

NPDES PERMIT NO. NM0029319

FACT SHEET

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

APPLICANT

Central Consolidated School District No. 22
583 County Road 6100
Kirtland, NM 87417

ISSUING OFFICE

U.S. Environmental Protection Agency
Region 6
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PREPARED BY

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DATE PREPARED

April 24, 2012

PERMIT ACTION

Proposed reissuance of the current permit issued January 30, 2006 with an effective date of March 1, 2006 and an expiration date of February 28, 2011.

RECEIVING WATER – BASIN

San Juan River – San Juan 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)
CCSD	Central Consolidated School District No. 22 (permittee)
CD	Critical dilution
CFR	Code of Federal Regulations
Cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CRSP	Colorado River Salinity Control Program
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
F&WS	United States Fish and Wildlife Service
mg/L	Milligrams per liter
µg/L	Micrograms per liter
MGD	million gallons per day
MRGCD	The Middle Rio Grande Conservancy District
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
NNWQS	Navajo Nation Water Quality Standards
NNEPA	Navajo Nation Environmental Protection Agency
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
PCB	Polychlorinated Biphenyl
POTW	Publically owned treatment works
RP	Reasonable potential
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

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

I. CHANGES FROM THE PREVIOUS PERMIT

Changes from the permit previously issued January 30, 2006, with an effective date of March 1, 2006, and an expiration date of February 28, 2011, are:

- A. FCB limits have been eliminated.
- B. Monthly average waste load limit for *E. coli* has been added
- C. Increase monitoring frequency for flow
- D. Increase monitoring frequency for TRC
- E. Increase monitoring frequency for pH
- F. Add percent (minimum) removal for BOD and TSS

II. APPLICATION LOCATION and ACTIVITY

As described in the application, the wastewater treatment plant is located at 583 Road 6100, in Kirtland, San Juan County, New Mexico. The effluent from the treatment plant is discharged into the San Juan River in Segment 20.6.4.401 of the San Juan River Basin. The discharge is located on that water at latitude 36° 43' 23" N and longitude 108° 22' 01" W.

Under the SIC Code 4952, the applicant operates a system that is similar to a publically owned treatment works (POTW), treating sanitary waste from two elementary, one middle, one high school, and an administration office.

There are no industrial contributions to the facility.

The facility described in the application uses a Schreiber Corporation series batch reactor (SBR). A variation of the extended aeration or low load activated sludge process, utilizing two concentric tanks for aeration storage and/or sludge digestion, and intermittent aeration/final settling. The facility has a 0.050 million gallon per day (MGD) design flow capacity serving a population of approximately 2,370 people per day.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received August 24, 2010, are presented below:

POLLUTANT TABLE - 1

Parameter	Max	Avg
	(mg/L unless noted)	
Flow, million gallons/day (MGD)	0.02	0.014
pH, minimum, standard units (su)	6.6	N/A
pH, maximum, standard units (su)	9.0	N/A

Biochemical Oxygen Demand, 5-day (BOD ₅)	45	8
Fecal Coliform (# bacteria /100 mL)	200	1
Total Suspended Solids (TSS) (mg/L)	45	5
Temperature (Winter) (F)	60	N/A
Temperature (Summer) (F)	70	N/A

A summary of 24-months of available pollutant data: September 2008 through September 2010, taken from DMRs shows no exceedances of permit limits for BOD₅ (See Pollutant Table 2). pH, TSS, TRC, E coli and Fecal Coliform show exceedances of permit limits.

