 sewage sludge requirements. Part 503 regulations are self-implementing, which means that facilities must comply with them whether or not a sludge-only permit has been issued. Part IV of the draft permit contains sewage sludge permit requirements.

B. WASTE WATER POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute programs directed towards pollution prevention. The permittee will institute programs to improve the operating efficiency and extend the useful life of the treatment system.

C. INDUSTRIAL WASTEWATER CONTRIBUTIONS

The treatment plant has no non-categorical Significant Industrial User's (SIU) and no Categorical Industrial User's (CIU). The EPA has tentatively determined that the permittee will not be required to develop a full pretreatment program. However, general pretreatment provisions have been required. The facility is required to report to EPA, in terms of character and volume of pollutants any significant indirect dischargers into the privately owned treatment works subject to pretreatment standards under §307(b) of the CWA and 40 CFR Part 403.

D. OPERATION AND REPORTING

The applicant is required to operate the treatment facility at maximum efficiency at all times; to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

VII. 303(d) LIST

Arroyo Hondo has not been assessed by the state of New Mexico and is not listed as an impaired waterbody and no additional permit requirements are needed at this time. The standard reopener language in the permit allows additional permit conditions if warranted by future changes.

VIII. ANTIDegradation

The State of New Mexico has antidegradation requirements to protect existing uses through implementation of its WQS. The limitations and monitoring requirements set forth in the proposed draft are developed from the appropriate State WQS and are protective of those designated uses. Furthermore, the policy's set 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.

IX. 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 maintains the mass loading requirements of the previous permit for BOD and TSS. The previous permit had limits for FCB. Since the previous permit issuance, New Mexico has adopted *E. coli* as the State bacteria standard in lieu of FCB. The change from fecal coliform bacteria to *E. coli* does not constitute antibacksliding since only the indicator bacteria have changed. *E. coli* Bacteria and pH limits have been made more restrictive than the previous permit.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at FWS website, <http://www.fws.gov/endangered/>, three species in Santa Fe County are listed as endangered or threatened. The Southwestern willow flycatcher (*Empidonax traillii extimus*), and Rio Grande silvery minnow (*Hybognathus amarus*) are listed as endangered. The Mexican spotted owl (*Strix occidentalis lucida*) is listed as threatened. The Yellow-billed Cuckoo (*Coccyzus americanus*), the Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*) and the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) are listed as candidate species. Based on the following discussion, EPA has determined that the issuance of this permit will have no effect on these federally listed threatened or endangered species nor will it destroy or adversely modify designated critical habitat.

The Rio Grande silvery minnow (*Hybognathus amarus*) is an experimental population in this county. The population location is in the Rio Grande River, from Little Box Canyon to Amistad Dam; and on the Pecos River, from its confluence with Independence Creek to its confluence with the Rio Grande. The authorized discharge and the issuance will have no effect on this species.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*) habitat occurs in riparian areas along streams, rivers, and other wetlands where dense willow, cottonwood, buttonbush and arrowweed are present. The primary reason for decline is the reduction, degradation and elimination of the riparian habitat. Other reasons include brood parasitism by the brown-headed cowbird and stochastic events like fire and floods that destroy fragmented populations. The discharge is not located in a riparian area and should not provide a suitable habitat for the flycatchers. The permit does not authorize activities that may cause destruction of the flycatcher habitat, and issuance of the permit will have no effect on this species.

Mexican spotted owl (*Strix occidentalis lucida*) inhabits canyon and forest habitats across a range that extends from southwestern Utah and Colorado, through Arizona, New Mexico, and west Texas, to the mountains of central Mexico. Section 7 of the Endangered Species Act requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to destroy or adversely modify designated critical habitat. The Mexican spotted owl habitat corresponds with isolated mountain systems and canyons, associated with mixed-conifer, pine-oak, and riparian forests.

Research of available material finds that the primary cause for the population decreases leading to threatened status for the Mexican Spotted Owl is destruction of habitat. No pollutants are identified which might affect species habitat or prey species and are not reviewed by the permitting process. Catastrophic fires and elimination of riparian habitat also were identified as threats to species habitat. The NPDES program regulates the discharge of pollutants and does not regulate forest management practices and agricultural practices, which contribute to catastrophic fires and elimination of riparian habitat, and thus, species habitat. The issuance of this permit is found to have no impact on the habitat of this species.

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. In the previous permit issued August 10, 2006, EPA made a “no effect” determination for federally listed species. EPA has received no additional information since then which would lead to a revision of that "no effect" determination. EPA determines that this reissuance will not change the environmental baseline established by the previous permit, and therefore, EPA concludes that reissuance of this permit will have "no effect" on the listed species and designated critical habitat.

2. No additions have been made to the FWS list of threatened and endangered species and critical habitat designation in the area of the discharge prior issuance of the permit. Two species, the Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*) and the New Mexico meadow jumping mouse (*Zapus hudsonius luteus*) have been listed as candidate species after the previous permit was issued.

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

4. The draft permit has been made more restrictive from the previous permit.

5. EPA determines that Items 1, thru 4 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.

XI. 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.

XII. 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 develops a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that TMDL. Modification of the permit is subject to the provisions of 40 CFR §124.5.

XIII. VARIANCE REQUESTS

No variance requests have been received.

XIV. 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.

XV. FINAL DETERMINATION

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

XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(S)

EPA Application Form 2A received June 29, 2010.

B. 40 CFR CITATIONS

Citations to 40 CFR are as of June 20, 2011

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 January 14, 2011.

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, May, 2011.

Statewide Water Quality Management Plan, May 13, 2003.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2010 - 2012.

D. MISCELLANEOUS

Ambient Water Quality Criteria for Chlorine – 1984, EPA - Office of Water, January 1985

Ambient Water Quality Criteria for Bacteria – 1986, EPA - Office of Water, January 1986