POLLUTANT TABLE - 2

Date	BOD ₅			pH		TSS			TRC	E. coli		Fecal Coliform	
	30 DAY AVG	30 DAY AVG	7 DAY AVG	Min.	Max	30 DAY AVG	30 DAY AVG	7 DAY AVG	Max.	30 DAY AVG	Daily Max	30 DAY AVG	Daily Max
	lbs/day	mg/L	mg/L	s.u.	s.u.	lbs/day	mg/L	mg/L	mg/L	cfu/100 mL	cfu/100 mL	cfu/100 mL	cfu/100 mL
Limit	12.5	30	45	6.6	9	12.5	30	45	0.099	126	235	100	200
9/30/2008	2.7	6	6	6.8	7.6	37.34*	83*	83*	0.01	159*	159	116*	116
10/31/2008	2.68	7	7	6.8	7.4	1.53	4	4	0.02	56	56	330*	330*
11/30/2008	2.6	8	8	6.7	7.7	1.62	5	5	0.02	3	3	1	1
12/31/2008	2.16	7	7	6.8	7.1	1.85	6	6	0.04	<1	<1	<1	<1
1/31/2009	2.5	10	10	6.6	7	1	4	4	0.03	2	2	5	5
2/28/2009	1.9	8	8	6.6	7.1	0.7	<3	<3	0.03	<1	<1	<1	<1
3/31/2009	1.2	5	5	6.6	7.2	0.7	<3	<3	0.03	25.5	25.5	17	17
4/30/2009	0.93	4	4	6.6	7.2	0.7	3	3	0.02	<1	<1	<1	<1
5/31/2009	1.95	6	6	6.8	7.2	0.97	3	3	0.03	1	1	<1	<1
6/30/2009	4.4	12	12	6.7	7.4	1.1	3	3	0.02	<1	<1	2	2
7/31/2009	1.62	5	5	7.1	7.4	1.62	5	5	0.01	<1	<1	1	1
8/31/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/30/2009	2.5	6	6	6.8	7.3	1.25	<3	<3	0.04	41	41	10	10
10/31/2009	1.85	6	6	7	7.4	1.54	5	5	0.02	1	1	2	2
11/30/2009	1.75	6	6	6.7	7.6	1.17	4	4	0.01	3	3	3	3
12/31/2009	2.05	6	6	6.6	7.3	1.37	4	4	0.02	62	62	58	58
1/31/2010	8.75	30	37	6.6	7.1	7	24	32	0.01	4862*	4862*	363*	363*
2/28/2010	3.1	10	10	6.7	7.2	1.54	5	5	0.05	34	34	37	37
3/31/2010	1.69	7	7	6.6	7.1	1.45	6	6	0.02	4	4	<4	<4
4/30/2010	2.4	8	8	6.7	7.3	0.9	<3	<3	0.2*	<4	<4	<4	<4
5/31/2010	2.22	7	7	6.7	7.2	0.95	<3	<3	0.02	<1	<1	<1	<1
6/30/2010	2.33	10	10	6.4 *	7.5	0.7	<3	<3	0.02	4886*	4886*	1095*	1095*
7/31/2010	6.3	27	27	6.7	7.2	0.7	3	3	0.02	<1	<1	14	14
8/31/2010	1.3	4	4	6.6	7.4	0.95	<3	<3	0.03	651*	651*	173*	173
9/30/2010	1.6	5	5	6.6	7.2	0.95	<3	<3	0.01	3.1	3.1	<1	<1

*-denotes exceedance of permit limit

ND- No discharge

In addition, the permittee was required to perform pollutant quarterly testing for total dissolved solids during the last permit term. The results since March 2008 are as follows in Pollutant Table 3:

POLLUTANT TABLE - 3

Date	TDS (Location 1)		TDS (Location G)	
	30 DAY AVG	30 DAY AVG	30 DAY AVG	30 DAY AVG
	lbs/day	mg/L	lbs/day	mg/L
3/31/2008	71	311	183.3	803
6/30/2008	66.2	227	199.1	683
9/30/2008	99.7	292	216.5	634
12/31/2008	267	782	156	456
3/31/2009	203.2	841	97.6	404
6/30/2009	216.7	703	79.2	257
9/30/2009	254	678	121	324
12/31/2009	235	741	135	428
3/31/2010	212	748	107	379
6/30/2010	207.3	7232	85.2	301
9/30/2010	201	689	109	374
12/31/2010	NR	NR	NR	NR

NR- Have not received DMR report

ND- No discharge

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.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a). The existing NPDES permit initially issued January 30, 2006 with an effective date of March 1 2006, and an expiration date of February 28, 2011 is administratively continued until this permit is reissued.

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 BOD₅. Water quality-based effluent limitations are established in the proposed draft permit for *E. coli* bacteria, TRC, and pH.

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, 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.

The CCSD facility operates a system that is similar to a POTW. POTW has 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 percent removal for each. BOD limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a). TSS limits of 30 mg/l for the 30-day average, 45 mg/l for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(b). ELGs for pH are between 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:

Loading in lbs/day = pollutant concentration in mg/L * 8.345 lbs/gal * design flow in MGD
 30-day average BOD₅/TSS loading = 30 mg/L * 8.345 lbs/gal * 0.05 MGD
 30-day average BOD₅/TSS loading = 12.5 lbs/day.

7-day average BOD₅/TSS loading = 45 mg/L * 8.345 lbs/gal * 0.05 MGD
 7-day average BOD₅/TSS loading = 18.8 lbs/day.

Technology-Based Effluent Limits - 0.05 MGD design flow.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS			
	lbs/Day		mg/L (unless noted)	
	30-Day Avg.	7-Day Avg.	30-Day Avg.	7-Day Avg.
Flow	N/A	N/A	Measure MGD	Measure MGD
BOD ₅	12.5	18.8	30	45
BOD ₅ , % removal, minimum	≥ 85% (*)	---	---	---
TSS	12.5	18.8	30	45
TSS, % removal, minimum	≥ 85% (*)	---	---	---
pH	NA	NA	6.0 - 9.0 s.u.	

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

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 tribal, federal, or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with the NNWQS, 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. Water Quality Standards

The general and specific stream standards are provided in NMWQS (20.6.4 NMAC amended through January 14, 2011, USEPA approved portions on April 18, 2011). The facility discharges into the San Juan River in segment number 20.6.4.401 of the San Juan River Basin. The designated uses of the receiving water are public and industrial water supply, irrigation, livestock watering, wildlife habitat, primary contact, marginal coldwater aquatic life and warmwater aquatic life.

The Navajo Nation has adopted *E. coli* criteria of 126/100 mL geometric mean and 235/100mL daily maximum for the San Juan River between the Hogback and the La Plata River (NNEPA 2008). The uses that are designated for the San Juan River are domestic water supply, primary human contact, secondary human contact, agricultural water supply, fish consumption, aquatic and wildlife habitat and livestock watering (NNEPA 2008).

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

The State of New Mexico stream segment specific WQS require pH to be between 6.6 and 9.0 s.u. and are more limiting than the technology-based limits presented earlier. The draft permit shall establish 6.6 to 9.0 s.u. for pH based on the State's WQS.

b. Bacteria

The previous permit had limits for fecal coliform bacteria (FCB) and *E. coli*. Since the previous permit issuance, New Mexico has adopted *E. coli* as the State bacteria standard in lieu of FCB. New Mexico stream segment specific WQS require *E. coli* of 126 cfu/100 mL monthly geometric mean and 410 cfu/100 ml daily maximum, end-of-pipe.

The State of New Mexico calculated a target load capacity of 1.13×10^{12} cfu/day for FCB and a target load capacity of 1.43×10^{12} cfu/day for *E. Coli* for the San Juan River from the Navajo Nation Boundary at the Hogback to Animas River in its May 2005 TMDL Report. The TMDL anticipated a change in bacteria indicator and has thus shown values to be used when *E. coli* water quality standards are approved, establishing a WLA of 1.90×10^8 cfu/day for FCB and 2.39×10^8 cfu/day for *E. coli* for the CCSD facility. Since the previous permit was issued, *E. coli* has become the State WQS indicator for bacteria replacing FCB for body contact protection.

The draft permit eliminates FCB and proposes only for *E. coli*. The segment specific New Mexico and Navajo Nation WQS limitation for *E. coli* is 126 cfu/100 mL monthly geometric mean. The TMDL specifies a 126 cfu/100 ml for the single sample maximum.

The draft permit will maintain the *E. coli* bacteria limits of 126 cfu/100 mL monthly geometric average and 234 cfu/day daily maximum (Navajo Nation Water Quality Standards) with a monthly average waste load limit of 2.39×10^8 cfu/day. Because a compliance schedule was included in the previous permit for *E. coli*, no compliance schedule will be granted in the draft permit to meet the *E. coli* limits or the proposed waste load limit. The load limit is based on the following TMDL Equation:

$$C \text{ as cfu/100mL} \times 1000 \text{ mL/Liter} \times 1\text{Liter}/0.264 \text{ gallons} \times Q \text{ in } 1,000,000 \text{ gal/day} = \text{cfu/day}$$

Where C = applicable water quality standard (126 cfu/100 mL)

Q = design capacity flow in million gallons per day (0.05 mgd)

Calculations:

Monthly geometric average:

$$126 \text{ cfu/100 mL} \times 1000 \text{ ml/L} \times 1 \text{ L}/0.264 \text{ gal} \times 0.05 \text{ mgd} \times 1,000,000 \text{ gal/day mgd} = 2.39 \times 10^8 \text{ cfu/day}$$

Removal of FCB does not constitute antibacksliding found in 40 CFR §122.44(l) since FCB is an indicator parameter used to evaluate impacts on human health recreational body contact. The adoption of *E. coli* as the State's indicator bacteria replaces 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 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. However, per Table 2, concentration of TRC has been exceeded the permit limit of 19 ug/l (0.099 mg/l), TRC shall be limited in the draft permit based on the previous permit. Derivation of permit limits will be discussed below.

(ii) Critical Conditions

Critical conditions 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 states 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 CCSF facility. The 4Q3 is 467 cubic feet per second (cfs) and the harmonic mean low flow used for human health calculations is 1145 cfs. To convert the 4Q3 expressed in cfs to a 4Q3 expressed as MGD, the constant 1.548 cfs/MGD is used. The 4Q3 is 301.68 MGD and the harmonic mean low flow is 739.66 MGD.

The critical dilution (CD) is used to allow for dilution of effluent by the receiving water for certain pollutants and is determined as follows:

$CD = Q_e / (FQ_a + Q_e)$, where:

Q_e = facility flow (0.05 MGD)

Q_a = critical low flow of the receiving waters (467 cfs [301.68 MGD])

F = fraction of stream allowed for mixing (1.0)

$$\begin{aligned} CD &= 0.05 \text{ MGD} / [(1.0)(301.68) + 0.05] \\ &= 0.000166 \\ &= 0.0166 \% \end{aligned}$$

(iii) TRC

The facility uses chlorine to control bacteria. The WQS for TRC is 11 µg/l for chronic conditions and 19 µg/l for acute. Since acute conditions do not allow dilution; the limit must be met at end-of-pipe, but chronic standards do allow dilution, the permit shall use the most stringent WQS for the permit limit. Previously, the CD was calculated at 0.000166 MGD. The in-stream TRC concentration after allowing for dilution is; $11 \mu\text{g/l} \div 0.000166 = 66380.6 \mu\text{g/l}$. Since this value is greater than the 19 µg/l end-of-pipe acute standard, the 19 µg/l is more stringent and will be more protective. The draft permit shall maintain the 19 µg/l limit contained in the present permit.

(iv) Total Dissolved Solids – Colorado River Salinity Control Program

The discharge to the San Juan River is part of the Colorado River Basin where a basinwide Colorado River Salinity Control Program (CRSP) was established by EPA in December 1974. NMED has incorporated the CRSP by reference into their WQS. “The objective of the policy, as

provided in Sections I.A. and I.B., is to achieve “no salt return” whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal dischargers.” A limitation for Total Dissolved Solids (TDS) is established in accordance with the Salinity policy and program outlined in the report “1999 Review, Water Quality Standards for Salinity, Colorado River System.” The policy establishes that the incremental increase in salinity shall be less than 400 mg/l, which is considered to be a reasonable incremental increase above the flow weighted average salinity of their intake water supply.

Data reported for TDS from December 31, 2008 to March 31, 2010 reveals that the discharge does not have a reasonable potential to exceed the 1 ton/day in salinity. The incremental average increase in TDS reported from December 31, 2008 to March 31, 2010 is 374 mg/l. The maximum incremental increase over the same period was 446 mg/l

$$\text{TDS} = 374 \text{ mg/l} * 8.34 \text{ lbs/gal} * 0.05 \text{ MGD} * 1 \text{ ton}/2000 \text{ lbs} = 0.078 \text{ tons/day}$$

The draft permit will maintain the previously established quarterly monitoring of the discharge and intake water supply, consistent with the CRSP.

5. 303(d) List Impacts

Segment 20.6.4.401 of the San Juan River is listed on the current “2010 - 2012 State of New Mexico 303(d) List for Assessed River/Stream Reaches Requiring Total Maximum Daily Loads (TMDLs).” This segment is assessed as Category 4A with industrial water supply, irrigation, livestock watering, municipal water supply, marginal coldwater aquatic life, warmwater aquatic life, and wildlife habitat as fully supporting. It is not supporting for secondary contact. In the bacteria section above, it was reported that a TMDL dated May, 2005, was completed for bacteria for this reach. The TMDL limits *E. coli* based on State and Navajo nation WQS. The draft permit maintains the previous *E. coli* limits consistent with the approved TMDL. The TMDL includes a daily maximum concentration of 126 cfu/100 mL and a daily maximum loading limit of 0.19×10^9 cfu/day for the CCSD. The standard reopener language in the permit allows additional permit conditions if a future TMDL is established.

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). Technology based pollutants; BOD₅ and TSS, are proposed to be monitored one (1) times a month. Flow shall be sampled continuously (daily) by totalizing meter. Sample type for BOD₅ and TSS is a grab sample, which is consistent with the NMIP.

Water quality-based pollutant monitoring frequency for *E. coli* shall be sampled one (1) times per month using grab samples. TRC shall be measured five (5) times per week by instantaneous grab (field measurement). TDS shall be monitored one (1) times every three months by grab sample. The pollutant pH shall be monitored five (5) times per week by instantaneous grab

(field measurement) sample consistent with the NMIP. Regulations at 40 CFR Part 136 define instantaneous grab as being analyzed within 15-minutes of collection. In regards of the TDS, the draft permit will maintain the previously established quarterly monitoring of the discharge and intake water supply consistent with the CRSP. All of these monitoring frequencies are consistent with the NMIP.

E. WHOLE EFFLUENT TOXICITY LIMITATION REQUIREMENTS

OUTFALL 001

In Section V.C.4.c.(ii) above; "Critical Conditions", it was shown that the critical dilution, CD, for the facility is 0.017%, because the discharge is to a perennial. Based on the nature of the discharge; POTW, the design flow; less than 0.1 MGD, the nature of the receiving water; perennial, the critical dilution; 0.017%, and the submittal of a WET test with the application (February 24, 2012), the NMIP directs there to be no WET testing for this permit term.

Reasonable potential for an excursion of the narrative criterion to protect the aquatic life against toxicity does not exist because lethal (acute test) toxic events were not demonstrated from the WET test submitted with the permit application. 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 San Juan River in Segment No. 20.6.4.401 of the San Juan River Basin.

VI. FACILITY OPERATIONAL PRACTICES

A. SEWAGE SLUDGE PRACTICES

Sludge removal takes place once a year during the summer when the plant is taken offline for maintenance. The sludge is removed through a set of valves at the exterior of the plant by a vactor truck. The solids can be removed from any of the three chamber in the plant. Solids removed from the plant are hauled to either the City of Farmington WWTP or to the total retention lagoons located at the elementary school. The solids are processed with the Farmington WWTP solids and final disposal is at the San Juan County Regional Landfill. 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 POTW subject to pretreatment standards under Section 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.

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 BOD₅ and TSS. The pollutant pH has been made more stringent and this action is not subject to antibacksliding provisions. The previous permit had limits for fecal coliform bacteria (FCB). Since the previous permit issuance, New Mexico has adopted *E. coli* as the State bacteria standard in lieu of FCB. All of the changes represent permit requirements that are consistent with the States WQS and WQMP.

X. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at US Fish and Wildlife Service (USFWS), Southwest Region 2 website, <http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>, eight species in San Juan County are listed as endangered (E) or threatened (T). Two of the species are aquatic and include the Colorado pike minnow (*Ptychocheilus lucius*), E, Experimental Population Non-Essential (EXPN) and the razorback sucker (*Xyrauchen texanus*), E. Two of the species are avian and include the Southwestern willow flycatcher (E) (*Empidonax traillii eximius*) and the Mexican spotted owl (T) (*Strix occidentalis lucida*). Three plant species are the Knowlton cactus (*Pediocactus knowltonii*), E, Mancos milk-vetch (*Astragalus humillimus*), E and the Mesa Verde cactus (*Sclerocactus mesae-verdae*) and the lone mammal is the black-footed ferret, (*Mustela nigripes*), E, EXPN. The American bald eagle (*Haliaeetus leucocephalus*) was previously listed in San Juan County; however, the USFWS, removed the American bald eagle in the lower 48 states from the Federal List of Endangered and Threatened Wildlife Federal Register, July 9, 2007, (Volume 72, Number 130).

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. The USFWS in a letter to EPA (Consultation #2-22-99-I-172 September 6, 2000), concurred with EPA's "may affect but not likely to adversely affect" determination. The USFWS agreed that the water quality in the San Juan would improve over the 5-year permit term. Since that determination no additional information which would cause a revision of that "may affect but not likely to adversely affect" determination has been identified. After review, EPA has determined that the reissuance of this permit 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 listed threatened and endangered species nor will adversely modify 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 relevant portions of either States WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the States Water Quality Standards are either revised or promulgated. Should either State adopt a new WQS, and/or develop or amend a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR 122.44(d). 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 of New Mexico 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 August 24, 2010.

B. 40 CFR CITATIONS

Citations to 40 CFR as of April 30, 2010.

Sections 122, 124, 125, 133, 136

C. STATE WATER QUALITY REFERENCES

New Mexico State Standards for Interstate and Intrastate Surface Water, 20.6.4 NMAC, as amended through January 14, 2011.

Procedures for Implementing NPDES Permits in New Mexico, March 2012.

Statewide Water Quality Management Plan, December 17, 2002.

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

D. MISCELLANEOUS REFERNCES

May 10, 2005 Total Maximum Daily Load (TMDL) for the San Juan River Watershed (Part One), Navajo nation Boundary at the Hogback to Navajo Dam.

May 13, 2008 Navajo Nation Surface Water Quality Standards 2007, Navajo Nation Environmental Protection Agency